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The Official Voice of Emergency Medicine

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## Bringing the Specialty Together



ACEP President Dr. Gillian Schmitz outlines the direction the College plans to take in her term

by CEDRIC DARK, MD, MPH, FACEP, MEIC

I had the opportunity to briefly see Gillian Schmitz, MD, FACEP, between meetings in Boston as she rode up the elevator at the conference hotel. Although we didn't have a chance to speak for long at that moment, we sat down a few days after ACEP21 to discuss her plans as ACEP's Presi-

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## Combating COVID in the Hospital, Community, and Media

Emergency physicians working in public health leadership combat disinformation, politicization

by KAREN APPOLD

While treating COVID-19 patients has been challenging in many ways for emergency physicians working in hospitals, those who work in public health leadership roles have faced a different set of obstacles. These physicians work on the front lines of educating communities through various channels, including the media. Topping their list of challenges is combating disinformation about the disease.

For Joneigh S. Khaldun, MD, MPH, FACEP, vice president and chief health equity officer at CVS Health and an emergency physician at Henry Ford Hospital in Detroit, the biggest challenges she faced when recently serving as chief medical executive for the State of Michigan stemmed from how politicized the pandemic became. "This initially began when the White House downplayed the pandemic and made protective measures political instead of a public health issue," she said. "It was very difficult to promote basic public health measures for the general public when it became so political."

Along these lines, Steven J. Stack, MD, MBA, FACEP, commissioner for public health for the Kentucky Department for Public Health in Frankfort, said the politicization of the pandemic sadly divided the country at a time when national unity could have averted much economic hardship, illness, and death. "The medical and public health science supporting mask use and vaccination are strongly established, and had the nation united more fully around

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## Breaking Down MyEMCert

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# NEWS FROM THE COLLEGE

## UPDATES AND ALERTS FROM ACEP

### Prepare for ABEM's New EM Ultrasound Exam

Are you planning to take the American Board of Emergency Medicine's (ABEM's) first Advanced Emergency Medicine Ultrasonography Focused Practice Designation exam in March 2022? ACEP is hosting two virtual educational events to help you prepare for the exam, Jan. 18–19 or Feb. 8–9. Join national experts who are emergency ultrasound fellowship directors or instrumental in fellow training for this two-day review of the emergency ultrasound fellowship core content. Learn more at [www.acep.org/aemus](http://www.acep.org/aemus).

### Popular Reimbursement Conference Coming Up Soon

ACEP's annual Reimbursement & Coding (R&C) Conference is coming up Jan. 17–19, 2022. This time it's a hybrid event, so you can either attend in New Orleans or register for the virtual package. Never been to R&C before? The R&C courses are the most authoritative and informative conferences available regarding emergency physician reimbursement and coding.

Nationally recognized experts who are actively involved in the regulatory and legislative process will cover the information you need to know. You will learn real-world strategies to lead the way for your group and hospital to maximize reimbursement. Register today at [www.acep.org/rc](http://www.acep.org/rc).



### Play It Back: Hear from ACEP Leaders

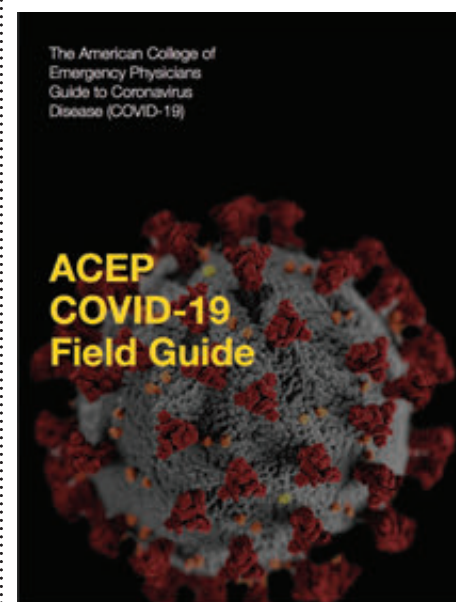
During the ACEP21 Council Meeting, ACEP Immediate Past-President Mark Rosenberg, DO, FACEP; President Gillian Schmitz, MD, FACEP; and Executive Director Sue Sedory, CAE, all delivered speeches that provided updates on ACEP's work and outlined a vision for the future. Those remarks are now available for on-demand viewing:

- Ms. Sedory's speech: [www.acep.org/ACEP21-Sedory](http://www.acep.org/ACEP21-Sedory)
- Dr. Rosenberg's remarks: [www.acep.org/Rosenberg](http://www.acep.org/Rosenberg)
- Dr. Schmitz's speech and a full transcript are available at [www.acep.org/ACEP21-Schmitz](http://www.acep.org/ACEP21-Schmitz), and you can also hear more of

her plans on p. 1 of this issue.

### View ACEP21 Award Winner Videos

ACEP sincerely congratulates its 2021 Leadership Award winners, who were recently honored during ACEP21 in Boston. Learn more about these deserving emergency physicians by watching their award videos at [www.acep.org/acepawardwinners](http://www.acep.org/acepawardwinners).



### Emergency Physicians Join Forces to Create Award-Winning COVID-19 Field Guide

You may have heard of the *ACEP COVID-19 Field Guide*, but do you know its origin story? More than 100 emergency physicians contributed to the guide, a huge testament to what ACEP members can accomplish when they work together.

Listen to your fellow emergency physicians tell the story of the guide and its growing global reach (accessed by people in more than 160 countries!) at [www.acep.org/COVID-Field-Guide-video](http://www.acep.org/COVID-Field-Guide-video).

In late September 2021, ACEP was honored with a Summit Award from the American Society for Association Executives in recognition of the *ACEP COVID-19 Field Guide's* impact on public health and community safety. 🏆



## WHAT ARE YOU THINKING?



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## A NEW SPIN



# Quarantine the Oral Boards

With significant cost and no proven value, the oral board exam should be reconsidered

by J. TYLER SCHWARTZ, MD, MPH; AND  
MATTHEW R. BABINEAU, MD, FACEP

Doctors are good at standardized tests. It remains unclear whether those tests are good for the doctors. Since 1980, the American Board of Emergency Medicine (ABEM) has set forth the emergency medicine board certification processes, including the requirement of an oral examination in addition to a written qualifying exam.<sup>1</sup> In response to the coronavirus pandemic, ABEM moved the oral boards component online to a Zoom format.<sup>2</sup> This restructuring provides an opportunity to question the value and validity of the test itself. ABEM's oral exam is expensive and has never been shown to predict an emergency physician's clinical competence; its 2020 reformatting should be the first step in abandoning the exam altogether.

## Cost

Money talks. Or rather, in this case, talking generates money for ABEM. As of November 2021, the registration fee for the ABEM oral boards is \$1,255 if paid early and \$1,565 if paid late. This fee can only be paid after the examinee has paid the initial certification fee (\$420 early, \$840 late) and has paid for and passed the written qualifying exam (\$960 early, \$1,260 late).<sup>3</sup> Nearly 2,500 board-eligible emergency medicine residents graduate every year.<sup>4,5</sup> Thousands of doctors paying thousands of dollars in fees adds up. Indeed, fully 34 percent of ABEM's *net* \$2.1 million revenue in FY19 came from these initial certification costs, and these sums include none of the continuing certification fees that ABEM extracts from practitioners on an ongoing basis once board-certified.<sup>6</sup>

ABEM will argue that the high fees are necessary to cover the overhead costs of administering the oral exam, and this may be true. Even after converting to a Zoom format and presumably saving on hotel costs (the organization having previously faced criticism for lavish lodgings), ABEM still has to produce the test material; administer the exam; analyze testing results; and support a host of administrative, clerical, and information technology staff.<sup>7</sup> The net profit to ABEM after accounting for these expenditures is probably small, if anything at all. But the cost to physicians is real, as is the unpaid time required to study for and take the test. The question is whether the benefits of the exam justify these costs.

## Benefit

Ideally, board certification should distinguish exemplary practitioners of emergency medicine. Indeed, ABEM's board of directors notes, "The purpose of initial certification is to objectively and independently confirm that physicians who complete an emergency medicine residency demonstrate core knowledge,



skills, and abilities needed to practice emergency medicine at the highest standards."<sup>8</sup> The problem is that ABEM has no evidence to show that it can make this determination.

Despite 40 years of oral boards testing, there simply are no data supporting the oral exam as an accurate means for differentiating who is a safe, competent emergency doctor and who is not. There are some data weakly supportive of board certification in general. Hospitals with more board-certified emergency physicians may miss fewer myocardial infarctions, and lapses in continuous board certification are associated with increased risk of state medical board disciplinary action.<sup>9,10</sup> Both of these studies are fraught with confounders, and neither teases apart which component of board certification—whether written or oral or recertification—is important. In fact, the scant data that do exist suggest one's board exam scores (either written or oral) do not correlate significantly with one's clinical effectiveness as measured by patients per hour.<sup>11</sup> At best, one can construct a syllogism to suggest that written standardized examinations may predict later clinical performance. USMLE Step 2 CK exam scores

have been shown to predict one's odds of passing the ABEM written qualifying exam.<sup>12</sup> And studies have shown that Step 2 CK scores predict international medical graduates' patient mortality from acute myocardial infarction and congestive heart failure and predict U.S. medical graduates' odds of receiving disciplinary action from a state medical board.<sup>13,14</sup> Possibly then, if the syllogism holds, doing well on the ABEM *written* exam could translate into later clinical success, though no study has ever directly measured this. No such stretches of logic can be made regarding the oral exam.

Perhaps recognizing this nonexistent predictive value of the oral exam, ABEM boasts research about the exam's reliability. However, of the six studies ABEM cites for this purpose, only two date from the current millennium.<sup>15-20</sup> These studies do suggest that the oral boards exam is an internally valid instrument, though it remains unclear how well an exam based on person-to-person interactions holds up in an era of increased attention to implicit biases. Even if the exam is technically consistent and completely devoid of unconscious bias, creating a reliable exam is not the same as creating a useful one. Producing 10,000 cars that con-

sistently pull to the left when steered down a straight road demonstrates that one's production process is reliable, but the final product is still a clunker.

## Analysis

In light of these costs emergency physicians and the dubious benefit to society, one might reasonably question ABEM's continued insistence on the oral exam. Of the 40 specialties recognized by the American Board of Medical Specialties, only 19 require an oral examination, and 11 of those 19 are surgical specialties.<sup>21</sup> Why does emergency medicine, a nonsurgical specialty, require an oral component, especially one that is expensive and of unproven utility? Is there a better way forward?

ABEM justifies the oral exam because the written exam is incomplete. The organization explains, "The oral exam measures different competencies and dimensions than the qualifying (written) exam. At least 36 percent of the knowledge, skills, and abilities that ABEM assesses are only measured by the oral exam."<sup>22</sup> To continue the car analogy, this is the equivalent of selling 64 percent of a vehicle and then requiring customers to return to the dealer at a later date to purchase the other 36 percent.



"A New Spin" is the personal perspective of the author and does not represent an official position of ACEP Now or ACEP.

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The answer to an incomplete written exam is not an additional oral exam but rather a better written one.

The logical strategy would be to abandon the oral examination completely and rely solely on the written examination to determine board certification. As noted earlier, one can string together some evidentiary basis for written exams predicting clinical performance. And simple statistical models based on a few objective data points have been shown to score better than individual interviewers at predicting the success of applicants in a range of endeavors from school performance to military roles to recidivism among juvenile offenders.<sup>23</sup> Simply put, we may not need the oral exam to predict who will become a good and safe emergency physician.

If ABEM insists on keeping the oral exam as an element of board certification, then the test should remain online. In the wake of COVID-19 lockdowns, industries worldwide have moved to remote working. Why should our testing be any different? Surely, we can respond to an examiner's clinical cases as easily through a webcam as across a desk in a hotel room. This tele-testing approach would reduce the overhead costs of administering the exam, and those cost savings could then be passed on to examinees, who are usually fresh graduates laden with student loan debt. Or perhaps ABEM could use the money saved to conduct research trials to show that its oral examination actually

accomplishes what it sets out to do.

### Conclusion

For 40 years, ABEM has forced emergency physicians to pay dearly for an inconvenient oral examination that is unsupported by evidence. COVID-19 provides the perfect opportunity for our specialty to leave this exam component in the past. At the very least, less expensive virtual oral boards examinations should be the path forward. As emergency medicine doctors, we do not perform interventions on our patients without robust evidence to justify the clinical action, and it is time we hold our board certification process to the same standard.

**DR. SCHWARTZ** is a board-certified emergency physician with a background in public health policy whose previous research interests include helicopter air ambulance billing, LGBT rights, firearm violence, and sex education in schools. He is currently on sabbatical.

