

COUNCIL RECAP ACEP22 Council **Debates** SEE PAGE 6

RESTRICTIVE COVENANTS When to Negotiate **Your Contract SEE PAGE 10**



Wiley



CEP

The Official Voice of Emergency Medicine

JANUARY 2023 Volume 42 Number 1

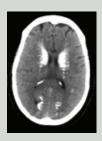
facebook/acepfan



TWITTER/ACEPNOW

ACEPNOW.COM

PLUS



CASE REPORT Endocrine Enigma SEE PAGE 12



AIRWAY

Upper Airway Obstruction in the Emergency Department

SEE PAGE 20



FIND IT ONLINE

For more clinical stories and practice trends, plus commentary and opinion pieces, go to: www.acepnow.com



ED Syncope Risk Assessment



CASES

Depending on lab tests and imaging is not the answer

by DR. ANTON HELMAN, MD, CCFP(EM), FCFP

he last two decades have seen ever-increasing utilization of diagnostic testing in emergency departments (EDs) across the United States. When it comes to the assessment and workup of patients who present to the ED with syncope, advanced imaging, such as head CT, has very low diagnostic yield.^{2,3,4} One of the problems with indiscrimi-

CONTINUED on page 15

ACEP Chapter Roundup: Highlights and Updates from 2022

we kick off 2023, ACEP chapters were invited to share their news from the past year and preview what's to

From the national level, ACEP welcomed Chris Johnson as its new Senior Director of State Government Affairs in July 2022. Mr. Johnson is focused on strengthening of the role of state advocacy and aligning state strategies with ACEP's efforts at the national and workplace levels.



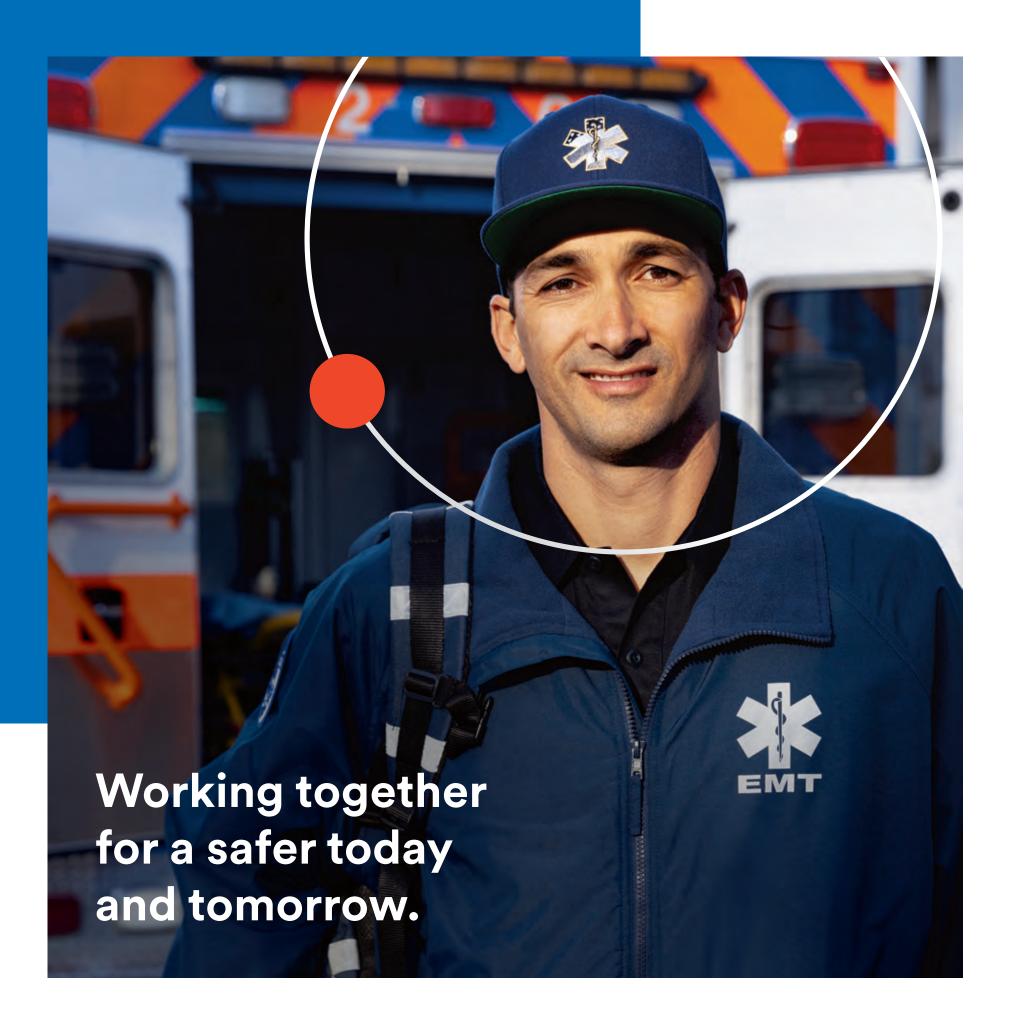
The Alabama Chapter participated in a physician legislative day on Capitol Hill. During this visit, Dr. Bryan Balentine, President of the Alabama Chapter at the time, testified in the house health committee in opposition to a bill that would have allowed non-nurse midwives to perform vaginal birth after cesarean (VBACS) in a home setting up to an hour away from the nearest hospital. The

CONTINUED on page 4









For more than 25 years, OnStar® has been working with First Responders to get the right help to those in need. As we innovate and expand our services, we can help more people by bringing OnStar Advisors to smartphones and smart speakers. When contacted from these devices, our Advisors can quickly assess the situation and provide critical information and location details — so you know what to expect upon arrival.

LEARN MORE AT PUBLIC-SAFETY.ONSTAR.COM





EDITORIAL STAFF

MEDICAL EDITOR

Cedric Dark, MD, MPH, FACEP cdark@acep.org

ASSOCIATE EDITOR Catherine A. Marco, MD, FACEP cmarco@acep.org

ASSISTANT EDITOR Amy Faith Ho, MD, MPH, FACEP amyho@acep.org

EDITOR Danielle Galian, MPS dgalian@wiley.com

ART DIRECTOR Chris Whissen chris@quillandcode.com

RESIDENT FELLOW Sophia Görgens, MD sgorgens@northwell.edu

ACEP STAFF

EXECUTIVE DIRECTOR/CHIEF EXECUTIVE OFFICER Susan Sedory, MA, CAE ssedory@acep.org

CHIEF OPERATING OFFICER Robert Heard, MBA, CAE rheard@acep.org

SENIOR VICE PRESIDENT, COMMUNICATION Jana Nelson jnelson@acep.org

MANAGING DIRECTOR, CONTENT AND COMMUNICATION INTEGRATION Nancy Calaway, CAE ncalaway@acep.org

SENIOR CONTENT MANAGER Jordan Grantham jgrantham@acep.org

PUBLISHING STAFF

PUBLISHING DIRECTOR Lisa Dionne Lento ldionnelen@wiley.com ASSOCIATE DIRECTOR, ADVERTISING SALES **Tracey Davies** tdavies@wiley.com

ADVERTISING STAFF

DISPLAY & CLASSIFIED ADVERTISING Kelly Miller kmiller@mrvica.com (856) 768-9360

EDITORIAL ADVISORY BOARD

James J. Augustine, MD, FACEP Richard M. Cantor, MD, FACEP L. Anthony Cirillo, MD, FACEP Jonathan M. Glauser, MD, MBA, FACEP Michael A. Granovsky, MD, FACEP Sarah Hoper, MD, JD, FACEP Mitchell Kentor, MD Phillip Luke LeBas, MD, FACEP

Ricardo Martinez, MD, FACEP Sandra M. Schneider, MD, FACEP Jeremiah Schuur, MD, MHS, FACEP Robert C. Solomon, MD, FACEP Annalise Sorrentino, MD, FACEP Peter Viccellio, MD, FACEP Rade B. Vukmir, MD, JD, FACEP

INFORMATION FOR SUBSCRIBERS

Subscriptions are free for members of ACEP and SEMPA. Free access is also available online at www. acepnow.com. Paid subscriptions are available to all others for \$334/year individual. To initiate a paid subscription, email cs-journals@WILEY.com or call (800) 835-6770. ACEP Now (ISSN: 2333-259X print; 2333-2603 digital) is published monthly on behalf of the American College of Emergency Physicians by Wiley Periodicals LLC, 111 River Street, Hoboken, NJ 07030-5774. Periodical postage paid at Hoboken, NJ, and additional offices. Postmaster: Send address changes to ACEP Now, American College of Emergency Physicians, P.O. Box 619911, Dallas, Texas 75261-9911. Readers can email address changes and correspondence to acepnow@ACEP.org. Printed in the United States by Sheridan of Ohio (SOH), Brimfield, OH. Copyright ©2023 American College of Emergency Physicians. All rights reserved. No part of this publication may be reproduced, stored, or transmitted in any form or by any means and without the prior permission in writing from the copyright holder. ACEP Now, an official publication of the American College of Emergency Physicians, provides indispensable content that can be used in daily practice. Written primarily by the physician for the physician, ACEP Now is the most effective means to communicate our messages, including practice-changing tips, regulatory updates, and the most up-to-date information on healthcare reform. Each issue also provides material exclusive to the members of the American College of Emergency Physicians. The ideas and opinions expressed in ACEP Now do not necessarily reflect those of the American College of Emergency Physicians or the Publisher. The American College of Emergency Physicians and Wiley will not assume responsibility for damages, loss, or claims of any kind arising from or related to the information contained in this publication, including any claims related to the products, drugs, or services mentioned herein. The views and opinions expressed do not necessarily reflect those of the Publisher, the American College of the Emergency Physicians, or the Editors, neither does the publication of advertisements constitute any endorsement by the Publisher, the American College of the Emergency Physicians, or the Editors of the products advertised.