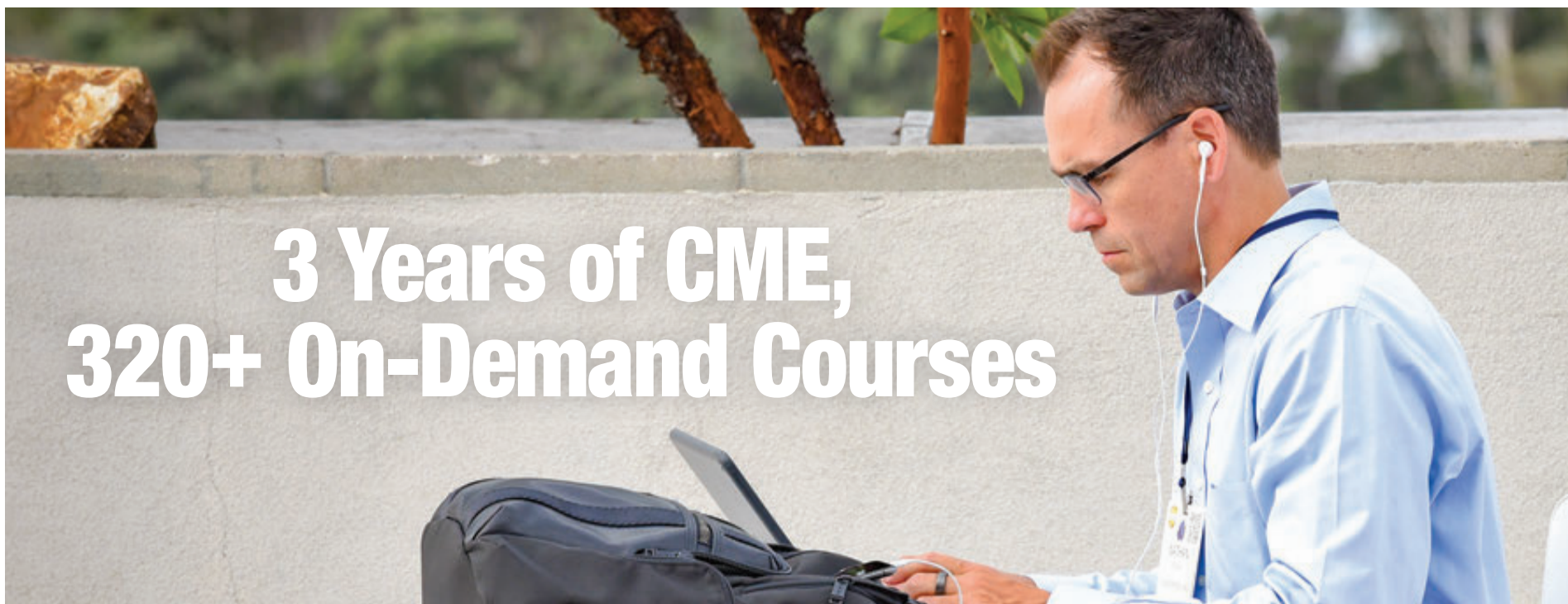
**DR. BABINEAU** is a board-certified emergency physician and assistant professor of emergency medicine at the Dartmouth-Hitchcock Medical Center in Lebanon, New Hampshire. His academic interests include resident education and clinical decision making.

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# STAT MedEvac Response to COVID-19

Strategies to help patients, maintain safety, and preserve resources during a pandemic

by NICHOLAS GEORGE, MD; GREG FELOCK, MD; FRANCIS GUYETTE, MD; CHRISTIAN MARTIN-GILL, MD; JEFFREY NUSBAUM, MD; DYLAN MORRIS, MD; AND LEONARD WEISS, MD

COVID-19 has infected more than 247 million people worldwide, leading to over 5 million deaths.<sup>1</sup> Distribution of critically ill patients to available critical care units and tertiary centers for specialized care has been an essential strategy to maximize health system resources. These circumstances have put a strain on and created unique needs for air medical transport in the United States.

STAT MedEvac is a regional critical care transport network serving a catchment area of roughly 4 million people. Affiliated with the University of Pittsburgh Medical Center, STAT MedEvac transports 13,000 patients per year, operating 18 base sites serving five states and the District of Columbia. Since March 2020, we have developed and refined comprehensive procedures to address the clinical needs posed by the COVID-19 pandemic and, to date, have transported over 2,000 confirmed or suspected COVID-19 patients.

## Clinician Safety and Personal Protective Equipment (PPE)

Early in the pandemic, managing uncertainty regarding transmission, diagnosis, prevention, and treatment called for definitive, dynamic procedures. For real-time education and communication, we implemented weekly systemwide video conferences to discuss current recommendations, answer questions, and facilitate necessary changes. Daily operations calls at shift change addressed more immediate needs.

To reduce on-duty exposure, we established a preshift health assessment. Staff who screened positive were referred to regional management and occupational health. We also enacted universal masking while on duty; instituted daily cleanings; and deployed physical distancing and barriers in our administrative offices, maintenance areas, and communications center.

A three-tiered system identified patient COVID-19 status prior to transport. First, our referral center screened for known infection. Once a transport asset was requested, our communications center performed a second-level screen with the referring facility including symptoms and testing for COVID-19. At bedside, crews performed a third, more thorough screening based on symptoms, lab studies, and clinical assessment to identify patients of interest (PUIs). In accordance with recommendations from the World Health Organization (WHO) and the Air Medical Physician Association (AMPA), personnel used airborne precautions for all PUIs.<sup>2</sup>

During the first wave of COVID-19, we employed a PPE strategy that included surgical masks for all patients and crew, escalating to eyewear, N95 mask, surgical gown, and gloves if the patient met COVID-19 high-risk criteria (including any of the following: positive or pending COVID-19 test, isolation status, close contacts within 21 days, fever absent alternate source, suspected respiratory infection, noninvasive or high-flow ventilation, or need for aerosolizing procedures). We had no known patient-to-staff case transmission during that time. However, the second wave brought an increasing number of COVID-positive patients missed by screening, including trauma and stroke patients from missions where limited history was available. To mitigate unexpected crewmember quarantines, in October 2020, we adjusted our requirements for crew to wear elevated levels of PPE for all patient interactions. To offset supply concerns, N95s were reused per Centers for Disease Control and Prevention recommendations. Additionally, each crewmember was issued a half-face respirator containing removable P100 filters that permitted easy disinfection. To ensure appropriate resource allocation, we tracked PPE stock counts daily at each base and communicated to central management.

## Vehicle Logistics

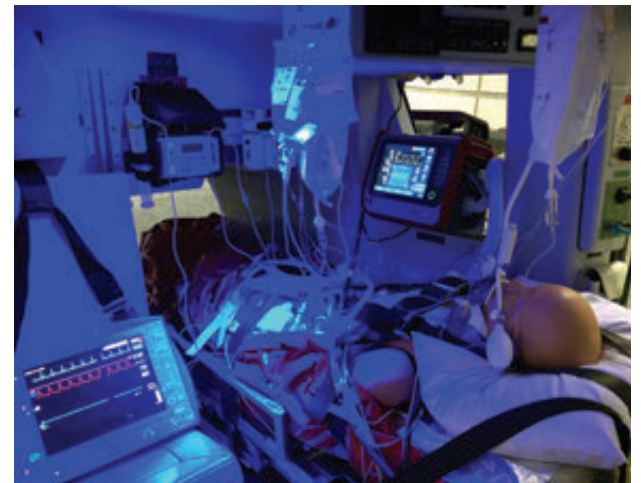
The air medical transport environment (in Airbus EC-135 and EC-145 helicopters) presented a challenge to maintaining isolation precautions because patients and staff were contained



Medical scene mission during the COVID-19 pandemic.



STAT crew at base, ready with PPE.



Typical setup inside STAT MedEvac aircraft, featuring a loaded patient on ventilator, multiple infusions, and balloon pump.



EC-135 on top of the University of Pittsburgh Medical Center Mercy Hospital helipad.

in small compartments with unavoidable prolonged exposure (median flight time 19 minutes; interquartile range 13–31 minutes). Because only a cloth divider separates the cockpit and main cabin, even our pilots don N95 masks for all patient transports. To avoid unnecessary exposure, they remain in the cockpit, stay out of patient clinical areas, and do not assist in patient loading or unloading. In the aircraft cabin, outside air ventilation is selected over air recycling.

Following transport of COVID-19 patients or PUIs, aircraft and equipment undergo a regimented decontamination process. All equipment is removed from the aircraft, and the floor of the airframe, the stretcher, and equipment tracks are swept. The entire patient compartment and all equipment are then

sprayed with disinfectant (3M's TB Quat) and allowed to dry. After an appropriate dwell time (minimum 20 minutes), the main cabin is wiped down with antiseptic wipes before returning the equipment. Recently, we adopted the use of an AeroClave fogger for more efficient decontamination.

## Clinical Care

### Aerosolizing Procedures

Aerosolizing procedures such as intubation, nebulized medications, and noninvasive ventilation (NIV) create the highest risk of virus transmission. Additionally, certain emergent procedures (needle decompression) carry some risk. We limit aero-

## KEY POINTS

- Air transport of COVID-19 patients poses unique challenges beyond the typical critical care environment.
- Comprehensive and adaptive guidelines are paramount in successfully managing critically ill patients during this unprecedented pandemic.
- A well-rounded, supportive, and in-tune team contributes to quality care and safety in these high-stakes environments.

solizing procedures in the aircraft, performing them prior to transport when possible. We use video laryngoscopy to optimize first-pass success and reduce exposure time. During NIV, we place in-line HEPA filtration and use nonvented masks while monitoring and minimizing leaks. Nebulization and high-flow nasal cannula (HFNC) were initially used on a limited basis; however, more recently with improved protection assurance through PPE and vaccinations, utilization has increased. These interventions have been provided for COVID-19 and other patients, using the highest-level PPE.

### Oxygen Consumption

COVID-19 hypoxemic respiratory failure requires massive oxygen delivery consuming up to 80 LPM through NIV and HFNC. Our aircraft are fitted with either one or two M-size main oxygen cylinders ( $\geq 1,200$  psi) and two portable cylinders (sizes D and E, 2,000 psi). Despite having more than 2,000 L, oxygen remains a limiting factor. Crew training and a custom smartphone application facilitates oxygen consumption calculations prior to transport, supplemented by bedside discussions with a medical director to ensure adequate supply, delivery method, and  $FiO_2$  optimization. A minimum 30-minute oxygen reserve is required for safety.

### Mechanically Ventilated Patients

Nearly one-quarter of STAT MedEvac transports are mechanically ventilated. Patients presenting with COVID-19-related respiratory failure present unique challenges in transport. To minimize risk to the crew, we use an in-line HEPA viral filter and clamp the endotracheal tube prior to any transitions. Treatment of hypoxemia in intubated patients generally follows the ARDSnet mechanical ventilation protocol.<sup>3</sup> We primarily use adaptive support ventilation (ASV) with the Hamilton-T1, a pressure-regulated volume-control mode that automatically adjusts tidal volume and respiratory rate based on a target minute volume, dynamic lung compliance, and the Otis work of breathing equation.<sup>4</sup> While this mode has been successful in most COVID-19 patients, some require alternate ventilation strategies.

### Prone Positioning

Prone hypoxic COVID-19/acute respiratory distress syndrome (ARDS) patients refractory to other treatments improves pulmonary mechanics and oxygenation.<sup>5</sup> We have performed prone transports since 2012<sup>6</sup> and provided all staff with refresher training using printed and video materials. Patient characteristics for which prone is considered include a P:F <150 despite  $FiO_2 > 0.6$  and PEEP >10. Self-prone for awake patients is uncommon due to the limited space and aircraft restraint systems.

### Extracorporeal Membrane Oxygenation (ECMO)

ECMO may rescue patients with refractory hypoxemia. We provide both primary and secondary ECMO transport. For primary ECMO, we deploy a cannulation team including two physician proceduralists and a perfusionist to outlying facilities to cannulate patients who would otherwise be too ill to transport safely. Secondary transports require only our standard crew and a perfusionist to retrieve a patient already on ECMO. ECMO missions require additional planning, equipment, and time.

## Health Resource Management and Telemedicine

Across our health system, we experienced capacity shortages due to both bed space and staffing. Our medical direction and patient referral center work closely together with a COVID-19 resource center for the health system. This system provides teleconsultation to referring hospitals to maximize their ability to care for critically ill COVID patients on-site and to limit transfers for patients who both exceed local resources and might still benefit from quaternary care. As such, we have the unique ability to optimize bed utilization within the regional system, ensuring that destinations are appropriate, and patients are distributed according to available resources.

To conclude, during this global crisis, we found that an adaptive, comprehensive approach to operations and clinical care culti-

vated a safe and promising experience for our patients and personnel engaged in critical care air medical transport. +

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A single 1500-mg dose of DALVANCE provides a **full course of therapy**,<sup>1</sup> helping your patients avoid hospitalization for daily ABSSSI treatment

**Free to go** **Dalvance**®   
(dalbavancin) for injection  
500 mg

## INDICATION AND USAGE

DALVANCE® (dalbavancin) for injection is indicated for the treatment of adult and pediatric patients with acute bacterial skin and skin structure infections (ABSSSI) caused by designated susceptible strains of Gram-positive microorganisms: *Staphylococcus aureus* (including methicillin-susceptible and methicillin-resistant isolates), *Streptococcus pyogenes*, *Streptococcus agalactiae*, *Streptococcus dysgalactiae*, *Streptococcus anginosus* group (including *S. anginosus*, *S. intermedius*, *S. constellatus*) and *Enterococcus faecalis* (vancomycin-susceptible isolates).

To reduce the development of drug-resistant bacteria and maintain the effectiveness of DALVANCE and other antibacterial agents, DALVANCE should be used only to treat or prevent infections that are proven or strongly suspected to be caused by susceptible bacteria.

## IMPORTANT SAFETY INFORMATION

### Contraindications

DALVANCE is contraindicated in patients with known hypersensitivity to dalbavancin.

**Please see additional Important Safety Information on next page. Please also see Brief Summary of full Prescribing Information on adjacent page or visit [https://www.rxabbvie.com/pdf/dalvance\\_pi.pdf](https://www.rxabbvie.com/pdf/dalvance_pi.pdf).**

dent. Below are excerpts from our conversation, which have been edited for length and clarity, and you can watch our entire interview at [www.acepnow.com/article/conversation-with-acep-president-dr-gillian-schmitz](http://www.acepnow.com/article/conversation-with-acep-president-dr-gillian-schmitz).

**Cedric Dark: How's the job going so far?**

**Gillian Schmitz:** It has been a very busy couple weeks! I feel like it's been going non-stop. We just got back from Boston, and it was very invigorating and exciting to be able to see everybody in person again. I'm hitting the ground running and really excited to get started.

**CD: I remember seeing you in Boston in the elevator at the end of an extremely long day. How do you handle things like work-life balance, especially considering the fact that we, the ACEP members and the emergency medicine family, have asked so much of you over the past decade of your life?**

**GS:** Work-life balance is so important for all emergency physicians. I'm a runner, and I'm also a tennis player. [Those hobbies] keep me grounded, but I think the support system I have within our community of emergency physicians and, most notably, my family and kids help ground me the most. Having time

to unwind after work, get lost in a TV show or book, or just spend time with my friends and family gives me time to absorb it all and stay grounded.

**CD: What's something the average ACEP member might not know about you to help them understand you a little bit more as a leader in the College?**

**GS:** I met my husband in medical school, sitting next to each other during orientation at a White Sox game. He had a military career, and because of his career, we've lived and practiced all over the country, so my career has been all over the place. I've done a lot of

academic practice, but I've worked in some rural emergency departments, a freestanding emergency department, and started my own small democratic group. These have all given me perspective on how different our practices can be and in different resource environments.

**CD: How do you intend to bridge that divide coming from all these different member perspectives?**

**GS:** Unlike other specialties that lean one way or the other politically, emergency medicine is right down the middle. We are 50 percent Republican, 50 percent Democrat.

**DALVANCE® (dalbavancin) for injection, for intravenous use** PROFESSIONAL BRIEF SUMMARY  
CONSULT PACKAGE INSERT FOR FULL PRESCRIBING INFORMATION

**INDICATION AND USAGE**  
**Acute Bacterial Skin and Skin Structure Infections**  
DALVANCE® is indicated for the treatment of adult and pediatric patients with acute bacterial skin and skin structure infections (ABSSSI) caused by designated susceptible strains of the following Gram-positive microorganisms: *Staphylococcus aureus* (including methicillin-susceptible and methicillin-resistant isolates), *Streptococcus pyogenes*, *Streptococcus agalactiae*, *Streptococcus dysgalactiae*, *Streptococcus anginosus* group (including *S. anginosus*, *S. intermedius*, *S. constellatus*) and *Enterococcus faecalis* (vancomycin susceptible isolates).

**Usage**  
To reduce the development of drug-resistant bacteria and maintain the effectiveness of DALVANCE and other antibacterial agents, DALVANCE should be used only to treat or prevent infections that are proven or strongly suspected to be caused by susceptible bacteria. When culture and susceptibility information are available, they should be considered in selecting or modifying antibacterial therapy. In the absence of such data, local epidemiology and susceptibility patterns may contribute to the empiric selection of therapy.

**CONTRAINDICATIONS**  
DALVANCE is contraindicated in patients with known hypersensitivity to dalbavancin.

**WARNINGS AND PRECAUTIONS**  
**Hypersensitivity Reactions**  
Serious hypersensitivity (anaphylactic) and skin reactions have been reported in patients treated with DALVANCE. If an allergic reaction to DALVANCE occurs, discontinue treatment with DALVANCE and institute appropriate therapy for the allergic reaction. Before using DALVANCE, inquire carefully about previous hypersensitivity reactions to other glycopeptides. Due to the possibility of cross-sensitivity, carefully monitor for signs of hypersensitivity during treatment with DALVANCE in patients with a history of glycopeptide allergy [see Patient Counseling Information].

**Infusion-Related Reactions**  
DALVANCE is administered via intravenous infusion, using a total infusion time of 30 minutes to minimize the risk of infusion-related reactions. Rapid intravenous infusions of DALVANCE can cause flushing of the upper body, urticaria, pruritus, rash, and/or back pain. Stopping or slowing the infusion may result in cessation of these reactions.

**Hepatic Effects**  
In Phase 2 and 3 clinical trials, more DALVANCE than comparator-treated subjects with normal baseline transaminase levels had post-baseline alanine aminotransferase (ALT) elevation greater than 3 times the upper limit of normal (ULN). Overall, abnormalities in liver tests (ALT, AST, bilirubin) were reported with similar frequency in the DALVANCE and comparator arms [see Adverse Reactions].

**Clostridioides difficile-Associated Diarrhea**  
*Clostridioides difficile*-associated diarrhea (CDAD) has been reported in users of nearly all systemic antibacterial drugs, including DALVANCE, with severity ranging from mild diarrhea to fatal colitis. Treatment with antibacterial agents can alter the normal flora of the colon, and may permit overgrowth of *C. difficile*.

*C. difficile* produces toxins A and B which contribute to the development of CDAD. Hypertoxin-producing strains of *C. difficile* cause increased morbidity and mortality, as these infections can be refractory to antibacterial therapy and may require colectomy. CDAD must be considered in all patients who present with diarrhea following antibacterial use. Careful medical history is necessary because CDAD has been reported to occur more than 2 months after the administration of antibacterial agents.

If CDAD is suspected or confirmed, ongoing antibacterial use not directed against *C. difficile* should be discontinued, if possible. Appropriate measures such as fluid and electrolyte management, protein supplementation, antibacterial treatment of *C. difficile*, and surgical evaluation should be instituted as clinically indicated.

**Development of Drug-Resistant Bacteria**  
Prescribing DALVANCE in the absence of a proven or strongly suspected bacterial infection or a prophylactic indication is unlikely to provide benefit to the patient and increases the risk of the development of drug-resistant bacteria.

**ADVERSE REACTIONS**  
The following clinically significant adverse reactions are also discussed elsewhere in the labeling:

- Hypersensitivity Reactions [see Warnings and Precautions]
- Infusion Related Reactions [see Warnings and Precautions]
- Hepatic Effects [see Warnings and Precautions]
- Clostridioides difficile*-associated Diarrhea [see Warnings and Precautions]

**Clinical Trials Experience**  
Because clinical trials are conducted under widely varying conditions, adverse reaction rates observed in clinical trials of DALVANCE cannot be directly compared to rates in the clinical trials of another drug and may not reflect rates observed in practice.

**Clinical Trials Experience in Adult Patients**  
Adverse reactions were evaluated for 2473 patients treated with DALVANCE: 1778 patients were treated with DALVANCE in seven Phase 2/3 trials comparing DALVANCE to comparator antibacterial drugs and 695 patients were treated with DALVANCE in one Phase 3 trial comparing DALVANCE single and two-dose regimens. The median age of patients treated with DALVANCE was 48 years, ranging between 16 and 93 years. Patients treated with DALVANCE were predominantly male (59.5%) and White (81.2%).

**Serious Adverse Reactions and Adverse Reactions Leading to Discontinuation**  
Serious adverse reactions occurred in 121/2473 (4.9%) of patients treated with any regimen of DALVANCE. In the Phase 2/3 trials comparing DALVANCE to comparator, serious adverse reactions occurred in 109/1778 (6.1%) of patients in the DALVANCE group and 80/1224 (6.5%) of patients in the comparator group. In a Phase 3 trial comparing DALVANCE single and two-dose regimens, serious adverse reactions occurred in 7/349 (2.0%) of patients in the DALVANCE single dose group and 5/346 (1.4%) of patients in the DALVANCE two-dose group. DALVANCE was discontinued due to an adverse reaction in 64/2473 (2.6%) patients treated with any regimen of DALVANCE. In the Phase 2/3 trials comparing DALVANCE to comparator, DALVANCE was discontinued due to an adverse reaction in 53/1778 (3.0%) of patients in the DALVANCE group and 35/1224 (2.9%) of patients in the comparator group. In a Phase 3 trial comparing DALVANCE single and two-dose regimens, DALVANCE was discontinued due to

an adverse reaction in 6/349 (1.7%) of patients in the DALVANCE single dose group and 5/346 (1.4%) of patients in the DALVANCE two-dose group.

**Most Common Adverse Reactions**  
The most common adverse reactions in patients treated with DALVANCE in Phase 2/3 trials were nausea (5.5%), headache (4.7%), and diarrhea (4.4%). The median duration of adverse reactions was 3.0 days in patients treated with DALVANCE. In the Phase 2/3 trials comparing DALVANCE to comparator, the median duration of adverse reactions was 3.0 days for patients in the DALVANCE group and 4.0 days in patients in the comparator group. In a Phase 3 trial comparing DALVANCE single and two-dose regimens, the median duration of adverse reactions was 3.0 days for patients in the DALVANCE single and two-dose group.

Table 1 lists selected adverse reactions occurring in 2% or more of patients treated with DALVANCE in Phase 2/3 clinical trials.

**Table 1. Selected Adverse Reactions Occurring in ≥ 2% of Patients Receiving DALVANCE in Phase 2/3 Trials (Number (%) of Patients)**

Adverse Reactions	DALVANCE (N = 1778)	Comparator* (N = 1224)
Nausea	98 (5.5)	78 (6.4)
Diarrhea	79 (4.4)	72 (5.9)
Headache	83 (4.7)	59 (4.8)
Vomiting	50 (2.8)	37 (3)
Rash	48 (2.7)	30 (2.4)
Pruritus	38 (2.1)	41 (3.3)

\* Comparators included linezolid, cefazolin, cephalexin, and vancomycin.

In the Phase 3 trial comparing the single and two-dose regimen of DALVANCE, the adverse reaction that occurred in 2% or more of patients treated with DALVANCE was nausea (3.4% in the DALVANCE single dose group and 2% in the DALVANCE two-dose group).

The following selected adverse reactions were reported in DALVANCE treated patients at a rate of less than 2% in these clinical trials:

**Blood and lymphatic system disorders:** anemia, hemorrhagic anemia, leucopenia, neutropenia, thrombocytopenia, petechiae, eosinophilia, thrombocytosis  
**Gastrointestinal disorders:** gastrointestinal hemorrhage, melena, hematochezia, abdominal pain  
**General disorders and administration site conditions:** infusion-related reactions  
**Hepatobiliary disorders:** hepatotoxicity  
**Immune system disorders:** anaphylactic reaction  
**Infections and infestations:** *Clostridioides difficile* colitis, oral candidiasis, vulvovaginal mycotic infection  
**Investigations:** hepatic transaminases increased, blood alkaline phosphatase increased, international normalized ratio increased, blood lactate dehydrogenase increased, gamma-glutamyl transferase increased  
**Metabolism and nutrition disorders:** hypoglycemia  
**Nervous system disorders:** dizziness  
**Respiratory, thoracic and mediastinal disorders:** bronchospasm  
**Skin and subcutaneous tissue disorders:** rash, pruritus, urticaria  
**Vascular disorders:** flushing, phlebitis, wound hemorrhage, spontaneous hematoma  
**Alanine Aminotransferase (ALT) Elevations**

Among patients with normal baseline ALT levels treated with DALVANCE 17 (0.8%) had post baseline ALT elevations greater than 3 times the upper limit of normal (ULN) including five subjects with post-baseline ALT values greater than 10 times ULN. Among patients with normal baseline ALT levels treated with non-DALVANCE comparators 2 (0.2%) had post-baseline ALT elevations greater than 3 times the upper limit of normal. Fifteen of the 17 patients treated with DALVANCE and one comparator patient had underlying conditions which could affect liver enzymes, including chronic viral hepatitis, history of alcohol abuse and metabolic syndrome. In addition, one DALVANCE-treated subject in a Phase 1 trial had post-baseline ALT elevations greater than 20 times ULN. ALT elevations were reversible in all subjects with follow-up assessments. No comparator-treated subject with normal baseline transaminases had post-baseline ALT elevation greater than 10 times ULN.

**Clinical Trials Experience in Pediatric Patients**  
Adverse reactions were evaluated in one Phase 3 pediatric clinical trial which included 161 pediatric patients from birth to less than 18 years of age with ABSSSI treated with DALVANCE (83 patients treated with a single dose of DALVANCE and 78 patients treated with a two-dose regimen of DALVANCE) and 30 patients treated with comparator agents for a treatment period up to 14 days. The median age of pediatric patients treated with DALVANCE was 9 years, ranging from birth to <18 years. The majority of patients were male (62.3%) and White (89.0%). The safety findings of DALVANCE in pediatric patients were similar to those observed in adults.

**Serious Adverse Reactions and Adverse Reactions Leading to Discontinuation**  
Serious adverse reactions (SARs) occurred in 3/161 (1.9%) of patients treated with DALVANCE, all in the single-dose arm. There were no adverse reactions leading to DALVANCE discontinuation.

**Most Common Adverse Reactions**  
Most common adverse reaction occurring in more than 1% of pediatric patients 2/161 (1.2%) was pyrexia.

**Other Adverse Reactions**  
The following selected adverse reactions were reported in DALVANCE-treated patients at a rate of less than 1% in this pediatric clinical trial:  
**Gastrointestinal disorders:** diarrhea  
**Nervous system disorders:** dizziness  
**Skin and subcutaneous tissue disorders:** pruritus

**Post Marketing Experience**  
The following adverse reaction has been identified during post-approval use of dalbavancin. Because the reaction is reported voluntarily from a population of uncertain size, it is not possible to reliably estimate the frequency or establish a causal relationship to drug exposure.  
**General disorders and administration site conditions:** Back pain as an infusion-related reaction [see Warnings and Precautions].

**DRUG INTERACTIONS**  
**Drug-Laboratory Test Interactions**  
Drug-laboratory test interactions have not been reported. DALVANCE at therapeutic concentrations does not artificially prolong prothrombin time (PT) or activated partial thromboplastin time (aPTT).