NEWS FROM THE COLLEGE

UPDATES AND ALERTS FROM ACEP

ACEP Responds to AHRQ Report on Diagnostic Errors in the ED

In mid-December 2022, ACEP and eight other emergency medicine organizations issued a letter expressing their deep concern about a report titled "Diagnostic Errors in the Emergency Department: A Systematic Review," which was conducted as part of the Agency for Healthcare Research and Quality's (AHRQ) Effective Health Care Program. The letter states in part, "The initial request ... was to investigate opportunities to improve care in the ED. We see little in this report to identify such opportunities. Instead, we see a diagnostic error rate (derived from non-applicable European sources with training very different than that of the U.S.) and an analysis of malpractice data interpreted to be cognitive error.

"The repercussions of this faulty report cannot be overstated, as it will irresponsibly and falsely alarm the public and potentially lead them to delay or even forego treatment for time sensitive emergencies." ACEP is supporting additional responses to address the report's controversial methodology in research channels. Stay updated at acep.org/AHRQreport.

ACEP's New App Puts Resources in Your Pocket

Internet connections can be spotty on shift, that's why ACEP has put some of its most popular website features on a new mobile app that provides reliable access. On the new app, you'll find ACEP's clinical policies, reimbursement FAQs, advocacy alerts, and more.

The app will continue to expand its offerings, so more content will be available regu-

It's simple to get started—follow the links to your preferred app store and install! Use your ACEP username and password to access even more features, like your membership details and to bookmark content for quick reference later. Learn more at acep.org/mobile-app.

Webinars Available Now: Pediatric RSV, Bronchiolitis

The 2022-23 winter season is proving to be a very challenging one for pediatric respiratory illnesses, so ACEP's Pediatric EM Committee put together some resource videos to help. "The Pediatric Tripledemic: How to Survive" presented by Annalise Sorrentino, MD, FACEP, and "Managing RSV and Bronchiolitis" presented by Christopher Amato, MD, FACEP, and Jessica Wall, MD, FACEP, are now available at acep.org/pediatric.

ACEP Submits Amicus Briefs Re: Post-Roe State Laws

ACEP is working with a coalition of leading national medical societies to address legal barriers that hinder emergency physicians' ability to practice medicine. This effort includes submitting an amicus brief in United States v. State of Idaho, a case that underscores the state law's clear conflict with EMTALA. As the brief notes, "the Idaho law is not just a bad law, it's bad medicine."

ACEP also signed onto a brief in *Texas v*. Becerra that explains how the state of Texas is misunderstanding physicians' EMTALA obligations and that laws prohibiting emergency physicians from providing appropriate care could put pregnant patients at risk. Learn more at acep.org/post-roe.

Resolve to Maximize Your **Member Benefits in 2023**

As an ACEP member, you get valuable discounts from a variety of affinity partners. From travel discounts to clinical tools and financial resources, there is something for everyone. Are you taking advantage of the deals? Visit acep. org/memberbenefits to learn more.

Apply to be ACEP Now's **Next Resident Fellow**

ACEP Now is looking for its next resident to join our editorial team. The position is open to any emergency medicine resident physician in an ACGME-accredited program who will be PGY2-4 during the July 2023-July 2024 Resident Fellow term. Applications are due February 17, 2023, for a year-long term that will begin July 1, 2023. Learn more and apply at acepnow.com/article/resident-fellow.

Member Benefit Spotlight: Panacea Financial

Are you looking for a bank that works around the clock, like you do? Check out Panacea Financial, the bank built for doctors, by doctors. They're open 24/7/365 because they work doctors' hours. Best of all, as an ACEP Member, you are eligible for member benefits, discounts, and cash rewards! Learn more at acep. org/panacea or use the QR code below. •



WHAT ARE YOU THINKING?



CHAPTERS | CONTINUED FROM PAGE 1

bill was voted on in the committee that day and failed to pass thereby preventing its advancement to the floor of the house.



AzCEP celebrated its 50th anniversary with a reception and a special edition of the Arizona EPIC newsletter. The chapter was also actively involved in supporting and implementing legislation to improve its members' well-being and practice environment and AzCEP hosted a summer retreat that included an EM Work/Life Integration Panel.



Chapter advocacy efforts included work on dozens of pieces of legislation to defend physician reimbursement and to improve patient care. California ACEP sought to require health plans to collect co-payments and deductibles directly from patients rather than requiring emergency physicians to be their billing agents. The chapter will pursue this effort again in 2023. The chapter also supported several bills signed into law to improve mental health care, provide Medicaid to all income-eligible Californians, and to expand fentanyl testing, to name a few.



The Colorado Chapter has had many wins at the Capitol. The chapter met multiple times with the Governor's office to address COVID-19, staffing, and boarding issues, along with speaking at a press conference alongside Governor Polis. Colorado ACEP hosted a successful Medical Director's Summit and CME event with hands-on ultrasound training. The chapter formed a task force and has written legislation to combat physician assistant independent practice. There is active work at the city level to protect the ability of EMS to administer sedative medications.



FCEP was thrilled to host a very successful, full-scale, in-person return to its annual meeting, Symposium by the Sea, at the



Arizona Chapter listening to Council sessions at ACEP22.

Hyatt Regency Coconut Point in Bonita Springs. The SBS22 program featured a balanced mix of scientific presentations, networking/social events, and resident competitions. The chapter strove to emphasize wellness while providing a family-friendly atmosphere.



GEORGIA

GCEP is proud to have successfully completed the second year of applications for its Georgia diversity scholarship. The goal is to help an underrepresented minority 4th-year medical student participate in an emergency medicine rotation anywhere within the state of Georgia. GCEP continues to support a successful leadership fellowship program that equips its participants for advocacy at multiple levels. In 2023, the program will add a third fellow. Many of its program graduates are actively involved in GCEP, ACEP, and the American Medican Association (AMA).



ILLINOIS

ICEP supported state funding of the new 9-8-8 emergency care number for behavioral health emergencies and helped pass



Members of the Indiana Chapter pose during legislative meetings at ACEP's 2022 Leadership & Advocacy Conference.

legislation to improve the Sexual Assault Survivors Emergency Treatment Act (SASETA). ICEP is represented on the new Community Emergency Services and Supports Act (CESSA) technical advisory committee to develop protocols for Mobile Crisis Response (MCR) for 9-8-8 calls and continues to collaborate with state officials to develop strategies to reduce emergency department (ED) boarding, especially those with behavioral health issues.



LOUISIANA

Louisiana ACEP was active in the state legislature defending the practice of medicine against scope creep by non-physician practitioners, all while enduring a very active hurricane season. Louisiana ACEP was proud to receive the ACEP Council Teamwork award at the last council meeting.

MARYLAND

Maryland ACEP has been diligently working with the Maryland Department of Health to address emergency medicine billing/ reimbursement issues related to Optum, the state's Administrative Service Organization for Behavioral Health Services. After countless discussions, letters, and a legislative hearing, Optum issued a Provider Alert that can be viewed on the Optum website. MDACEP urges its members to resubmit any claims with a mental health primary diagnosis that were erroneously denied. This is a big win for Maryland ACEP.



MASSACHUSETTS

The state's current two-year legislative session has come to a close. MACEP was asked to join several work groups that came out of recently passed legislation. The chapter has developed an annual advocacy report to track our advocacy efforts that is available at www.macep.org.



MICHIGAN

MCEP welcomed its new Executive Director, Christy Snitgen, who has been with MCEP for 27 years. MCEP continues to monitor the changing legal landscape post-Roe and is working diligently to mitigate how the Dobbs v. Jackson decision affects emergency physicians and patients. MCEP's Diana Nordlund, DO, JD, FACEP, and Antony Hsu, MD, FACEP, are cochairing ACEP's EM Reproductive Health and Patient Safety Task Force. In 2022, MCEP had representation on each of the Council Reference Committees: Dr. Hsu, Dr. Nordlund and Bradford Walters, MD.



MISSOURI

MOCEP continues to battle down-coding. The chapter was able to fight off scope of practice creep throughout the legislative session and collaborated with other medical groups on several health care issues. MOCEP held its largest Missouri Emergency Medicine Symposium to date and hosted an Advocacy Day in partnership with the state medical association. View the MOCEP Annual Report for more updates at https://mocep.org/2022/08/2022-mocep-annual-report/.