**Drug-Drug Interactions**

No clinical drug-drug interaction studies have been conducted with DALVANCE. There is minimal potential for drug-drug interactions between DALVANCE and cytochrome P450 (CYP450) substrates, inhibitors, or inducers.

**USE IN SPECIFIC POPULATIONS**

**Pregnancy**  
**Risk Summary**  
There are no adequate and well-controlled studies with DALVANCE in pregnant women to evaluate for a drug-associated risk of major birth defects, miscarriage or adverse developmental outcomes.

No treatment-related malformations or embryo-fetal toxicity were observed in pregnant rats or rabbits at clinically relevant exposures of dalbavancin. Treatment of pregnant rats with dalbavancin at 3.5 times the human dose on an exposure basis during early embryonic development and from implantation to the end of lactation resulted in delayed fetal maturation and increased fetal loss, respectively [see Data].

The estimated background risk of major birth defects and miscarriage for the indicated population is unknown. All pregnancies have a background risk of birth defect, loss, or other adverse outcomes. In the U.S. general population, the estimated background risk of major birth defects and miscarriage in clinically recognized pregnancies is 2% to 4% and 15% to 20%, respectively.

**Data**

**Animal Data**  
No evidence of embryo or fetal toxicity was found in the rat or rabbit at a dose of 15 mg/kg/day (1.2 and 0.7 times the human dose on an exposure basis, respectively). Delayed fetal maturation was observed in the rat at a dose of 45 mg/kg/day (3.5 times the human dose on an exposure basis).

In a rat prenatal and postnatal development study, increased embryo lethality and increased offspring deaths during the first week post-partum were observed at a dose of 45 mg/kg/day (3.5 times the human dose on an exposure basis).

**Lactation**

**Risk Summary**  
There are no data on the presence of dalbavancin or its metabolite in human milk, the effects on the breast-fed child, or the effects on milk production. Dalbavancin is excreted in the milk of lactating rats. When a drug is present in animal milk, it is likely that the drug will be present in human milk.

The developmental and health benefits of breastfeeding should be considered along with the mother's clinical need for DALVANCE and any potential adverse effects on the breast-fed child from DALVANCE or from the underlying maternal condition.

**Pediatric Use**  
The safety and effectiveness of DALVANCE for the treatment of ABSSSI has been established in pediatric patients aged birth to less than 18 years. Use of DALVANCE for this indication is supported by evidence from adequate and well-controlled studies in adults with additional pharmacokinetic and safety data in pediatric patients aged birth to less than 18 years [see Adverse Reactions]. There is insufficient information to recommend dosage adjustment for pediatric patients with ABSSSI and CLcr less than 30 mL/min/1.73m<sup>2</sup>.

**Geriatric Use**  
Of the 2473 patients treated with DALVANCE in Phase 2 and 3 clinical trials, 403 patients (16.3%) were 65 years of age or older. The efficacy and tolerability of DALVANCE were similar to comparator regardless of age. The pharmacokinetics of DALVANCE was not significantly altered with age; therefore, no dosage adjustment is necessary based on age alone.

DALVANCE is substantially excreted by the kidney, and the risk of adverse reactions may be greater in patients with impaired renal function. Because elderly patients are more likely to have decreased renal function, care should be taken in dose selection in this age group.

**Renal Impairment**  
In patients with renal impairment whose known CLcr is less than 30 mL/min and who are not receiving regularly scheduled hemodialysis, the recommended regimen for DALVANCE is 1125 mg, administered as a single dose, or 750 mg followed one week later by 375 mg. No dosage adjustment is recommended for patients receiving regularly scheduled hemodialysis, and DALVANCE can be administered without regard to the timing of hemodialysis. There is insufficient information to recommend dosage adjustment for pediatric patients younger than 18 years with CLcr less than 30 mL/min/1.73m<sup>2</sup>.

**Hepatic Impairment**  
No dosage adjustment of DALVANCE is recommended for patients with mild hepatic impairment (Child-Pugh Class A). Caution should be exercised when prescribing DALVANCE to patients with moderate or severe hepatic impairment (Child-Pugh Class B or C) as no data are available to determine the appropriate dosing in these patients.

**OVERDOSAGE**  
Specific information is not available on the treatment of overdose with DALVANCE, as dose-limiting toxicity has not been observed in clinical studies. In Phase 1 studies, healthy volunteers have been administered cumulative doses of up to 4500 mg over a period of up to 8 weeks (not an approved dosing regimen), with no signs of toxicity or laboratory results of clinical concern.

Treatment of overdose with DALVANCE should consist of observation and general supportive measures. Although no information is available specifically regarding the use of hemodialysis to treat overdose, in a Phase 1 study in patients with renal impairment less than 6% of the recommended dalbavancin dose was removed.

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Although we try to stick to medicine, a lot of what we do in emergency medicine has to do with public health, and there are gray areas. Half of the College wants us to take one action to be vocal and the other half has a very different opinion, and you can be very alienating of half of your membership no matter what you say or do. Our strategy has been that we are the American College of Emergency Physicians, not the Republican College or Democratic College.

**CD: ACEP is looking at a strategic plan for the next several years. What will ACEP be doing over the next two to three years that might transform the organization and the specialty?**

**GS:** We need to focus on the individual emergency physician. What I'm hearing from mem-

bers is that we joined ACEP because we want someone to fight for us, to represent us and our needs. Our strategic pivot is going to be around how we best advocate for the emergency physician.

**CD: Looking into that landscape, with the pandemic hopefully coming to an end, what do you think the value proposition is for ACEP?**

**GS:** The sense of community that we have within ACEP and within the emergency medicine specialty is, for me, an opportunity to recharge my batteries of being around like-minded individuals, feeling a sense of home and of coming together with my colleagues. That's one value of membership.

The second value involves the numerous resources and tools ACEP has for our members.

Specific to COVID, we have a now nationally recognized *COVID-19 Field Guide* that has the most up-to-date information and best practices pertaining to emergency physicians. Beyond COVID, there are so many different resources on how to advance your career, how to get promoted, leadership opportunities in the publications and national committees. Those are all things that helped me advance my career that I wouldn't have been able to do by myself as an individual.

The third value is advocacy, and this is what ACEP does better than anybody else, but many emergency physicians don't really even understand what advocacy is. A lot of what ACEP does is prevent bad things from happening, and that's a hard sell because many people don't even see those bad things come to fruition because we had an active role in preventing them.

**CD: There are some big issues that I think a lot of members are really concerned about, one of which is what happens with corporate medicine. What do you think the College's role is in the management of our practices, and how do you think the average emergency physician can regain control of their livelihood?**

**GS:** I think that's a great question, and there has been this perception that ACEP is afraid to talk about it or that we're in bed with CMGs [contract management groups]. I think this is really going to be a focal point of my presidency—starting to talk about it. But let's talk about it with data and truth and not by innuendos and emotionally charged rhetoric that isn't necessarily accurate. Because just like people spread rumors about the vaccine and ivermectin, we need to be able to have open discussions that are respectful and look at issues that have been very divisive within our specialty. If we look historically, when I graduated from residency, I had a choice of where I practiced and the practice model that I went into. Nowadays, my residents don't have that choice.

We've seen such consolidation across the market, across the entire health care industry. Hospitals are now health systems. Insurance companies, where there used to be dozens and dozens of them, now there are three or four, and in many markets, there may be one. Physicians are more likely to be employed by either an employer or physician staffing group than they are to own their own practice, and because of that, we've become increasingly divorced from how we're reimbursed. My perception is that most emergency physicians have a very negative view of the corporatization of emergency medicine, and I think we have to acknowledge that.

What's important for our members to understand is that the corporatization of medicine is not just large corporate groups. This is happening in academic practices. It's happening in small democratic groups. This happened in the military, where we have people in the C-suite, administrators, nurse officers telling us how to do our jobs, and it's incredibly frustrating to feel that you have lost control over your practice. How do we empower physicians to have that ability to control their practice?

**CD: What do you think the leadership of ACEP is doing in regard to the role of nonphysicians in emergency medicine?**

**GS:** ACEP has always advocated for emergency physician-led care. We are vehemently fighting against independent practice, and it's been very concerning, particularly in the midst of COVID, the amount of states that have tried to pass legislation on independent practice of nonphysician providers. We have won some, we have lost some, and this is going to be a long-haul fight of really advocating the value of emergency physician-led care in the emergency department.

**CD: In Boston, the Council unanimously accepted an amended version of Resolution 31, which says that ACEP is supposed to submit a resolution to the June 2022 AMA House of Delegates Annual Meeting promoting the concepts of Arizona House Bill 2622 as a model state and national legislation. The goal is to protect emer-**

## IMPORTANT SAFETY INFORMATION (continued)

### Warnings and Precautions

#### Hypersensitivity Reactions

Serious hypersensitivity (anaphylactic) and skin reactions have been reported with glycopeptide antibacterial agents, including DALVANCE. Exercise caution in patients with known hypersensitivity to glycopeptides due to the possibility of cross-sensitivity. If an allergic reaction occurs, treatment with DALVANCE should be discontinued.

#### Infusion-related Reactions

Rapid intravenous infusion of DALVANCE can cause reactions, including flushing of the upper body, urticaria, pruritus, rash, and/or back pain.

#### Hepatic Effects

ALT elevations with DALVANCE treatment were reported in clinical trials.

#### *Clostridioides difficile*-associated Diarrhea

*Clostridioides difficile*-associated diarrhea (CDAD) has been reported with nearly all systemic antibacterial agents, including DALVANCE, with severity ranging from mild diarrhea to fatal colitis. Evaluate if diarrhea occurs.

#### Development of Drug-resistant Bacteria

Prescribing DALVANCE in the absence of a proven or strongly suspected bacterial infection or a prophylactic indication is unlikely to provide benefit to the patient and increases the risk of the development of drug-resistant bacteria.

#### Adverse Reactions

The most common adverse reactions in adult patients treated with DALVANCE in Phase 2/3 trials were nausea (5.5%),

headache (4.7%), and diarrhea (4.4%).

The most common adverse reaction that occurred in more than 1% of pediatric patients was pyrexia (1.2%).

#### Use in Specific Populations

- There are no adequate and well-controlled studies with DALVANCE use in pregnant or nursing women. The developmental and health benefits of breastfeeding should be considered along with the mother's clinical need for DALVANCE and any adverse effects on the breast-fed child from DALVANCE or from the underlying maternal condition.
- In patients with renal impairment whose known creatinine clearance (CLcr) is less than 30 mL/min and who are not receiving regularly scheduled hemodialysis, the recommended regimen of DALVANCE is 1125 mg, administered as a single dose, or 750 mg followed one week later by 375 mg. No dosage adjustment is recommended for patients receiving regularly scheduled hemodialysis, and DALVANCE can be administered without regard to the timing of hemodialysis. There is insufficient information to recommend dosage adjustment for pediatric patients younger than 18 years of age with CLcr less than 30 mL/min/1.73m<sup>2</sup>.
- Caution should be exercised when prescribing DALVANCE to patients with moderate or severe hepatic impairment (Child-Pugh Class B or C) as no data are available to determine the appropriate dosing in these patients.

Please also see Brief Summary of full Prescribing Information on adjacent page or visit [https://www.rxabbvie.com/pdf/dalvance\\_pi.pdf](https://www.rxabbvie.com/pdf/dalvance_pi.pdf).

Reference: 1. DALVANCE® (dalbavancin) [prescribing information]. Madison, NJ: Allergan USA, Inc.; 2021.

abbvie

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Free to go

**Dalvance**®   
(dalbavancin) for injection  
500 mg

CONTINUED on page 10

agency physicians from corporate workplace and/or employer retaliation when reporting safety, harassment, and fraud concerns at their places of work or government, and to also include independent and third-party contractors providing patient services at said facilities. Talk to me about due process from the standpoint of the College.

**GS:** Due process is the ability for physicians to stand up and speak out when they feel there is something going on in the department that shouldn't be, and we adamantly support that. We always have. ACEP has multiple policies on the importance of due process and advocating for that in every practice. We have in prior legislative sessions, and we'll be reintroducing this year a piece of legislation with Rep. Raul Ruiz on due process and holding third parties accountable that they are not allowed to waive those rights and that this is a fundamental right of every emergency physician.

**CD: What about our patients and our community? How does that fit into ACEP's vision as well?**

**GS:** As we pivot from advocating for not just the specialty but also for the emergency physician, we're not losing focus on the patient. Everything we do is about the patient, but



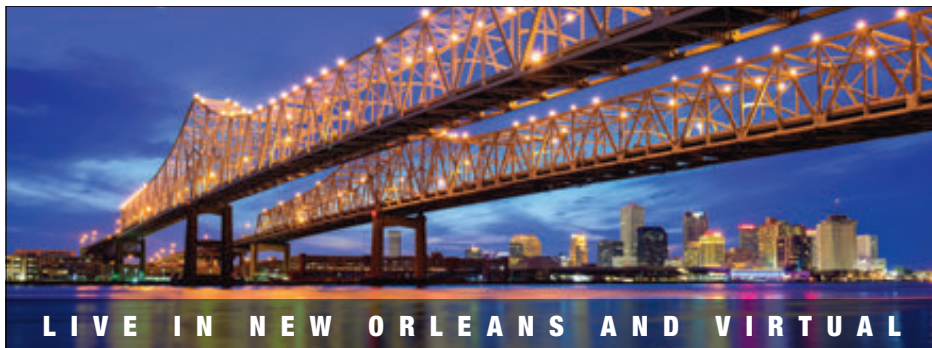
Cedric Dark, MD, MPH, FACEP, ACEP Now Medical Editor in Chief (left) and Gillian Schmitz, MD, FACEP, ACEP President.

when I get on an airplane with my kids, the first thing the flight attendant says is in the event of an emergency, put on your own oxygen mask first. I think that's what we're doing—we're realizing that if we don't take care of

each other first and foremost, we're not going to be able to provide effective patient care. If we're burnt out, exhausted, jaded, and cynical, we're not going to be able to take proactive care of our patients. +

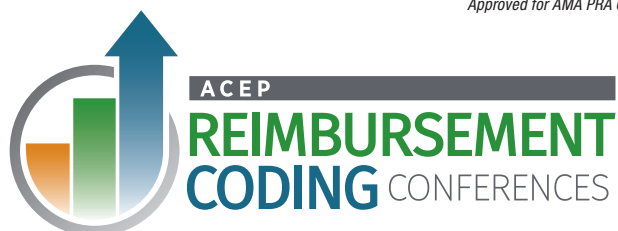


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## COMBATting COVID | CONTINUED FROM PAGE 1



Joseph Kanter, MD



Joneigh S. Khaldun, MD, MPH, FACEP



Steven J. Stack, MD, MBA, FACEP



Anne Zink, MD, FACEP



A protest against COVID-19 face mask mandates in Florida.

these measures, much of the worst harm caused in the most recent Delta variant surge could have been averted," he said.

It's also challenging to educate the public in the face of a developing scientific knowledge base. "While physicians and scientists understand the concept of not having full evidence or learning more and pivoting a response based on what one learns, the general public doesn't understand that," Dr. Khaldun said. "It's important for public health leaders, from a crisis communications perspective, to be first, be right, and be credible. That involves explaining what you know, what you don't know, and helping people understand that plans may change as we learn more and the virus changes."

In a similar vein, it's difficult to explain to the public that vaccines are still effective and important when they hear about people being infected, or even dying, once they've been vaccinated. "A coordinated, up-front national public health messaging effort early on would have been helpful to get ahead of this," Dr. Khaldun said.

### Overcoming Resistance to Mitigation Measures

Despite challenges, emergency physicians in public health leadership roles were able to find some ways to overcome obstacles. Joseph Kanter, MD, state health officer of the State of Louisiana and medical director of the Louisiana Department of Health in Baton Rouge, found that partnering with trusted messengers, such as clinicians and community leaders, worked well to disseminate information. These experts spoke at community centers, churches, association meetings, Q&A-and-answer format or at open discussion sessions. Sometimes meetings were held in conjunction with an opportunity to get tested for COVID or vaccinated.

Talking to people face-to-face worked well for Dr. Kanter, he believes, because it became harder to reach people through mass media or more top-down approaches as the pandemic became more politicized.

"The key is to be nonjudgmental," Dr. Kanter said. "Never judge someone for believing what they do, and work hard to listen to their concerns. Try to bring science and evidence to someone's concerns."

Anne Zink, MD, FACEP, chief medical officer at the Alaska Department of Health and Social Services in Anchorage, said the department partnered with officials of school districts, municipalities, tribes, and other community groups to determine what mitigation techniques and tools would work best for each of them specifically. "The 'one-size-fits-all' approach doesn't work in our state," she said. "Some rural communities only accessible by boat or plane have never had a COVID case, while others were hit incredibly hard."

Dr. Khaldun believes that launching a bipartisan commission that included people from the business community, academia, and multiple socioeconomic and demographic backgrounds to specifically promote vaccinations was successful because people often do not trust government or political leaders. "But they will trust their faith leader, neighbor, or doctor who they've known for years," she said. "It is important to recognize that and elevate trusted voices."

Communities have done better when public and private leaders collaborated to provide factual information and clear, apolitical guidance, Dr. Stack said. "A consistent focus on things that unite, rather than divide, communities exerts a powerfully positive effect on people," he said. "Most folks are generally kind, caring, and willing to pull together to help each other out if leaders communicate and model through a sense of common purpose their actions. When prominent persons focus instead on instilling conflict and division, the community does worse as a whole."

### Lessons Learned

Measures such as wearing masks and getting vaccines have been proven by science for more than a century, Dr. Stack said. "It's human sociology, not science, that has failed us as a

nation," he said. "Those who confront future public health emergencies would do well to focus quickly and intently on defusing disagreements, seeking common ground, and promoting cooperation that rises above politics to prioritize everyone's health and well-being."

Dr. Kanter recommends not waiting for an emergency to bring public health messengers on board. "The more partnerships you can create ahead of time, the more ongoing planning and preparedness can occur," he said. "This will make it easier to call on the help of these partners when a crisis occurs."

### Effects on the Field

Dr. Kanter believes that emergency physicians need to take on greater roles to ensure that the nation is equipped to handle a pandemic like COVID-19 in the future. "Experience shows that health care workers in and around the emergency room will bear the brunt of a crisis if we're unprepared," he said.

Along these lines, Dr. Zink challenges emergency physicians to take their skills outside of the emergency department and work upstream collectively instead of in silos. "These physicians are uniquely trained in and possess the skills to respond to emergencies like a pandemic; they're used to working with limited resources and partnering with different health care partners," she said.

Those same skill sets are needed to improve the future of health care. "I hope our profession can apply those same skills more broadly, such as by working to diminish racial and geographic inequities, because they are desperately needed," Dr. Zink said. "Choose an area of interest such as using EMS to more effectively help patients avoid the ER or work in the telehealth space. Employers of these physicians should financially support such efforts and make them part of their job description." +

**KAREN APPOLD** is an award-winning journalist with more than 25 years of editorial experience. She is based in Lehigh Valley, Pennsylvania.

# Council Resolutions Tackle Key Issues

## EMERGENCY PHYSICIANS WEIGH IN ON TOPICS MOST LIKELY TO IMPACT THE SPECIALTY

by STEPHANIE CAJIGAL

The ACEP Council, the College's governing body, meets every year to discuss and vote on resolutions affecting emergency physicians.

Any member can submit a resolution, but it must be in writing at least 90 days prior to the ACEP Scientific Assembly and be supported by at least one other ACEP member. If adopted, the resolutions become official ACEP policy.

This year at ACEP21 in Boston, the Council received a record 82 proposed resolutions. This was a big jump from only 58 resolutions considered in 2020 and 60 considered in 2019. Of the resolutions the Council considered this year, 56 were adopted, 15 were not adopted, 10 were referred to the Board of Directors, and one was referred to the Council Steering Committee.

Our editorial staff closely tracked a few of this year's resolutions due to their interest and impact on emergency physicians.

### Resolution 22: Expanding Diversity and Inclusion in Educational Programs

Adopted by the Council, Resolution 22 requires ACEP to survey its speakers and educational presenters and report on their demographics. The resolution also calls for ACEP to set guidelines for its educational content to include material on diversity, inclusion, and health care disparities as well as to ensure panel members come from diverse backgrounds.

The New York Chapter submitted this resolution, which noted, "differences in care and diagnosis related to age, gender, identity, race, culture, sexual orientation, physical disability/limitation, ethnicity and social status are classically understudied and taught."

The ACEP Education Committee has an ongoing objective to increase faculty diversity and to create programs that cover topics such as implicit bias and microaggressions in the setting of emergency medicine, according to background information prepared by Debbie Smithy, CMP, CAE, educational meetings director. In addition, the Educational Meetings Subcommittee has a strategy to increase diversity of speakers at ACEP meetings. Currently, ACEP members aren't required to report their ethnicity data, and that creates difficulty for meeting organizers who look to the membership database for speakers, as they must then do additional research to identify the ethnicity of speakers, according to the notes in the proposed resolution.

Dara Kass, MD, associate clinical professor of emergency medicine at Columbia University Vagelos College of Physicians and Surgeons, was not involved in the resolution but supports the College's effort to improve the diversity of its panelists. "Any time you deviate from the standard—which is historically white, male, able-bodied, and heterosexual—and decide you want to diversify, it takes effort," she said.

Dr. Kass is the founder of FemInEM, an organization that seeks to support the advancement of women working in emergency medicine. The organization created a speakers bureau to help conference planners find expert speakers from underrepresented groups.

When organizing a meeting panel, the first step is to know who is speaking, which is not always apparent by name or surface-level demographic information, according to Dr. Kass. For its programs, FemInEM creates demographic spreadsheets and aims for its panels to represent a wide swath of the population.

Dr. Kass encourages organizers to not only look for diversity in backgrounds but also diversity in thought. In 2018, for example, she organized a conference that included a lecture about reducing gun violence and recruited a politically conservative speaker who also owned guns. The other speakers did not meet this profile, and she wanted several different ideas to be presented.

Sometimes organizations need to provide financial support for inclusion goals. Dr. Kass feels it's important to recruit speakers from underrepresented groups who might not have the resources or time off to travel to a meeting. "Collecting demographic data is one thing, but removing barriers, like pay-



Discussion at the 2021 ACEP Council Meeting in Boston.

ing for meeting travel, takes diversity and inclusion efforts to a higher level."

### Resolution 31: Employment-Retaliation, Whistleblower, Wrongful Termination

Resolution 31 is a response to accounts of emergency physicians being fired because of public comments they made about working conditions during the height of the COVID-19 pandemic. This resolution was submitted by Olga Gokova, MD, FACEP; Rebecca Parker, MD, FACEP; Amish Shah, MD, FACEP; and the Arizona College of Emergency Physicians.

A few notable examples on this topic include Cleavon Gilman, MD, who was dismissed from his job at Yuma Regional Medical Center in Bellingham, Washington, because of tweets he sent in November 2020 about the surge of COVID-19 patients, according to the *Arizona Republic*. In one tweet, he said he was notified that all of the hospitals in Arizona were out of ICU beds.<sup>1</sup>

In March 2020, emergency physician Ming Lin, MD, was fired by PeaceHealth St. Joseph Medical Center in Washington after he publicly described what he felt were unsafe practices by the hospital. He complained, for example, that patients were being screened for COVID-19 inside the hospital rather than outside, where there was less of a risk of the virus spreading, *The Seattle Times* reported.<sup>2</sup>

Legislators in Arizona reacted to Dr. Gilman's case by introducing Arizona House Bill 2622.<sup>3</sup> The bill prohibits retaliation against a health professional who reports a safety, harassment, or fraud concern to a health care institution and, "having provided the health care institution a reasonable opportunity to address the report, provides information to a private health care accreditation organization or governmental entity concerning the activity, policy or practice that was the subject of the report." The bill also prohibits third-party contractors from taking retaliatory action against health care professionals who make such reports.

The ACEP Council adopted the resolution to submit a resolution to the June 2022 American Medical Association (AMA) House of Delegates Annual Meeting, "promoting the concepts of Arizona House Bill 2622 (2021)." The resolution also states the College will develop model legislation fashioned after the Arizona bill, which it will share with all ACEP chapters.

William J. Naber, MD, JD, associate professor of emergency

### What Is the ACEP Council?

The ACEP Council is the governing body of ACEP. It elects ACEP's Board of Directors, the President-Elect of the College, and, every two years, the Council Speaker and Vice Speaker. It also shapes policy. The Council is composed of:

- One voting councillor per Chapter
- One additional councillor for every 100 Chapter members
- One voting councillor per Section
- Eight voting councillors from the Emergency Medicine Residents' Association
- One councillor each for the Association of Academic Chairs of Emergency Medicine, the Council of Emergency Medicine Residency Directors, the Society for Academic Emergency Medicine, and the American College of Osteopathic Emergency Physicians

To learn more, see "An Overview of the ACEP Council and How It Governs Strategy and Policy," in the Sept. 2021 issue.

medicine at the University of Cincinnati College of Medicine and associate chief medical officer at UC Health, said he likes that the Arizona bill basically asks health care professionals to first work within their institutions to address concerns.

"If I had a patient safety concern at my institution, we have so many avenues to work internally within the health care system to fix things," he explained. "It would have to be a very significant event that goes unaddressed to turn externally [to the press or social media] to try to fix something." Dr. Naber was not involved in the ACEP resolution or the Arizona bill.

He said that emergency physicians should receive whistleblower protection if they have exhausted all internal systems for addressing quality or safety concerns. After that, emergency physicians can turn to The Joint Commission or their state health department. Posting about the issue on social media should be a final resort, said Dr. Naber.

# Virtual ACEP 2.021 (The Remix!)

by HOWIE MELL, MD, MPH, FACEP

As the COVID-19 pandemic came into full force in early 2020, ACEP began canceling events and moving meetings to a virtual format. As the ACEP Scientific Assembly (ACEP20) was moved from an in-person meeting to a virtual space, Council Speaker Dr. Gary Katz and Vice Speaker Dr. Kelly Gray-Eurom had to figure out how to move the annual Council meeting to a virtual format. They not only succeeded in running a successful virtual meeting, they also created several innovations that carried into 2021.

First, a mechanism was created to debate proposed resolutions before the meeting in the form of asynchronous reference committee testimony. This allowed councillors to weigh in on the issues facing the Council via a closed email list several weeks before the meeting. Second, the entire Council meeting itself was broadcast online, allowing remote viewing of all the proceedings.

As the 2021 meeting approached, the decision was made that, because of a combination of infection control measures, councillors could safely meet in person. However, some councillors had travel restrictions in place through their employers that prevented them from attending in person. So again, the Council leaders had to pivot, and again, they rose to the occasion. New rules were created allowing councillors to be seated (ie, counted toward quorum) remotely. They could provide asynchronous testimony before the meeting and ask others to speak on their behalf during the meeting. They could watch the entire proceedings and, most important, vote. Of the more than 440 councillors, roughly 80 participated remotely.