NEW HAMPSHIRE

NHACEP held its Managing Medical Emergencies workshop in May followed by a dinner with more than 20 students in attendance.



NEW YORK

New York ACEP celebrated its 50th anniversary in 2022, commemorating the milestone with a video on New York ACEP's last 50 years: Advancing Emergency Care in New York State. View the video at https://www.youtube.com/watch?v=guIYftXlTvk.



NORTH CAROLINA

The North Carolina College of Emergency Physicians has recently sent a letter to its governor, attorney general, legislative leadership, law enforcement, and the court system about the crisis situation in EDs around the state. The letter addressed violence against health care workers in the ED, extreme staffing shortages, and the behavioral health holds that are combining to make this a crisis situation. The chapter received responses from the Department of Health and Human Services and leadership in the House and will continue to work with these stakeholders to address these issues in 2023.



OHIO

Ohio ACEP's 50th Anniversary was celebrated at its 2022 Annual Meeting. At the event, Laura Tiberi, Chapter Executive Director, 2002–21, was presented the chapter's highest honor, the Bill Hall Award for Service. Chapter leaders developed its 2022–25 strategic plan, and an in-person Residents' Assembly was attended by more than 350 residents. Ohio ACEP began offering hands-on ultrasound courses and continues to advocate to protect patients from retroactive insurance claim denials and reduction in benefits for ED visits.



Ohio Chapter members in Washington, D.C., at ACEP's 2022 Leadership & Advocacy Conference.



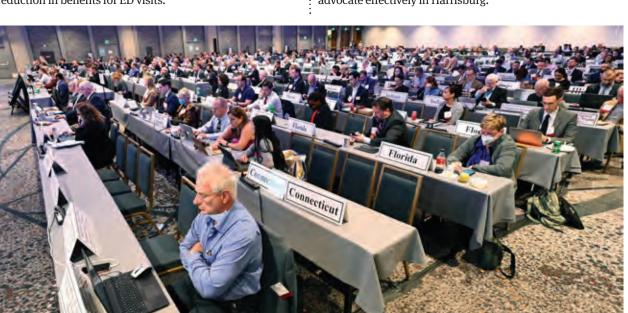
OREGON

OCEP celebrated 50 years as a chapter, putting together a list for its members to highlight the best chapter moments from the past five decades: https://oregonacep.org/ocep-celebrates-50-years/. The chapter held a successful conference with more than 100 members in attendance and will host the 2023 event in Portland for the first time in many years. The chapter continues to partner with other groups to raise awareness about ED violence concerns. In 2023, Oregon is keeping up the fight for legislation on workplace safety and EMS modernization.



PENNSYLVANIA

In 2022, PACEP modernized its decades-old political action committee, the Pennsylvania Emergency Physicians Political Action Committee (PEP-PAC). This transformation included establishing bylaws, electing a board of directors, partnering with a bipartisan consulting firm focused on compliance with lobbying finances and disclosures, and embarking on an innovative fundraising campaign, "\$22 for \$22,000 in 2022." These efforts will ensure that emergency physicians can continue to advocate effectively in Harrisburg.



 ${\it Chapters were well represented during \ the \ ACEP22 \ Council \ Meeting \ in \ San \ Francisco.}$

TEXAS

TCEP restructured its Government Relations Council that will lead its advocacy efforts alongside its state lobbyists. The chapter hosted its Advocacy Training Day in November for all interested members. To strengthen the chapter's relationships with legislators, TCEP facilitated Legi-Zoom calls and ED visits with key legislators.



VIRGINIA

The Virginia chapter is gearing up for an intense 2023 State General Assembly session. From fair payment to boarding and crowding and workplace violence, the chapter is on the front lines of creating and promoting solutions through legislation and regulation. Get the latest on Virginia's main issues at www. vacep.org/issues.



WEST VIRGINIA

The West Virginia Chapter resumed sending one resident from each EM residency program in the state to ACEP's Leadership and Advocacy Conference. The Chapter is working collaboratively with the WV Partnership for Health Innovation to establish a statewide system for ED Palliative Care Referrals.



WISCONSIN

In 2023, the Wisconsin Chapter will prioritize increasing the Medicaid reimbursement rates associated with emergency codes. While the increase from the last budget has improved reimbursement for emergency codes for the first time in three decades, more work is needed to get on par with other states. WI-ACEP continues to collaborate with residency programs to present the Annual Wisconsin Emergency Medicine Research Forum. The chapter is focused on overall member engagement and increasing its support to those in more rural areas. •

"Democracy at Its Best"

ACEP COUNCIL DEBATES SCOPE OF PRACTICE, ACCESS TO CARE, SAFE INJECTION SITES, AND MORE

by JORDAN GRANTHAM

ore than 60 resolutions were put forth during the ACEP22 Council Meeting in San Francisco, with many of them drawing considerable discussion and debate. As usual, the resolutions provided a snapshot of what's happening in society-concerns about access to reproductive health care, the dangers of scope creep, and appropriate involvement between law enforcement and intoxicated patients, to name

A few of the most-discussed topics are highlighted below. View the sidebar to see a list of resolutions approved by the Council or referred to the ACEP Board of Directors. Interested in the work that happens after a resolution is approved? Visit acep.org/council to view actions taken on recent resolutions.

Access to Reproductive Health Care

After the Supreme Court overturned Roe v. Wade in late June 2022, it was no surprise that four resolutions were put forth to the ACEP Council focused on pregnancyrelated health care. Taken as a whole, the reproductive health care resolutions called on ACEP to protect both physicians and patients. For patients, that included supporting equitable, nationwide access to evidence-based pregnancy care, including advocating for universal access to emergency contraception. For physicians, the resolutions pushed for clear legal protections for emergency physicians providing federally-mandated emergency care, clinical practices and policies that protect the integrity of the physician-patient relationship, and increased education around pregnancy-related complications.

Despite the potential divisiveness of this topic, the ACEP Council came to a clear consensus: All four resolutions were eventually adopted by the Council. (Resolution 27 was adopted as submitted, while Resolutions 24, 25, and 26 were adopted after amendments.)

Monica Saxena, MD, JD, a clinical assistant professor in the department of emergency medicine at the Stanford School of Medicine, led the writing for "Resolution 26: Promoting Safe Reproductive Health Care for Patients" with a group of her Stanford colleagues who, surprised by the sudden overturn of Roe v. Wade and its implications for emergency medicine, decided to take action through ACEP's democratic process.

Dr. Saxena and her Stanford colleagues practice in the first hospital in the country to offer abortions through the emergency department (ED), so they are uniquely familiar with the procedure and its protocols. Still, they wanted to think beyond California to write a resolution to address the concerns encountered by colleagues in more restrictive states.

"We understand that emergency physicians are not a monolithic group," Dr. Saxena said. "We wanted to make sure that we were re-



Voting at ACEP22's Council debates.

specting different opinions and even to some level different state laws and different institutional regulations, while also advocating for our patients."

Resolution 26 underwent significant amendments during the Reference Committee hearing, with much of the debate around whether to include special emphasis on EMTA-LA. When it came time for Resolution 26 to be debated on the Council floor, testimony was mostly supportive.

Dr. Saxena said she was braced for strong opposition from some councillors, but the live testimony-even from those who disagreed with the resolution-was constructive and collegial. "That was wonderful to see that people were coming together to advocate for patients," said Dr. Saxena.

As a newcomer to the ACEP Council process-it was Dr. Saxena's first time writing a resolution and attending the meeting—she described her experience as eye-opening, educational, and encouraging. "This was just a group of four or five physicians who came together and said, 'We want to do something, and we pooled our resources and we wrote a resolution, and we got it passed. That's democracy at its best."

Scope of Practice

Another hot topic at the 2022 ACEP Council meeting was scope of practice. Four resolutions were debated that covered competencies, offsite supervision, safe staffing and educational standards. Many of the scope of practice discussions had a common theme: How can we ensure ACEP is emphasizing the

importance of emergency physician-led care: teams without opening the door to unintended consequences?

"Resolution 44: Competencies of Independent Emergency Medicine Nurse Practitioners and Physician Assistants" called for ACEP to adopt policy positions stating that nurse practitioners and physician assistants should never practice emergency medicine without in-person physician supervision. Prior to the meeting, asynchronous testimony overwhelmingly agreed that nurse practitioners (NPs) and physicians assistants (PAs) should not practice without onsite supervision available for support, but comments questioned the practicality of requiring every patient to be seen by an emergency physician in all settings. Heavy debate ensued: How would this policy play out in rural EDs? Could this resolution incidentally create a path for physicians who do not meet ACEP's definition of an emergency physician? In the end, this resolution was not adopted by the Council.

The Council did reach consensus on the : gold standard for supervision when it approved "Resolution 45: Onsite Supervision of: Nurse Practitioners and Physician Assistants," : preciate the advice. I might get carried away at which calls for ACEP to revise its existing pol- : times and look for immediate results (the ED icy statement so that onsite emergency medicine physician supervision is stated as the gold

The next scope of practice debate centered on staffing ratios: Should ACEP take the lead, or is this complex, circumstantial issue best left to local medical directors? After lively debate on both sides of the issue, the Council adopted an amended version of "Resolution" The past few years of ACEP Council meet-46: Safe Staffing for Nurse Practitioner and ings have seen resolutions related to the re-

Physician Assistant Supervision" that called for ACEP to investigate and make recommendations regarding appropriate and safe staffing models of emergency physician-led teams.