I've been a councillor for the past 12 years (this year representing the Illinois Chapter). Ten days before the meeting, a medical crisis struck my family, so I became a virtual councillor. The experience was different. I felt a little like a coach on NFL draft day, lining up colleagues to speak to my various resolutions and support my positions. I had long text threads going by the end of the day and wore a hole in the carpet pacing while talking on the phone. But it wasn't the same as being at the meeting. I couldn't directly participate in the debates, but I was able to listen and vote, both for resolutions and for the leadership of the College. While I'd much rather have been on the Council floor, learning, debating, and campaigning for those causes and candidates I support, I have to thank Dr. Katz and Dr. Gray-Eurom, our Council leaders, for making this hybrid option work well. Without it, I and many others, wouldn't have been able to participate at all. Hopefully, the need for a hybrid meeting will have abated by 2022, and if not, a great precedent has been set. 📌

**DR. MELL** is an emergency physician at Hospital Sisters Health System St. Elizabeth's Hospital in O'Fallon, Illinois, and a councillor for the Illinois Chapter of ACEP.

"You always you want a non-retaliatory feeling and culture of safe reporting at your institution; otherwise, people won't report events if they are afraid of retaliation," said Dr. Naber.

## Resolution 47: Family and Medical Leave

The Council considered a resolution on family and medical leave and adopted it in part. The resolution was submitted by Megan Dougherty, MD, FACEP; Sarah Hoper, MD, JD, FACEP; the Iowa Chapter; the Vermont Chapter; and the American Association of Women Emergency Physicians Section.

The resolution called for ACEP to support the AMA's effort to study the effects of Family Medical Leave Act expansion; conduct an environmental survey and create a paper on best practices regarding maternity, paternity, and family leave for emergency physicians; and issue a new statement in support of paid family leave. The first resolved was adopted, and the third was referred to the Board of Directors.

Resolution 47 notes that the United States is one of six United Nations member states that does not have a federal policy mandating paid maternity leave.<sup>4</sup> ACEP's current Family and Medical Leave statement, which was revised in 2019, does not specifically support paid family leave but encourages employers to "take into consideration what can be done to support the individual financially" by offering at least 12 weeks' leave for child birth or adoption, four weeks' leave for a co-parent in child birth or adoption, and flexible work schedules for both parents before and after a new child.<sup>5</sup>

"I have friends who do not work in medicine, and when I told them you can be a doctor, work in a hospital, and not have paid maternity leave, they thought that was insane," said Hilary Fairbrother, MD, MPH, FACEP, an emergency physician in Houston who was not involved in the Council resolution.

Dr. Fairbrother was six months pregnant when she accepted a new job in 2017. The three months she took off from work after delivery were mostly unpaid because she hadn't accrued vacation or sick time that she could apply to her leave. Dr. Fairbrother also only partially qualified for short-term disability because her insurer considered her pregnancy to be a preexisting condition.

With her second child, Dr. Fairbrother was able to use accrued vacation and sick leave and apply for short-term disability, "which contributed to a different fiscal reality," she explained. Dr. Fairbrother had established childcare to take care of her 2-month-old when she went back to work. She especially appreciated being able to do telemedicine and administrative work from home during the third month after giving birth, which helped her establish breastfeeding.

She said she supports a federal paid leave policy, but that employers should address the issue in the absence of a national policy. "In consulting, if you want diversity, if you want to attract and hire women, you need to offer paid maternity leave *plus* flexibility for when they transition back to work," said Dr. Fairbrother. "We should advocate for the same standard in emergency medicine."

## Resolution 71: Emergency Medicine Workforce by Non-Physician Practitioners

The Council did not adopt Resolution 71, which was submitted by the Emergency Medicine Workforce Section. It called for ACEP to support the elimination of non-physician health care professionals in emergency departments except in cases where there aren't enough emergency physicians to properly staff the facility.

The resolution notes the ACEP workforce study's prediction that there will be an oversupply of board-certified emergency physicians by 2030.<sup>6</sup> Nurse

practitioners and physician assistants are currently supplying about 20 percent of emergency care across the United States, according to the study.

Workforce projections from the ACEP report are not reliable because they are based on extrapolated data from a few years ago, according to Jesse Pines, MD, MBA, FACEP, who is the national director of clinical innovation for the physician contracting company US Acute Care Solutions. They also do not include innovative models in emergency medicine beyond what was happening in brick-and-mortar emergency departments. "Telehealth, for example, is a growing field that needs more emergency medicine physicians," said Dr. Pines, who is professor of emergency medicine at Drexel University College of Medicine and has conducted research on ED staffing.<sup>7</sup>

"What we can conclude from that report is there is probably not going to be an undersupply of emergency physicians [in the United States] by 2030. Much like today, there could continue to be an undersupply in rural areas and smaller emergency departments," explained Dr. Pines.

Sudave D. Mendiratta, MD, FACEP, chair of emergency medicine at University of Tennessee College of Medicine, said current reimbursement models will ensure that advanced practice professionals are here to stay. "The question we should be asking is how we can ensure they have the appropriate scope of practice and support," he explains.

Dr. Mendiratta, who is also the President of the Tennessee Chapter of ACEP, explained how emergency physicians, nurse practitioners, and physician assistants must collaborate in the face of nursing shortages.

Dr. Pines agreed. "A collaborative model, with oversight of advanced practice providers by emergency physicians, has been shown to deliver similar care than an emergency physician-only model." The important things, he added, are that health care professionals follow clinical guidelines and that there are mechanisms to catch any clinical mistakes and to engage in continuous quality improvement. 📌

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**STEPHANIE CAJIGAL** is a medical journalist based in Los Angeles.

## READ THE ACEP COUNCIL RESOLUTIONS IN FULL

Visit [www.acep.org/action-on-2021-resolutions](http://www.acep.org/action-on-2021-resolutions) to review the full text of the 82 resolutions submitted this year.



Hilary Fairbrother, MD, MPH, FACEP



Dara Kass, MD



Sudave D. Mendiratta, MD, FACEP



William J. Naber, MD, JD



Jesse Pines, MD, MBA, FACEP

# By the Numbers

TOTAL OF  
**41,062**

ABEM-certified  
emergency physicians

FIRST-TIME  
PASS RATE FOR  
ConCert

**92%**

FIRST-TIME  
PASS RATE FOR  
MyEMCert

**85%**

(for the initial 5,618  
module takers)

MyEMCert PASS RATE  
FOR SECOND-TIME  
MODULE TAKERS

**94-97%\***

IN 2021,  
APPROXIMATELY

**3,596**

certified emergency physicians  
up for recertification

IN 2022,  
APPROXIMATELY

**3,366**

certified emergency physicians  
up for recertification

Source: ABEM

\*Percentage varies depending on the  
module



## Breaking Down MyEMCert

THIS NEW CERTIFICATION PROCESS HAS SMALLER,  
MORE FREQUENT EXAMS AND AN OPEN-BOOK FORMAT

by LINDA KOSSOFF

In 2021, the American Board of Emergency Medicine (ABEM) launched its new certification process, MyEMCert, which established a five-year recertification cycle. ABEM has announced that its established process, ConCert, will be discontinued after 2022, and MyEMCert will be required of all physicians seeking recertification.

The transition began nearly five years ago, explained Marianne Gausche-Hill, MD, president of ABEM. “That’s when we began to study many of the changes that other specialties were undertaking in continuing certification,” she said. In 2017, ABEM convened a meeting of EM organizations to discuss the issue, which was followed by a series of focus groups and a survey of all ABEM-certified physicians. In 2020, a pilot of approximately 1,200 ABEM-certified physicians taking MyEMCert modules was conducted to provide feedback.

Although it has been years in the making, the move away from the familiar ConCert process, which has operated on a 10-year certification cycle, has sparked some concern and questions from the emergency medicine community as to what EM residents and physicians can expect from the new model.

### Components of MyEMCert

MyEMCert consists of four modules and one Improvement in Medical Practice (IMP) activity, all of which must be successfully completed over a five-year period to receive recertification. This is in contrast to ConCert, which is taken all at once every 10 years. The MyEMCert assessment includes Key Advances (ie, new medical advances), a feature that has been integrated into the modules to keep physicians up-to-date. “In addition, physicians will need to maintain a medical license in compliance with ABEM policy and attest to the ABEM

Code of Professionalism,” said Dr. Gausche-Hill. “For physicians in a five-year cycle, not completing these requirements at the end of five years means losing their certification.” She adds that the process for initial certification “is being reviewed but will likely remain a rigorous examination process.”

To help physicians prepare, ACEP launched PEERcert+ ([www.acep.org/PeerCertPlus](http://www.acep.org/PeerCertPlus)), a tool composed of questions and image-based study aids designed to mirror the MyEMCert exam. “When ABEM announced that the recertification process was changing, ACEP wanted to provide its members with a product that would help them not just prepare to pass the exam but also to continue to provide optimal patient care at the bedside,” explained Maria Moreira, MD, FACEP, medical director of continuing education and simulation at Denver Health in the Office of Education, associate professor of emergency medicine at the University of Colorado School of Medicine, and Editor-in-Chief for PEERcert+.

“We wanted to mirror the new testing structure, so we developed questions pertaining to specific case presentations,” said Dr. Moreira. “The components of each PEERcert+ module also include typical core content questions and key advance questions based on ABEM’s Key Advance Articles. We also developed first-aid tool kits as quick references for learning and test taking.” She notes that the existing PEERprep and PEER tools are still in place for physicians preparing for initial certification.

The new format represents an overhaul in the entire assessment approach. MyEMCert is designed to be an online assessment, so physicians will no longer need to travel to a testing site. Moreover, the modules are all taken open-book. “Physicians can take modules at any time from any place,” said Dr. Gausche-Hill. “And because they are open-book, they

are assessments *for* learning rather than assessments *of* learning.”

### Impact on Physicians

The immediate effect of the transition from ConCert to MyEMCert on individual practitioners varies from nonexistent to considerable, depending on when they originally received their ABEM certification. As Dr. Gausche-Hill explained, physicians seeking to recertify have had the option to do so by either taking the ConCert Exam and Lifelong Learning and Self-Assessment (LLSA) tests or MyEMCert, depending on where they are in their certification cycle. Some physicians, she said, might complete a combination of MyEMCert modules and LLSA tests.

The opportunity to take ConCert will end after the 2022 examinations are given, and LLSA tests will no longer be available once all currently certified physicians transition to the five-year certification cycle. “Eventually—probably around 2025–2026—LLSAs will be phased out, and MyEMCert and IMP activities will be the components of continuing certification,” Dr. Gausche-Hill said. “These changes result in a physician completing fewer total activities over any 10-year period.” She adds that physicians can check their requirements based on their certification end date using the ✓ ABEM Reqs feature on the website.<sup>1</sup>

When this transition is complete and all physicians are taking MyEMCert, everyone will have five years’ time in which to complete the recertification requirements. Until then, physicians who are up for recertification in less than five years’ time and choose MyEMCert will still be required to complete all of its components by their certification end date.

Heather Studley, MD, FACEP, an emergency physician at Brigham and Women’s Hospital in Boston, is one such physician. She received

her certification in 2011 and was therefore up for recertification this year. Given that this is a transitional year, she could either take the written ConCert exam as originally planned or opt for MyEMCert and complete all its requirements in just one year.

“At first, I was miserable about it,” said Dr. Studley. “But ultimately, I actually found it way better than having to study for the written boards and go sit down in a testing center.” To prepare, she reviewed information from the ABEM website on the new format and referenced the UpToDate resource while taking the tests. She passed all but one test, which she passed on the second try.

The decision was a lot easier for Anand Swaminathan, MD, MPH, FACEP, assistant clinical professor of emergency medicine at St. Joseph’s Hospital in Paterson, New Jersey. Dr. Swaminathan took his 10-year written boards in 2019. With MyEMCert, he has until 2024 to complete his exams, so he opted to do just one module this year. “I did the ‘Abnormal Vital Signs and Shock’ section and passed on the first try,” he said. “The questions were as difficult as those on the standard written exam, but having a smaller chunk to take on and having resources available made it much more palatable.” Having taken his written exam so recently, Dr. Swaminathan did not need to study in advance. During the test, he used the online textbook CorePendium and the open-source search engine FOAM Search for reference.

The flexibility of taking exams from any place and at any time—and even to pause an exam at a moment’s notice, then get back to it when it is convenient—is likely to find favor with most physicians. Based on their experiences, both Dr. Studley and Dr. Swaminathan have mostly positive reviews for MyEMCert.

“I don’t think there’s much I would change,” said Dr. Swaminathan. “I think it’s a very reasonable assessment in comparison to the prior format.” Dr. Studley feels that the MyEMCert exam questions are more concise than those on the ConCert exam, but she does see room for improvement. “They still need to work out the kinks in terms of questions that are vague or confusing because they’re not worded very well,” she said. “But as an alternative to the written boards, it’s much better.” She also benefited from the open-book, instant-feedback format of the new exams. “If I’m looking up a question, I’m referring my memory or I’m learning something in that moment. Either way, with the type of learner I am, I’m more likely to retain the information.”

The cost impact of the change from ConCert to MyEMCert on physicians is more a question of payment schedule than total fee amount. Some physicians, such as Dr. Swaminathan, feel that the price for maintaining certification overall is too high, “particularly for a fresh graduate,” he said. MyEMCert, however, does not introduce new fees to the recertification process. “In terms of cost, it is the same as under the ConCert format. That is, the annualized cost is the same with MyEMCert as it was under ConCert,” explained Dr. Gausche-Hill. “The bottom line is that it is a more level payment system without the large single fee associated with the ConCert Exam.”