ACEP's EM Workforce Section submitted a resolution to address concerns about the wide variation and quality in nurse practitioner education. "Resolution 47: Independent Agency Report for Nurse Practitioner Schools" called for ACEP to "work with the American Medical Association to provide recommendations for nurse practitioner education reform to improve the quality and standards of nurse practitioner training for the purpose of improving physician-led patient care." Asynchronous and live testimony was mixed, with commenters discussing alternative approaches such as a minimum number of clinical hours and/or standardized testing. After much discussion, an amended resolution was adopted.

Resolution author and EM Workforce Section leader Deborah Fletcher, MD, FACEP, said hearing from the many perspectives of ACEP Councillors is a learning opportunity. "There are so many serving in the Council who have been doing this longer than I have, and I apphysician in me!), but it is great to have those who understand the process and how to work for the best outcome long term," she said.

Law Enforcement and **Intoxicated ED Patients**

lationship between law enforcement and the emergency department or EMS, and this year was no different. Elizabeth Barrall Werley, MD, FACEP, and Jennifer Savino, DO, FACEP, helped lead a team from the Pennsylvania College of Emergency Physicians that submitted "Resolution 53: Law Enforcement and Intoxicated Patients in the Emergency Department" to help combat workplace violence in the emergency department (ED). Resolution 53 called on ACEP to investigate alternative care models to evaluate patients in police custody, such as telehealth, to determine necessity of an in-person evaluation, and to encourage law enforcement to stay with any patient they choose to bring to the ED who poses a risk to the safety of themself or others until a disposition has been determined or the physician determines assistance is no longer needed.

Dr. Werley was inspired to write the resolution by a scary encounter she had years ago in her ED when she was in her second trimester with her first child. Law enforcement left an intoxicated patient with her because he seemed to be in control. After they left, he physically assaulted her. She ultimately pressed charges and testified in court. "Fast forward 10 years later, and I attended ACEP's 2022 Leadership & Advocacy Conference where we lobbied for protection from violence against health care workers. So, my personal encounter from over a decade before was fresh in my head all over again [as I proposed this resolution]."

When working on the resolution with fellow PACEP members, Drs. Werley and Savino "noticed a clear dichotomy regarding our experiences with law enforcement among us from those who practice in more urban settings to those that practice in a more smalltown or rural environment," said Dr. Werley. Those perspectives prepared them for the detailed debate that ensued at the Council Meeting.

There was concern that the second part of the resolution-that ACEP encourage law enforcement to stay with any patient they choose to bring to the ED who poses a risk to the safety of themself or others until a disposition has been determined or the physician determines assistance is no longer needed-did not reflect the collaborative relationship needed with law enforcement. Those testifying acknowledged that this is a complex problem that affects emergency physicians and patients, and highlighted the practical, regulatory, and legal challenges associated with implementing this resolution. There was additional debate about hospitals taking more responsibility for the safety of staff and patients.

The telemedicine aspect of the resolution "brought up concerns that it could turn into a slippery slope, and we may be asked to do other evaluations for law enforcement," said Dr. Savino, so it was agreed to remove that part.

The resolution prompted a lot of discussion about the institution's role in keeping its employees safe, which illuminated the safety resources available to large, urban EDs compared to smaller hospitals.

"I was surprised that some perceived [our resolution] as anti-law enforcement, which was never the intent. I have had great experiences with law enforcement in my career," Dr. Werley said. "But just like hospitals have various resources based on size and location, the same can be said for a small town with only one or two officers on duty versus a city with a much larger police force."

After much debate, this resolution was referred to ACEP's Board of Directors. "We knew it might be contentious when we wrote it, but

felt it was worth discussing because it impacts so many of us," said Dr. Werley. "I'm glad it generated so much discussion because it demonstrated to the Board the importance of this issue." Both Drs. Savino and Werley were comfortable with the resolution's outcome, saying they felt confident that the Board had heard both sides of the discussion and would be able to explore the additional nuances of the issue.

Safe Injection Sites

ACEP Past President Larry Bedard, MD, FACEP, believes substance abuse disorder patients should be treated with all available resources and dignity. It's that belief, combined with his knowledge about California's safe injection site pilot sites, that led him to co-author "Resolution 32: Supervised Consumption Facilities/ Safe Injection Sites" with Dan Morhaim, DO, FACEP.

This resolution called on ACEP to support the development of Supervised Consumption Facilities/Supervised Injection Sites (SCF/SIS) in the United States that would collect data to inform policymakers on the feasibility, effectiveness, and legal aspects of whether these sites in reduce harm and health care costs related to injection drug use.

For this topic, there was an interesting divide between the asynchronous testimony before the Council meeting (unanimously opposed) and the live testimony in San Francisco, which was mostly supportive. The debate centered around whether safe injection sites are a proven method of harm reduction. Some members providing testimony believed ACEP should focus on establishing sobering centers instead.

"I like taking on controversial issues," Dr. Bedard said. He absorbed the Council's debate over whether ACEP should support safe injection sites or sobering centers, but he feels it doesn't need to be framed as an either/or situation. Dr. Bedard thinks they work well together. "There's a significant number of patients who go to a safe injection center that get referred to treatment centers."

After the Council adopted the resolution, Dr. Bedard reflected on his long history with the Council—he's been involved for 40 years—and how important the Council is for setting policy that affects EM physicians and patients. He encourages other ACEP members to get involved. "This is how we set policy," he said. "It's where we represent not only the best interests of our fellow physicians, but also of our patients."

From veteran Council member Dr. Bedard to relative newcomers Drs. Fletcher, Saxena, Savino and Werley, they agreed that participating in the 2022 ACEP Council Meeting was energizing.

"I am glad for the diversity in opinions, but also that we really have patients at the heart of the debate," said Dr. Fletcher. "[Council] is a truly fascinating process... So much is at stake right now."

"Before I got involved at the local level, I didn't even know Council existed. I imagine not a lot of ACEP members even know about it or what is done at the meeting," said Dr. Savino. Now that she's participated, she better understands how the debate and discussion helps align the College's work to find solutions to pressing issues. "At the end of the Council meetings, I feel like I actually made a difference." •

JORDAN GRANTHAM is senior content manager at ACEP.

Summary of ACEP22 Council Resolutions

Get more details on each resolution at acep.org/council.

NON-BYLAWS RESOLUTIONS*

- ▶ 17 Criteria for the Location of Future National ACEP Events (as substituted)
- 19 Due Process and Interaction with ACEP (as amended)
 second resolved
- > 24 Access to Reproductive Rights (as amended)
- 25 Advocacy for Safe Access to Full Spectrum Pregnancy Related Health Care (as amended)
- > 26 Promoting Safe Reproductive Health Care for Patients (as amended)
- > 27 Equitable Access to Emergency Contraception in the ED
- 28 Billing and Collections Transparency and Interaction with ACEP (as amended)
- 29 Buprenorphine is an Essential Medicine and Should be Stocked in Every ED
- > 32 Supervised Consumption Facilities/Safe Injection Sites
- > 33 Telehealth Bridge Model for the Treatment of Opioid Use Disorder
- > 34 Emergency Department Safety
- > 35 Workplace Violence Towards Health Care Workers (as amended)
- ▶ **36** Emergency Medical Services Are Essential Services (as amended)
- > 37 Enhance Patient Safety and Physician Wellness
- ▶ 38 Focus on Emergency Department Patient Boarding as a Health Equity Issue (as amended)
- ▶ **39** Signage at Emergency Departments With Onsite Emergency Physicians (as amended)
- ▶ **40** Support for Medicaid Expansion
- ▶ **41** Addressing Stigma in the Emergency Department (as amended)
- ▶ **43** Endorsing ED Resident Competency in Buprenorphine Initiation (as amended)
- ▶ **45** Onsite Supervision of Nurse Practitioners and Physician Assistants
- ▶ **46** Safe Staffing for Nurse Practitioner and Physician Assistant Supervision (as amended)
- ▶ 47 Independent Agency Report for Nurse Practitioner Schools (as amended)
- 50 Supporting Emergency Physicians to Work in Rural Settings (as amended)
- ▶ **51** Implementation of Social Determinants of Health Evaluation in the ED (as amended)
- ▶ **56** Policy Statement on the Corporate Practice of Medicine (as amended)
- ▶ 57 Recognized Bodies for Emergency Physician Board Certification (as amended)
- ▶ **58** Removing Intrusive Medical Exams and Questionnaires from Employment Contracts (as amended)

Resolutions Referred to the ACEP Board of Directors

- ▶ 10 Candidate Members in the ACEP Council Bylaws Amendment
- ▶ **20** Expert Consultation for Employee Contracts
- > 22 State Chapter Funding
- > 53 Law Enforcement and Intoxicated Patients in the ED

Council Standing Rules Resolutions

The Board does not take action on Council Standing Rules amendments.

- ▶ 15 Electronic Voting During the Council Meeting Council Standing Rules Amendment (as amended)
- ▶ 16 Required Candidate Campaign Materials from Floor Candidates

Bylaws Resolutions

Requires a 2/3 affirmative vote of the Board of Directors for adoption.

11 Establishing a Young Physician Position on the ACEP Nominating Committee

stList does not include the commendation and memorial resolutions that were also adopted by the Council.

Interview with Samuel M. Keim, MD, MS

ONE ON ONE WITH ABEM'S PRESIDENT

by CEDRIC DARK, MD, MPH, FACEP

Can you tell us about your role as ABEM president?

Dr. Keim: I am really excited about this opportunity to work with an amazing board and staff. The work is meaningful to current patient care quality and the future of our specialty. The American Board of Emergency Medicine (ABEM) has proven organizational excellence and has achieved independent recognition for this that, in my opinion, places it at the top of the specialty boards.

What is your "day job" as an emergency physician?

Dr. Keim: I have worked in the same emergency department for 32 years in Tucson, Arizona. It's a busy Level I trauma center and major referral hub for the region. We see all the common things plus some "spicy" stuff like rattlesnake bites, scorpion stings, and heat stroke. I love my clinical time and learn a ton from our super-sharp residents every shift.

How have emergency physicians been doing with the MyEMCert replacement for the ConCert exam?

Dr. Keim: Feedback from physicians has been very positive. I think this is largely a result of emergency physician contributions to redesigning the MyEMCert process. Current feedback indicates that MyEMCert is convenient and relevant to emergency physicians' clinical practices. Because modules are open-book and physicians have three attempts to pass, the experience is far less stressful than the ConCert Exam. The early results are in and it's clear that physicians prefer MyEMCert to the ConCert Exam. The most encouraging comments are about learning new clinically relevant content in the Key Advances sections. This truly has the potential to broadly and efficiently improve patient care practice in our specialty.

ABEM is initiating a new certification for EMS Board Certification called MyES-Cert. What should emergency physicians know about this?

Dr. Keim: Beginning in 2023, emergency physicians with subspecialty certificates in EMS will be transitioning to MyEMSCert when their current certifications expire. This process is similar to MyEMCert modules that include about 50 questions, with 60 percent on clinical core knowledge, 20 percent on advances in the literature (based on articles, much like the Lifelong Learning and Self-Assessment or LLSAs), and 20 percent on systems and regulations. When fully phased in 2027, physicians will be required to pass four MyEMSCert modules and attest to one Improvement in Medical Practice activity. For emergency physicians with EMS certifications that expire in 2023 or 2025, four MyEM-



Dr. Keim

SCert modules will be available, so they have options for how to meet their requirements based on what activities they've already completed. Like MyEMCert, EMS physicians will have three opportunities to pass a module. However, if a physician does not pass a module, they will have to wait three months to retake it. So, it's important to take a MyEM-SCert module as soon as they are available to optimize that number of times you can take a module. We strongly encourage physicians to start their recertification process as soon as the modules are available this February 2023.

Why do EMS physicians need to wait three months to retake the module?

Dr. Keim: Because there is only one form of the MyEMSCert module, there will be similar content. To balance this element, ABEM is using spaced repetition as a proven educational principle to optimize physician learning.

What are the three main subject areas where emergency physicians perform poorly in recertification and should try to improve their knowledge?

Dr. Keim: ABEM is working on identifying knowledge gaps in MyEMCert so that emer-

gency medicine organizations can develop focused education materials based on those gaps. The areas vary widely. ABEM is analyzing the content areas and will publicly post the "study points" every year that represent the areas that hold the richest learning opportunity. But, if I were to stress our greatest learning opportunity, it would be with the Key Advances. Every ABEM-certified physician should download and read the Key Advance synopses and watch the Osmosis videos on our website—that's a great place to start.

ABEM asserts that board certification brings increased income and additional job opportunities. Can you quantify that for us?

Dr. Keim: Based on data taken from the recent ACEP Workforce Study, ABEM and/or AOBEM certification is associated with an annual increase in income compared to non-certified emergency physicians. The prior ACEP-Daniel Stern salary survey showed an increase of about \$7,000 per year. We believe that the ACEP Workforce data, when reported, will be considerably higher. ABEM has also been adding new subspecialty certifications and a focused practice designation, which provides additional job opportunities. There is strong

published evidence that certification makes a difference in the quality of patient care, including fewer state medical board disciplinary

Last year we asked about ABEM tackling the issue of emergency physicians who speak out against proven measures to reduce the impact of the COVID pandemic such as masks and vaccines and advocate for unproven methods such as hydroxychloroquine and ivermectin. Has ABEM had to discipline any physicians as a result?

Dr. Keim: ABEM continues to ensure that ABEM-certified physicians adhere to the Code of Professionalism. This includes supporting science-based standards of care. Given the nature of these proceedings and the assurances of due process for physicians, ABEM has not made any public comments about the results of professionalism investigations. •



DR. DARK (@RealCedricDark) is associate professor of emergency medicine at Baylor College of Medicine and the medical editor in chief of ACEP Now.

38th Annual Series

EMERGENCY MEDICINE & ACUTE CARE / 2023

A CRITICAL APPRAISAL





- 28 State-of-the-Art Topics
 - Four 90-Minute Faculty Panels
 - **Seasoned Clinical Faculty**
 - **Focused on Clinical Questions**
 - Literature-Derived Evidence
- 10 Top-Rated Destinations

- Updates in the Care of Pulmonary Edema
- New Trends in Antibiotic Utilization
- Non-Occlusive Myocardial Infarctions
- NOMI ECGs It's Not Just STEMIs Anymore
- Getting Even Better at Pain Treatment
- Cruising the Critical Care Literature
- Management of the SOB Child
- Appendicitis and Diverticulitis: Antibiotics?
- Pearls from Risk Management Monthly Part 1
- Pearls from Risk Management Monthly Part 2
- Airway Management Nuances

- New EM Drugs and Products
- Toddler Fever What's New?
- Strokes, Mini Strokes, and TIAs
- Low Value Injury Care
- Serious Medication Errors in the ED
- Racial and Ethnic Challenges in EM
- Making a Difference in Low Back Pain
- **Holding Admitted Patients Worsens Outcomes**
- **Emergency Medicine Myth Busting Part 1**
- **Emergency Medicine Myth Busting Part 2**
- Practice Variation "The Art of Medicine"

- **GU Challenges in Children and Adults**
- **Upping Your Game in Headache Care**
- Visual Diagnosis Challenges Part 1
- Visual Diagnosis Challenges Part 2
- Aortic Dissection, Uncommon but a Killer
- Concussion Care: What's the Evidence?
- Important Recent EM Literature Part 1*
- Important Recent EM Literature Part 2*
- **ED Staffing and Operations Forum***
- Diagnostic and Therapeutic Controversies*

Topics listed with an asterisk () are 90-minute faculty panel discuall other topics are 30 minutes.

Dates & Locations









Emergency Physician Restrictive Covenants

WHEN TO NEGOTIATE YOUR CONTRACT

by LISA MAURER, MD, FACEP

orty years after its founding as a single-site democratic group, the physician-owned practice group of which I am a part added additional contracts in 2022. The sites where our group gained contracts already had fantastic physicians working there, along-side whom our partners would be proud to work. During the process of our group's transition into these new sites, we unfortunately found that many physicians in our area were limited in their right to work in their home community after employment when the previous contract ended. As we progressed in our transition into these sites, a couple of questions arose:

- Were these "non-compete" clauses enforceable for emergency physicians?
- Even if they were enforceable, do former employers historically pursue enforcement? What could our group do to help support these fellow emergency physicians?

To help our group answer these questions, we reviewed the typical structure and use of these contractual clauses within our specialty.

Contracts Between Employers and Emergency Physicians

Contracts between employers and emergency physicians that limit the right to compete after employment ends are common and subject to close scrutiny when challenged. Post-employment non-compete clauses limiting physician practice in a geographic area, non-solicitation provisions restricting treatment of former patients and solicitation of colleagues, and confidentiality provisions are all types of restrictive covenant agreements. Such provisions can be found in a wide range of contracts, including employment and independent contractor agreements as well as partnership agreements. These provisions contrast from "non-interference with contract" clauses that generally prohibit contracted emergency physicians from conspiring to control the emergency department management contract themselves or conspiring with others to do so.

Legislative approaches and the courts' willingness to enforce non-competes vary widely between states. California, for example, has declared most post-employment competition restrictions to be unenforceable and void. Other states, like Florida and Texas, are more sympathetic to enforcing these contracts by granting the courts power to revise or "bluepencil" provisions deemed unreasonable. An excellent survey of the national landscape by William Millard, MD, can be found as previously published in *ACEP Now* based on his peer-reviewed report in *The Annals of Emergency Medicine*.

Our group found it helpful to gather local legal opinions. The attorneys at Kravitt, Hovel, and Krawczyk suggested, "In every jurisdiction which entertains the possibility of enforcing such anti-competitive provisions, the employer must at least articulate a protectable interest justifying that restriction." They went on to describe that the party attempting to en-



force the provision needs to show it is necessary either to:

- 1. Prevent the use of trade secrets or other confidential information, or
- 2. Protect its "customer" or referral relationships.