#### A Call for Relevance

The overall message that came out of those ABEM meetings and focus groups, and especially the emergency physicians survey, was that the existing certification content had been falling short. “Physicians let us know that they wanted something more clinically relevant,

convenient, and that would help them learn about new advances in medicine,” said Dr. Gausche-Hill. “Obviously, this is a value to their patients, who are receiving care based on the most up-to-date medical advances. Emergency medicine benefits from having physicians who are being kept up-to-date and for being a leader in quality assessment.” It was this feedback that ABEM used to develop MyEMCert.

As Dr. Moreira explains, PEERcert+ was designed to support an optimally relevant and clinically useful recertification experience. “We wanted to create a product that physicians could continue to use to stay up-to-date on the best care of patients,” she said. “PEERcert+ tries to mirror the presentation of those patients to our departments so we can put all

the information we need to know into the appropriate context.”

Dr. Studley found the MyEMCert content more applicable to her daily practice than the written boards she took in 2011. “For that test, I had five questions on sarin nerve gas,” she said. “Well, if you’re trying to test me on the spectrum of what’s relevant in my practice, it’s definitely not sarin nerve gas. So with MyEMCert, there were less of those sorts of obscure questions and much more practical questions on topics related to our day-to-day practice.”

Dr. Gausche-Hill acknowledges that any change to a process that has been in place for decades is not going to be a simple endeavor. “Creating a new type of test using a new technology platform has been expensive and challenging,” she said. “Creating a type of

question that embeds learning and instant feedback takes a great deal of work. However, ABEM was able to meet our commitment to ABEM-certified physicians.” She encourages physicians to contact ABEM and/or use the organization’s online resources to facilitate a smooth recertification experience.

“We are lifelong learners,” concluded Dr. Moreira. “Medicine changes, and we need to stay on top of these changes to provide our patients with the best evidence-based care.”

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# RESIDENCY SPOTLIGHT

## UNIVERSITY AT BUFFALO EMERGENCY MEDICINE RESIDENCY PROGRAM

Twitter: @UBuffaloEM

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Location: Buffalo, New York

Year founded: 1994

Number of residents: 48

Program length: 3 years



UNIVERSITY AT BUFFALO

### What is a unique feature of your program?

We rotate through six different emergency departments, which provide exposure to patients with a broad array of pathologies and socioeconomic statuses. These hospitals include a Level 1 trauma center, a comprehensive tertiary care center that acts as both a stroke and a STEMI center, a comprehensive children's hospital, a Veterans Affairs medical center, a busy community hospital, and a small rural emergency department. Being in different emergency departments adds an extra layer to residency training that allows residents to be ready for any job opportunity.

### What is so great about living in Buffalo?

We have a lot of outdoor activities including hiking, camping,

and water sports. The city has plenty of culture, including unique artwork scattered across the city along with local Buffalo traditions and food. We are also very close to Canada.

### How do residents survive the winter?

Ice skating, skiing/snowboarding, rock climbing, and hanging out with co-residents. There are plenty of local breweries to explore!

### What is your fondest memory from your time as residency director?

When faculty tried to shield residents from intubations at the start of the COVID-19 pandemic, residents banded together and insisted that they be responsible for caring for every patient and every detail, no matter the risk. Just awesome.

### Recent Publications

- Clemency BM, Varughese R, Scheafer DK, et al. Symptom criteria for Covid-19 testing of health care workers. *Acad Emerg Med.* 2020;27(6):469-474.
- Clemency BM, Yuan T, Crowley C, et al. Vital signs, procedures, and timing preceding post arrival respiratory and cardiac arrest. *Acad Emerg Med.* 2020;27(S1):S251.
- Hauglid CB, Haider MN, Horn EC, et al. Male versus female adolescent performance on the Buffalo Concussion Treadmill Test early after sport-related concussion. *Clin J Sport Med.* 2020;30(2):182.

—Christian DeFazio, MD, residency program director



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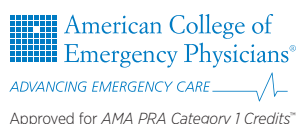


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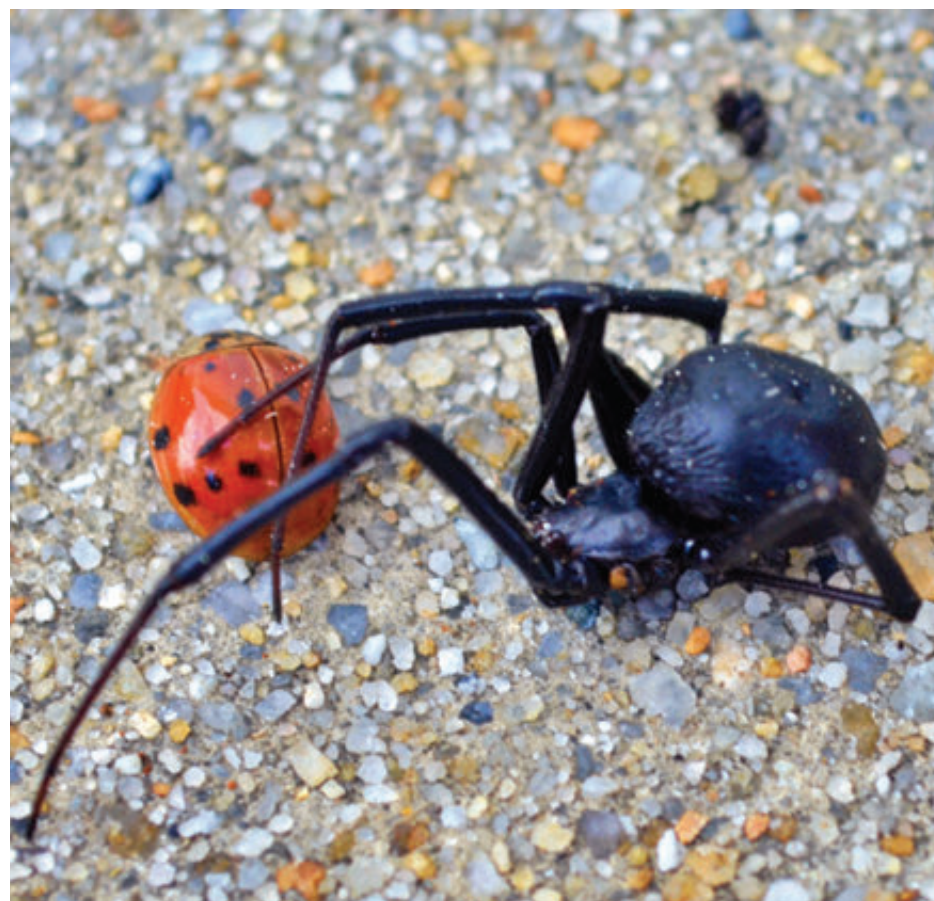
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## TOXICOLOGY Q&A



JASON HACK (CLEANER PHOTOGRAPHY)

# Spider's Secret

**Question:** Is this little spider a harmless garden friend or a danger in disguise?

TURN TO PAGE 18 TO FIND OUT



> waiting for answers

# Toxicology Q&A Answer

QUESTION ON PAGE 16

**Answer:** Beware! Although small, the black widow spider has powerful venom.

When you talk about black widow spiders, you are primarily talking about the female of the species. She has a classic spider shape: shiny black body with a red hourglass shape on her large round abdomen and is about 10–13 mm when fully mature. The red mark seen above is thought to warn predators that they will get more than they bargained for with this arachnid. These spiders create distinctive disorganized web constructs of tough silk strands called tangle webs; they hang upside down within the web to show off their hourglass while waiting for prey.

Black widows are named because of the species' sexual cannibalism. The male is much smaller and lighter in color and sometimes gets eaten after mating. This mostly occurs when the male cannot get away (like in a laboratory setting with scientists watching what is happening) and not outside in the wild—there, males only get eaten only about 2 percent of the time. These spiders are generally solitary, live one to three years, and eat insects and other spiders.

## Venom

Black widow spiders are the most venomous spiders in North America, with venom several times more potent than rattlesnake venom.<sup>1-3</sup> They are far from the most venomous in the

world (that honor goes to Australia's funnel-web spiders). Venom is delivered through fang bites and not from a posterior stinger.

Despite this, most people who are envenomated have no serious damage due to the low volume of venom delivered, although they can get very uncomfortable. Rarely, bites can be fatal, usually only in the very young, very old, or infirm. Annually, there are 1,000–2,000 black widow spider bites reported to the American Association of Poison Control Centers; no deaths have been reported in the last 10 years.

## Identification and Treatment

Generally, black widow bites hurt and may appear as a pale area of skin. The venom injected contains alpha-latrotoxin, whose mechanism of action involves binding to the motor end plates in the neuromuscular junction causing sodium channel opening and massive exocytosis of acetylcholine and norepinephrine.

This can cause hypertension, extreme muscle cramping in the torso and abdomen within minutes (it's one of the zebra differential diagnoses for "acute abdomen"), nausea, vomiting, and difficulty breathing. "Facies lactroectismica" is facial sweating and grimacing that is unique to this bite. There are also reports of profound persistent localized



JASON HACK (OLEANDER PHOTOGRAPHY)

## BLACK WIDOW SPIDER

*Latrodectus genus*

sweating near the bite site. Symptoms may last for several days.

Treatment is usually supportive. Wash the site, then provide pain medicine, muscle relaxants for spasms, and time.

There is an antivenin. It is horse-derived and can be useful in the right circumstances, but there are downsides. It has the risk of serum sickness and allergic reactions, including anaphylaxis. ⊕

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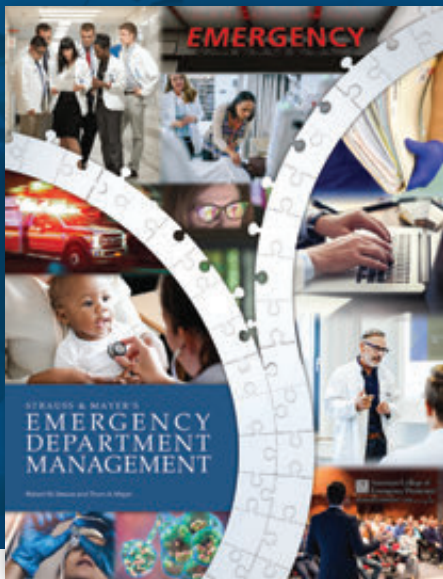
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> an incomplete picture

# Addressing Bias, Racism, and Disparities in the ED

We can all take concrete steps to make our hospitals more equitable

by LEAH GILBERT, MD, FACEP; ANTONY P. HSU, MD, FACEP; ROSE DIAZ, MD; AND DIKSHA MISHRA, MD

The emergency department represents a critical point of entry into the health care system for vulnerable patient groups, and as emergency physicians, we must strive to make our departments free of racism and bias. In the fast-paced environment of the emergency department, where stressful and complex decisions must be made quickly with limited information while balancing a large patient load and constant stream of interruptions, emergency physicians may be particularly susceptible to bias-based decision making.<sup>1,2</sup> As such, it is more important than ever that emergency physicians remain cognizant of these potential biases and how they contribute to disparate care and, ultimately, structural racism.

## Defining Terms

Establishing common definitions for core concepts surrounding health care disparities is a critical first step in working toward health equity, defined by the Robert Wood Johnson Foundation as “everyone has a fair and just opportunity to be as healthy as possible.” Discussions surrounding equity can be challenging in nature, and conversations can become tenuous when participants use terms that are defined in different ways by different users.

**Racism** is a system consisting of structures, policies, practice, and norms that assigns value and determines opportunity based on the color of one’s skin and results in conditions that unfairly advantage some and disadvantage others.<sup>3</sup> Racism can occur at various levels—internalized (acceptance of stigma within oneself), interpersonal (between persons), and structural (racism manifested in macro-level conditions such as policies, norms, laws, cultures, and institutions).<sup>3</sup>

**Implicit bias** refers to attitudes or stereotypes that affect our understanding, actions, and decisions in an unconscious way, making them difficult to control.<sup>4</sup> This is in contrast to **explicit bias**, which refers to attitudes and stereotypes that we are aware of on a conscious level.

**Health disparities** are preventable differences in the burden of disease, injury, violence, or opportunities to achieve optimal health that are experienced by socially disadvantaged populations. Health disparities are inequitable and are directly related to the historical and currently unequal distribution of social, political, economic, and environ-



mental resources.<sup>5</sup>

Racial and ethnic disparities in health care exist even when accounting for insurance status, income, age, and severity of conditions.<sup>6</sup> Unfortunately, bias on the part of the health care practitioners may contribute to differences in direct care and medical education.<sup>7,8</sup> For instance, Black and Hispanic patients were more likely to be taken to a hospital for uninsured, low-income patients even if they were picked up in the same ZIP code as their white counterparts.<sup>9</sup> In general, nonwhite Americans are more likely to have longer wait times and be triaged at a lower acuity; to receive a less comprehensive workup or interventions for complaints such as chest pain, acute coronary syndrome, and stroke; to be discharged rather than admitted; and to be physically restrained.<sup>10</sup> A study of pediatric emergency department visits found that Black and Hispanic patients had lower odds of undergoing radiography, ultrasonography, CT, or MRI compared to non-Hispanic white patients.<sup>11</sup> Black women with heart failure were less likely to receive referrals for specialized treatment than white women with the same symptoms.<sup>12</sup> Similarly, Black men may suffer unequal treatment as a direct result of implicit biases regarding their anticipated level of cooperativeness, compliance, or danger as compared to non-Black counterparts.<sup>13</sup>

## What We Can Do

The evidence demonstrates that racial bias exists in health care, but actively addressing

one’s own biases or witnessed racist behavior can be uncomfortable due to the lack of experience with constructive approaches to confront racist behavior.