Bradden Backer, JD, from DeWitt LLP concluded, "The unique nature of emergency medicine creates a strong argument for challenging the enforceability of post-employment limitations on such practitioners' ability to compete. Unlike many physicians, emergency medicine specialists usually do not have extended or repeated business relationships with patients. They also seldom secure patients through referral sources. Nor do patients customarily seek out a particular emergency room physician when faced with a medical emergency. Accordingly, a former employer may well have difficulty justifying the need to bar a departing emergency physician or similarly focused health care provider from working nearby or assisting former patients."

Despite these characteristics of the practice of emergency medicine that challenge the enforceability of restrictive covenants, if non-compete clauses exist, they certainly still apply significant pressure on the contracted physician. Even if the risk of a successfully enforced non-compete is low, the risk of having to endure such arduous legal procedures and steep financial ramifications may sway any emergency physician away from continuing to practice in their hometown. In our experience, the mere presence of non-compete clauses in agreements with the previous contract holder put all parties—the hospital, our group, and the individual physician—at risk of litigation.

Given the potential repercussions to the : cesses for employment agreements involving :

individual physician and the lack of damages: to the employer, both ACEP and the American Academy of Emergency Medicine (AAEM) oppose the use of restrictive covenants in employment agreements. ACEP outlines this clearly in its policy on Emergency Physician Rights and Responsibilities, stating, "Emergency physicians have the right to be free from restrictive covenants that restrict their ability to practice medicine, for a period of time or in a geographic area, upon termination of employment or a contract. Such restrictions are not in the public interest." AAEM includes this in its Policy on Ethical Business Practices in Emergency Medicine by stating, "No member shall engage another emergency physician in a contract that includes restrictive covenants, due process waivers, or a non-reciprocal right of termination without cause."

The Advocacy-Based Approach

Ongoing advocacy is needed at the state and federal level to ensure that legislators understand the full scope of consequences for restrictive covenants, especially for hospital-based physicians, such as emergency physicians. What's more, the atypical character of physician-patient relationships in the emergency department context warrants a particularly critical assessment by courts when considering limiting the post-employment competition of such practitioners.

Importantly, non-compete clauses should be removed from employment or partnership agreements with emergency physicians. Rather, groups who spend significant resources to recruit emergency physicians can continue to have mechanisms to outline repayment processes for employment agreements involving

a recruited emergency physician who moves onto another opportunity more quickly than the contracted time frame. ACEP members are oftentimes in positions of influence and leadership in various practice environments. Make it a priority to review the language in the contracts that your institution or group offers to prospective or currently contracted physicians

Groups that do happen to transition into contract management of new emergency departments should offer temporary flexibility and support to physicians who may want to stay in their communities despite restrictions imposed by non-competes. For example, if physicians can temporarily work at a remote site within the new contract-holding group, that may allow for return to their home site after the term of a non-compete has expired. In addition, an offer of legal support might be an attractive recruitment tool for a physician unsure of the legal ramifications of changing employers while remaining within their home community.

Lastly, for physicians who are negotiating terms and conditions for a new employment or partnership agreement, prioritize focusing on removal of non-compete clauses. Although the conditions may not always allow for it, weigh the presence or absence of a non-compete clause as an important deciding factor if you have the luxury of considering multiple job opportunities. •



DR. MAURER is physician with Emergency Medicine Specialists in Milwaukee and chief medical officer for ConsenioHealth.

CREATIVE CAREERS Exploring unique career options - for emergency physicians

RONALD ROTH, MD, FACEP

Team Physician, Pittsburgh Steelers

onald Roth, MD, FACEP, has never thought of himself as an athlete. He is, however, an integral part of the Pittsburgh sports scene in his role as team physician for the National Football League's Pittsburgh Steelers.

Over more than two decades with the team, Dr. Roth has seen it all. He could be assessing neck or head injuries, or various fractures. Other days he may be called to treat a collapsed lung or manage an athlete with hyperthermia. He also steers the organization's emergency action planning and oversees the rapid response for anyone who experiences a medical emergency at the stadium, practice facility, or training camp.

He credits his extensive EMS background for preparing him for the job. "This job is made for EMS. It's unpredictable, and we bring so many skills to the table," he said.

Dr. Roth concurrently serves as the medical director for the Pittsburgh Department of Public Safety, which includes police, fire responders, and EMS. His extensive knowledge and deep relationships are essential to smooth on-field operations, as the paramedics who may be caring for an injured player are part of his service.

"I'm an EMS physician. It doesn't faze me to treat a cardiac arrest outside rather than in an emergency department. I use my emergency medical training, just not on an ambulance," Dr. Roth said. "It's a lot of fun to take what you know and apply it to the football field."

He was medical director of the Pittsburgh Marathon when the Steelers contacted him about the role. When he was offered the job, he took it without hesitation. "As a diehard Steelers fan, I only thought about it for a millisecond," he



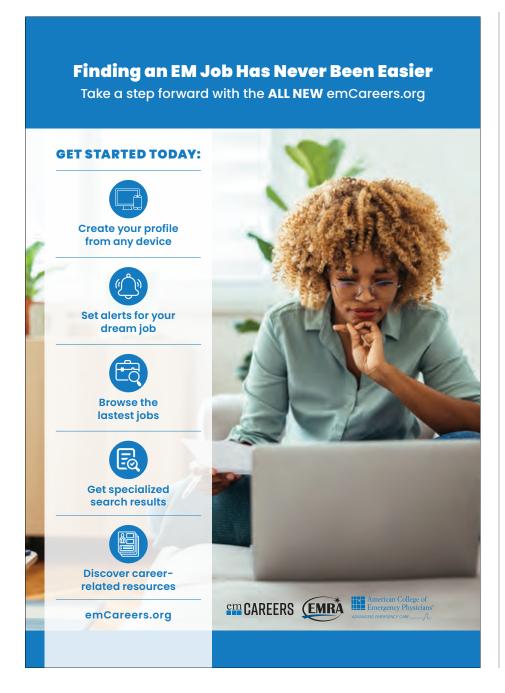
Dr. Roth encourages anyone interested in the intersection of sports and emergency medicine to pursue this line of work. "You're not a sports medicine doctor, you are an emergency physician, taking care of emergencies on the field. There's some overlap but we have our own expertise."

Dr. Roth has fond memories of sitting in the cheap seats to watch games with his father as a child. Now, he is on the sidelines and in the locker room. Some days he feels like a

"Sometimes I pinch myself," he said. "Nobody is going to ask me what plays to run, but when I help determine how to treat an injury, I feel like part of the team." •

ABOUT

- » Medical director of the Pittsburgh Department of Public Safety, which includes police, fire first responders, and EMS.
- » Medical command physician at the University of Pittsburgh Medical Center Medical Command Center.
- » Medical director for the Pittsburgh Marathon, the Allegheny County Emergency Operations Center, and a team physician for the Pittsburgh Steelers.
- » Dr. Roth has worked at the UPMC Presbyterian Department for over 30 years and has served as medical director of paramedic training, director of the UPMC EMS fellowship, and chief of the EMS division in the Department of Emergency Medicine. He served on the committee that developed the ACEP/ National Association of EMS Physicians (NAEMSP) EMS Subspecialty Certification Review Course.
- Medical degree and emergency medicine residency at University of Pittsburgh.





Endocrine Enigma

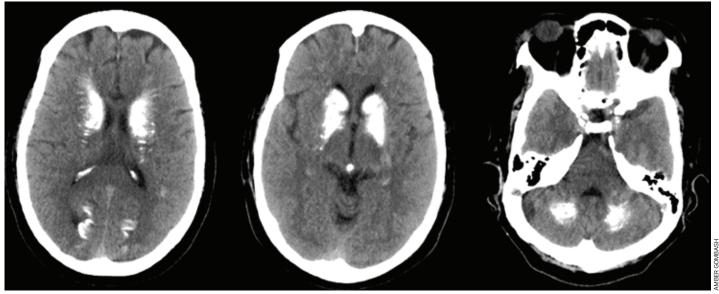
A case study complicating a common surgery

by AMBER M. GOMBASH, MD; DAVID S. BULLARD, MD, MED; AND JONATHAN L. FROMMELT, MD

66-year-old woman presented to the emergency department (ED) after a witnessed seizure. On examination, the patient had mild confusion, a head laceration, and a tongue abrasion. She was noted to have a healed surgical scar present on the anterior neck. Images from the noncontrast computed tomography scans of brain are shown in the figure (right).

Diagnosis: Extensive Brain Calcification Due to Hypoparathyroidism

The noncontrast computed tomography demonstrates extensive calcifications in the bilateral basal ganglia, periventricular white matter, and bilateral cerebellar hemispheres. Laboratory studies confirmed hypocalcemia: total calcium level was 4.6 mg/dL (reference range: 8.4-10.4 mg/dL) and ionized calcium was 2.65 mg/dL (reference range: 4.3-5.2 mg/ dL). The patient had a remote history of a thyroidectomy and previous issues with hypocalcemia, but no prior seizures. Additionally, the patient reported not taking her prescribed calcium supplementation. While in the emergency department, she had another seizure. She received calcium gluconate and levetiracetam and was admitted to the medical intensive care unit (MICU). In the MICU, the patient received



Noncontrast axial computed tomography of brain

additional intravenous calcium gluconate, oral calcitriol, and calcium carbonate. Her parathyroid hormone intact level was 6.0 pg/ mL (reference range 12.0-67.0 pg/mL).

Hypoparathyroidism leads to decreased serum calcium and increased serum phosphorus levels. The most common cause of hypoparathyroidism is iatrogenic from anterior neck surgery. Symptoms of mild to moderate hypocalcemia include paresthesias and tetany.¹ Severe hypocalcemia can present as seizures, cardiac arrhythmias, broncholaryngospasm, and sudden death.1,2 Seizures with hypocalcemia are linked to increased neuroexcitability.3 The basal ganglia calcium deposition itself is not definitively linked to seizures.^{3,4} **♦**

References

- 1. Clarke BL. Epidemiology and complications of hypoparathyroidism. Endocrinol Metab Clin North Am. 2018:47:771-782.
- 2. John DR, Suthar PP. Radiological features of long-standing hypoparathyroidism. Pol J Radiol. 2016;81:42-45
- 3. Nageen T, Muhammad SZ, Jamal A. Seizures and basal ganglia calcification caused by hypoparathyroidism Cureus 2020:12(4):e7888
- Zavatta G, Tebben PJ, McCollough CH, et al. Basal ganglia calcification is associated with local and systemic metabolic mechanisms in adult hypoparathyroidism. J Clin Endocrinol Metab. 2021:106(7):1900-1917.

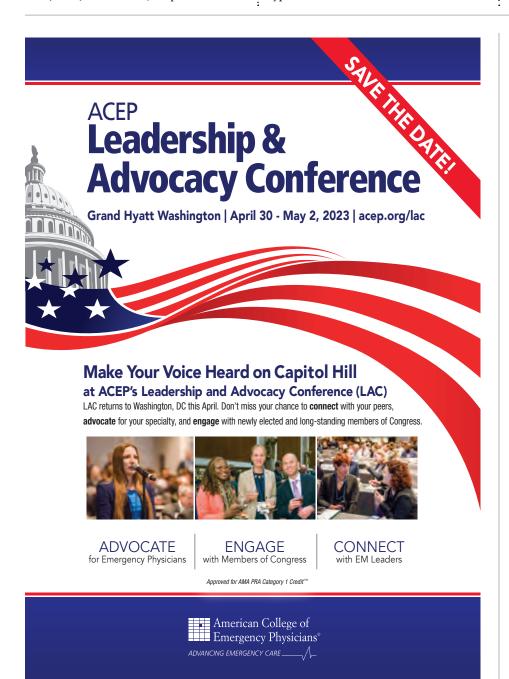






DRS, GOMBASH, BULLARD, AND

FROMMELT are emergency physicians at the department of emergency medicine at Case Western Reserve University School of Medicine at MetroHealth Medical Center in Cleveland, Ohio.





Q&A with New *Annals* Medical Editor Donald Yealy, MD, FACEP

Catching up with Dr. Yealy at ACEP22 in San Francisco

by CEDRIC DARK, MD, MPH, FACEP

Why is Annals of Emergency Medicine the best journal in emergency medicine?

Dr. Yealy: For 50 years, *Annals* has recruited the best talent to evaluate submissions and created the best processes to make that happen. When you put those [processes] together, you have a recipe for both impact and recog-

Tell me a little bit about your journey to how you got into this position.

Dr. Yealy: I finished my training in 1989, and I did a research fellowship as part of that training. Back then when I did a research fellowship, there were two other research fellows in emergency medicine in the country. We could have come to this meeting [ACEP22] and met in almost any room or any corner; it was easy to know everybody in it. And that's a symbol of how far we've come, because now you wouldn't be able to have that in the single room. I got interested in the creation of knowledge and once you have some skill toward creating knowledge and writing the manuscripts around it, you quickly get invited to review that same process for others. I started reviewing for both Annals and other journals, and over time developed an aptitude and skill for it. [I] took on increasing roles at both *Annals* and at other journals, and over the past 16 years have been deputy editor [for Annals].

What's the deal with reviewer number

Dr. Yealy: How is it that we manage to find the most difficult person and always assign them two? Just like on K-type questions, the right answer is always B. I think that it's actually not true. Your expectation is such that when it happens, it reinforces what is otherwise a haphazard event. It's not random, but it's haphazard.

How does Annals fit in with JACEP Open, ACEP Now, and all the other publications that the College publishes?

Dr. Yealy: The College has, as part of its mission and goals, the desire to meet the educational and practice needs of anyone who's a member. And they can do that through a variety of different formats. That includes peer-reviewed, original scientific research. That includes other platforms where work that maybe has already been through peer review or hasn't quite made it to peer review yet can be shared. I think for ACEP, it's a wise strategy to have multiple different platforms that overlap and yet provide information in the style and manner in which the end user likes to take it up. And that would include both print online and standard traditional formats. Each of those overlap because they're sharing knowledge, and they share from each other. Annals and JACEP Open focus primarily, but not exclusively, on original work. Annals, perhaps more mature original work. And JACEP Open maybe more nascent work. ACEP [Now] :



Dr. Yealy became the new editor-in-chief of Annals of Emergency Medicine in 2022.

would take the output from those things and talk more about, how can that be integrated into practice? I see them as distinctly different but overlapping platforms that are important for any successful organization to make sure they're meeting the needs of all the members. [Annal's] mission is to provide the highest quality science, whether it's new or assimilation of old known science, in formats that are the more traditional formats.

Your predecessor Dr. Michael Callaham was in this role for about 20 years. Are you going to be in the role for 20 years?

Dr. Yealy: No. I think change is an excellent thing. And we are right now in the middle of one of the most tectonic changes in health care from any angle that you're talking about. Delivery of health care, financing of health care, creation of knowledge around health care, and the education of folks. And so this is an exciting time to be at the helm of one of the vessels that's a part of that fleet addressing all of those particular opportunities. I don't plan to be in this for an extended period of time... It's my job to make sure on day one that I am grooming a pool of successors for [myself].

What are your thoughts about pre-publication in the medical field?

Dr. Yealy: Well, it's been a fascinating journey for the past couple of years. Like you, I had virtually no personal experience with pre-publication archives until COVID-19 came around. And people were [so] thirsty for insight at any level that a platform that offered rapid delivery on insight was really felt to be very helpful. And I do think that it will change many of the processes, and perhaps even some of the goals, of how it is we share scientific infortwo and a half years with the pandemic have taught us what's really helpful about that. It's a valuable tool to get information out, not only to practitioners but into the lay community, given the rapid pickup. But it's also an opportunity to get misinformation out. The reason we do peer review, it's not about true or untrue. Do the data make sense within the structure? Is the message interpreted with highest amount of fidelity? It's not a matter of truth or not truth, but does it make sense? ... It's hard to unring a bell once there's already been pickup at another level. I do think that the prepublication servers are changing things, but positively and negative[ly], I think we're going to learn lessons about what works and what doesn't work.

I wanted to ask about the Kardashian index. You're familiar with that?

Dr. Yealy: It'd be very easy, given my age and my stated career, to have a snarky comment about the Kardashian index and say that's just not real. But as we talked about in the beginning ... the name of the game is to share information with the people in whom it either can influence their practice or influence their outcomes. So you're talking about on the provider or the patient side, social media clearly is a powerful tool. Is it exactly the same as creating that knowledge or sending it off and going through peer review? No, it's a different part of the process. I think having singular concise measurements of how someone is effective at that particular job makes sense to me. The challenge for a person who has a scholarly career is, how will that fit when they want advancement or further recognition, or if they even want to monetize that?

On the advancement side, I see more and mation. I think the experiences over the past : more people who, in addition to saying I've

written so many papers that were cited by so many other people, or supported by so many dollars, are also talking about some form of measurement. And the Kardashian index is just one. There's Altametric measures. It's becoming more and more important, people are trying to quantify either the impact of a piece of information or their skill at delivering on that promise. I suspect it will be one measure, whether [the Kardashian Index] becomes the measure or not, I can't really tell yet.

In your tenure thus far with the Annals, what do you feel is the most important paper that has been published, let's say in the past 16 years?

Dr. Yealy: Oh, boy, that's a tough question. I wasn't prepared to answer that right now. I can think of many that were helpful, but I'd honestly have to sit down and put a little bit more thought into that.

What do you think's been the most memorable thing that comes to your mind?

Dr. Yealy: A piece about the practice of emergency medicine allowed us to not only develop dialogue back and forth on that particular topic, but to re-examine the role between the sponsoring organization and the editorial board and the content of the journal. And I'm proud of that, because a lot of other highprofile journals went through that process because of much more conflict, and perhaps even a need to terminate individuals involved. We were able to do it in a healthy way that reinforced and raised the level of, not only respect, but discourse between the two bodies that each had a task to do. I thought that was really, really healthy, although it was a little bit bumpy at times.

Any final thoughts?