Here are some concrete steps emergency physicians can take to address implicit bias:<sup>13</sup>

1. Identify stereotyped statements, reflect on why the response occurred, and consider how to **replace the stereotype** with unbiased responses.
2. Use **counter-stereotypic imaging**, a strategy that challenges a stereotype’s validity by pointing out positive examples that are salient to the audience.
3. Gather specific, personal information about members of the stereotyped group to permit **individuation** and cognitively replace group-based attributes.
4. Increase psychological closeness of the stigmatized group by **taking the perspective** from the first person of someone from the stereotyped group.
5. **Increase contact opportunities** to provide potentially positive interactions with the stigmatized group and alter the cognitive representations of the group.

Here are some concrete steps emergency physicians and health care organizations can use to address structural racism:<sup>14,15</sup>

1. Articulate specific goals related to action and change, and link these goals to metrics.
2. Review hiring and employment practices for hidden biases.
3. Conduct anonymous surveys with current

and former employees to assess areas of hidden bias or unfairness.

4. Offer training on implicit and explicit bias.
5. Provide anonymous third-party complaint channels such as an ombudsman.
6. Support projects that encourage positive images of persons of color and scrub the organization’s environment, processes, and practices of inequities.
7. Identify, support, and collaborate with effective programs that increase diversity across the organization.
8. Ensure leadership is diverse.
9. Invest financially in the dismantling of racism within the organization.

Both emergency physicians and health care organizations must address bias and racism to close health disparity gaps. Emergency departments should be leaders of this change, given the vulnerable populations they serve; they can begin by using the well-documented strategies described here. 📌

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**DR. RADECKI** is an emergency physician and informatician with Christchurch Hospital in Christchurch, New Zealand. He is the *Annals of Emergency Medicine* podcast co-host and Journal Club editor and can be found on Twitter @emlitofnote.

# 2021 Literature Year in Review

A review of TXA, tPA, fluids, antibiotics, and minor miracles

by RYAN PATRICK RADECKI, MD, MS

We come now to the end of 2021, a year of hope, dismay, followed again by hope, then dismay—and now, perhaps, is it yet safe finally to hope? Regardless, the medical journals burst forth with the tireless work of researchers from around the world. Here are a few of the highlights from 2021.

## The Essential, Not-So-Effective Tranexamic Acid

Tranexamic acid (TXA) use is ubiquitous throughout the scope of medicine in which patients are bleeding. In major trauma, postpartum hemorrhage, or traumatic intracranial hemorrhage, TXA likely exhibits a beneficial effect, albeit quite small. Two trials published this year evaluated its use in two additional types of bleeding: nontraumatic subarachnoid hemorrhage (SAH) and epistaxis. The first application, the ULTRA trial, evaluated functional outcomes of patients given TXA as soon as possible following diagnosis of nontraumatic SAH.<sup>1</sup> At the primary clinical endpoint of six-month follow-up, no difference was seen in functional outcomes as measured by the modified Rankin Scale. Small, nonsignificant reductions in early aneurysmal rebleeding were seen favoring the TXA cohort. There may be patients in whom early TXA treatment has value, but they were not identified in this specific trial.

Epistaxis is a fre-

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September Column



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quent clinical presentation to the emergency department, particularly across the population prescribed oral anticoagulants. The NOPAC trial randomized patients who had failed first-line topical vasoconstrictor therapy to either TXA-soaked packing or placebo.<sup>2</sup> Unfortunately, no advantage was seen with TXA-soaked packing, nor were any specific subgroup effects evident. It is likely any perceived benefit to topical TXA is as much confirmation bias as a true effect.

## The Brain Gain

Every year is an exciting one for stroke neurology, and this year is no different. A set of trials tackled one of the current hot controversies: whether patients destined for endovascular treatment should first be treated with systemic thrombolysis. Endovascular treatment, after all, owes its existence as a treatment for acute ischemic stroke specifically to the gross ineffectiveness of systemic thrombolysis for large vessel occlusions. Two trials published this year, the SKIP and DEVT trials, addressed this question.<sup>3,4</sup> The SKIP trial was performed in Japan, while the DEVT trial was in China, and neither trial demonstrated an advantage to systemic thrombolysis prior to endovascular interven-

tion. The SKIP trial was statistically inconclusive due to a small sample size, but the DEVT trial was stopped early due to the advantage demonstrated in the cohort treated by endovascular alone. The active debate over the interpretation of these trials will likely lead to substantial institutional and individual practice variation.

The other prominent trial making headlines this past year concerned mobile stroke units. The BEST-MSU trial out of Houston demonstrated dramatic differences favoring those treated by a mobile stroke unit, with 55 percent of those dispatched a mobile stroke unit achieving functional independence compared to 44 percent of those dispatched a traditional EMS.<sup>5</sup> Digging deeper into the supplemental results, however, shows the leap of faith required to take these results at face value: Those evaluated by a mobile stroke unit had an excess final diagnosis of "stroke reversed by tissue plasminogen activator" equal to the final effect size. Were these stroke mimics treated so early they never had a chance for spontaneous improvement, or were they true cerebral ischemia whose effects evaporated without a trace? Interpretation of this trial hinges on that particular perspective.

## Fluid Dynamics

We do love to give our patients in the emergency department intravenous fluids. Frequently, these fluids come at the behest of our "quality" overlords, ensuring no patient escapes the emergency department without receiving 30 cc/kg. One prominent concern has been which fluid is the "best," stemming from concerns relating to the hyperchloremic metabolic acidosis from high-volume resuscitation with 0.9 percent saline solution. The most recent information comes from the BaSICS trial, conducted in Brazil, evaluating a "balanced" fluid solution versus "normal" saline.<sup>6</sup> In this trial, no clinically important impacts on mortality or secondary outcomes were observed. For the vast majority of our patients, the initial choice of fluid probably does not matter.

In a slightly more esoteric vein, the SALSALSA trial looked at the treatment of moderate-to-severe hyponatremia, evaluating any advantage conferred by administering hypertonic saline as either a slow continuous infusion or

as repeated intermittent boluses.<sup>7</sup> By the researchers' measure of "overcorrection" in the first 24–48 hours, the intermittent boluses were less likely to exceed the target rate than the continuous infusion. This supports intermittent boluses as the current approach recommended by consensus guidelines.

## New Approaches to Old Infections

Some of the most common indications for antibiotics remain some of the least completely described. A diagnosis of community-acquired pneumonia is hardly infrequent, yet little evidence truly defines clinical practice. Should children be prescribed a five-day course or a 10-day course? The SAFER trial tested this straightforward, yet unanswered question and found clinical cure rates were virtually identical regardless of length of antibiotic therapy.<sup>8</sup> In low-risk outpatients requiring antibiotics for pneumonia, five days of high-dose amoxicillin is an appropriate first step.

Taking this idea one step further, this "less is more" principle was tested in a trial randomizing children with respiratory tract infections to an immediate antibiotic prescription, a "delayed antibiotic prescription," or no antibiotics.<sup>9</sup> By the authors' conclusion, the delayed antibiotic strategy was a success. Children randomized to delayed antibiotics had the same outcomes as those provided an immediate prescription while caregivers filled the delayed prescriptions at a dramatically lower rate. Less appreciated, however, was that the "no antibiotics" cohort also did just as well, with even fewer antibiotic exposures in follow-up. A "delayed antibiotics" strategy is certainly reasonable but only showed an advantage when compared to the modern standard of rampant antibiotic overuse. Prudent stewardship for pediatric respiratory infections is the far superior strategy.

Antibiotics-first strategies for the treatment of appendicitis have been increasingly in vogue the past few years. Studies evaluating these strategies have generally reported a short-term failure rate for antibiotics around 35 percent. The concern, however, is the long-term durability of an antibiotics-first strategy. In this follow-up from the CODA trial, subsequent appendectomy occurred in a cumulative 46 percent of patients out to two years from enrollment.<sup>10</sup> These additional data do not invalidate an antibiotics-first strategy as inevitably doomed, but they do provide valuable information for shared decision making with patients regarding the balance of risks and benefits to each strategy.

## The Recently Mostly Dead

Mostly dead is still partly alive, and the desperate search continues for effective strategies to salvage good functional outcomes in these patients. The November 2021 issue of *ACEP Now* described outcomes from the Targeted Temperature Management-2 trial, along with the



likely demise of “mild” hypothermia as part of the treatment of patients resuscitated from out-of-hospital cardiac arrest. However, it is an open question whether any current cooling practice involves not enough of a good thing. The CAPITAL CHILL trial tested “moderate” 31° C versus “mild” 34° C and was not able to discern a difference in either overall or neurologically intact outcomes.<sup>11</sup> The best bet at the moment remains “temperature management” rather than any sort of active cooling.

Work continues regarding whether patients recently resuscitated from cardiac arrest should undergo cardiac catheterization. The TOMAHAWK trial, similar to other previously reported trials, enrolled patients with out-of-hospital cardiac arrest of possible coronary origin and no evidence of ST-segment elevation.<sup>12</sup> Patients either underwent immediate coronary angiography or were hospitalized for intensive care assessment and observation. Even though nearly two-thirds of patients randomized to intensive care assessment subsequently underwent coronary angiography, both survival and neurological outcomes favored the delayed strategy. Given the totality of evidence, it ought to be clear resuscitated patients should only undergo coronary angiography based on specific indications rather than on a routine basis.

I’m looking forward to 2022 with a whole new set of research trial acronyms to summarize! ➕

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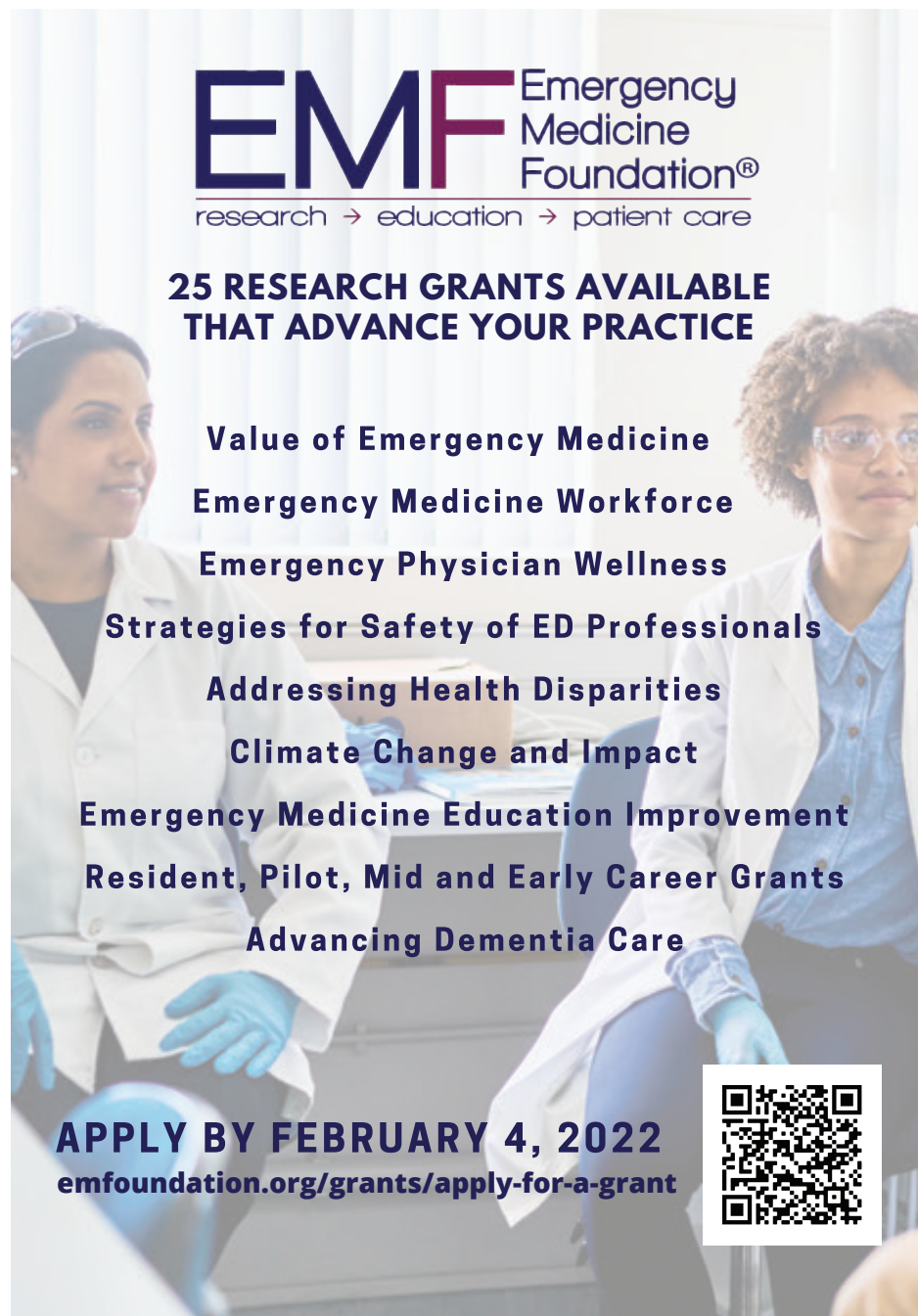
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