Dr. Yealy: [I want to point out] that not only did Dr. Callaham raise the stature, the content, and the recognition of the Annals of Emergency Medicine, he changed publishing around the globe. He saw that when humans evaluate humans, and that's what happens during a peer review, one person looks at another person's work and makes comments about it. No matter how hard you try, there will be opportunities to do better. In other words, either failures to accept something that's important, or having accepted something that shouldn't have been... But [Dr. Callaham] created science and observations around that and shared them across all journals. Annals of Emergency Medicine is not only the leading journal in emergency medicine for creating content specific to acute illness and injury, but it's a leader in changing the insights and the practices behind peer review. I can't think of another journal that has that type of impact on broader publications. •



DR. DARK (@RealCedricDark) is associate professor of emergency medicine at Baylor College of Medicine and the medical editor in chief of ACEP Now.

Tessalon Perles

BEWARE OF BENZONATATE MISUSE

by STEPHEN HARDING, MD

Case Summary

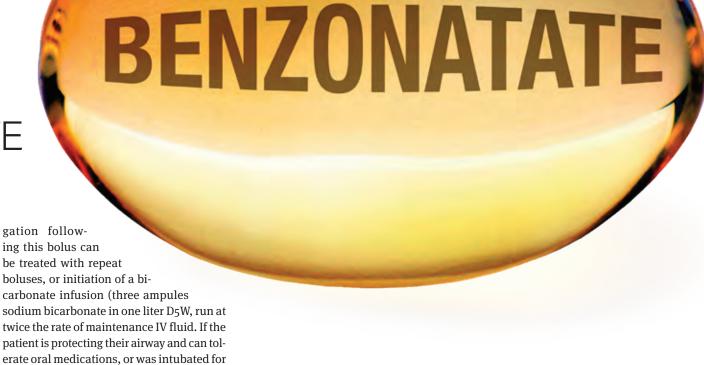
14-year-old female with a history of depression and prior overdose presented via EMS following an intentional overdose of benzonatate. She ingested approximately 15, 100-mg benzonatate tablets and began having seizure activity at home. Her mother believes she stopped breathing. On EMS arrival, she was unresponsive and then lost pulses. Return of spontaneous circulation was achieved after epinephrine, naloxone 0.8 mg, and six minutes of CPR. She was then intubated. Initial EKG showed sinus tachycardia with normal QRS and QTc.

Discussion

Benzonatate (Tessalon) is a non-opioid antitussive that has been available for over 50 years. Structurally similar to ester-type local anesthetics, its mechanism includes sodium channel blockade and anesthesia of pulmonary stretch receptors. Benzonatate's onset of action is approximately 15 to 20 minutes with effects lasting three to eight hours.1 A seven-year, retrospective review of poison center data regarding benzonatate ingestions returned 2,172 patients; five percent of these ingestions resulted in serious outcomes, including four deaths due to dysrhythmias.2 While seemingly rare, these clinically significant effects included tachycardia, agitation, seizures, status epilepticus, and dysrhythmias. Cardiac arrest was reported in eight patients (0.3 percent of cases analyzed).

Sodium channel blockade presents as prolongation of the QRS duration and subsequent risk of tachydysrhythmias. Other substances known to cause sodium channel blockade include tricyclic antidepressants, type 1A and 1C antidysrhythmics, diphenhydramine, bupropion, and cocaine among many others.³

Management of benzonatate toxicity is largely supportive. Local anesthesia of the oropharynx may increase risk of aspiration events and difficulty tolerating secretions. Seizures should be treated with benzodiazepines, and tachydysrhythmias or cardiac arrest with typical ACLS care. Sodium channel blockade, as evidenced by a wide QRS complex, can be treated with 1–2 meq/kg of sodium bicarbonate. Further QRS prolon-



More recently, a retrospective analysis of several databases including the National Poison Data System, FDA Adverse Event Reporting System, medical literature, and others was performed to evaluate benzonatate prescribing, exposures, and adverse events in pediatric patients.4 They found that the majority of exposures under age five years were exploratory, whereas most exposures in the ten- to 16-year-old age group were intentional. Additionally, they found a 62-percent increase in benzonatate prescribing, mainly among adolescent patients. During the time frame the authors examined, codeine- and hydrocodone-containing antitussive use decreased, likely due to efforts to decrease opioid prescribing in the face of the opioid epidemic. Ultimately, while benzonatate prescription is rare among pediatric patients, there has been an increase in exploratory ingestions among young children and misuse among adolescents. Emergency physicians should be cognizant that, while benzonatate is not an opioid, it is not without significant risk, and treatment mirrors that of other drugs that block sodium channels. •

their symptoms, activated charcoal (1g/kg)

can be considered to adsorb any benzona-

tate remaining in the gastrointestinal tract.

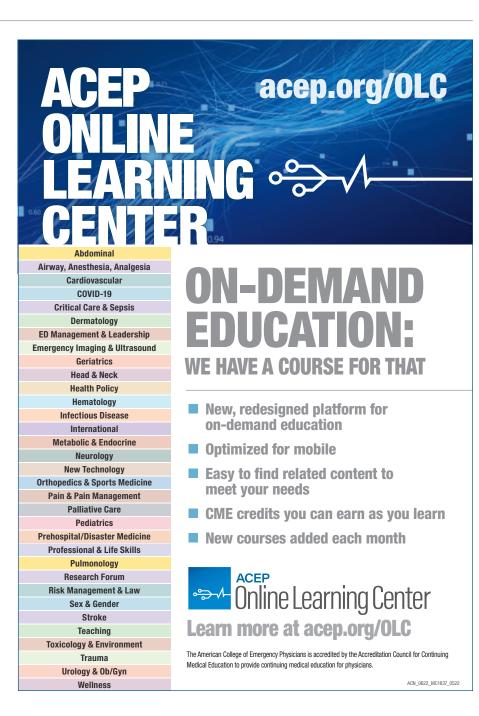
References

- 1. Pfizer, Inc. Tessalon (benzonatate) Perles Prescribing Information. Madison, NJ: Pfizer, Inc.; 2015.
- Winter ML, Spiller HA, Griffith JRK. Benzonatate ingestion reported to the national poison center database system (NPDS). J Med Toxicol. 2010;6(4):398–402.
- Nelson L, ed. Goldfrank's toxicologic emergencies. Eleventh edition. New York: McGraw-Hill Education; 2019.
- Kim I, Goulding M, Tian F, Karami S, et al. Benzonatate exposure trends and adverse events. *Pediatrics*.
 2022;2022677770



DR. HARDING

(@aleharmd) is an assistant professor of emergency medicine and director of medical toxicology at Baylor College of Medicine.



nate ordering of tests for patients who present: with syncope is that it may diminish our efforts in taking a thorough history and performing a thoughtful physical examination—the very areas that we should be concentrating our energies. The most recent ACEP Clinical Policy on Syncope state that history, physical examination, and ECG are the only level A recommendations for the evaluation of syncope.5

Step 1: Distinguish Syncope from Seizure

The first step in the evaluation of syncope is to distinguish it from seizure. There are several clinical findings with impressive specificities and likelihood ratios (LR) to help distinguish syncope from seizure. If one can accumulate enough accurate clinical findings of seizure, syncope can essentially be ruled out. Witnessed head turning during the event has a specificity of 97 percent and +LR of 14 for seizure, while unusual posturing during the event has a specificity of 97 percent and a +LR of 13.6 The absence of presyncope has a specificity of 86 percent and +LR of 5.6 while postictal state is present in 96 percent of patients with seizures.6

One common clinical pitfall is assuming the presence of seizure when urinary incontinence occurs during the event. Even though one review found that the specificity of urinary incontinence is 96 percent with a +LR 6.7 for seizure, urinary incontinence has subsequently been found unreliable in distinguishing syncope from seizure.^{6,7} On physical examination, evidence of a tongue laceration has a specificity of 97 percent and +LR of 17, and even better, evidence of a lateral tongue laceration has a specificity of 100 percent for tonic-clonic seizure, essentially clinching the diagnosis.^{6,8} One explanation for this is that the tongue often deviates laterally during a tonic-clonic seizure. Hence, one can ostensibly rule out syncope by ruling in seizure using these clinical features.

On the flip side, several clinical findings make syncope much more likely than seizure for the patient who has lost consciousness. Loss of consciousness with prolonged sitting or standing has a specificity of 98 percent and +LR 20 for syncope, while dyspnea and palpitations before loss of consciousness have a specificity of 98 percent and 96 percent and +LR of 13 and 8.3 respectively.6 Increased muscle tone during the event suggests seizure while decreased muscle tone during the event suggests syncope.

Another common pitfall is to assume seizure when there are any number of limbjerking movements witnessed. A few limb jerks during a syncopal event are present in approximately 90 percent of witnessed syncopal episodes, as lack of blood perfusion to the brain causes anoxic neuronal irritation.7 One rule of thumb and clinical pearl to help distinguish seizure from syncope is the 10:20

Rule. It states that patients with less than 10 : that involve neck extension (e.g., car mechanwitnessed myoclonic jerks after sudden loss of : consciousness are more likely to have syncope as the cause, versus more than 20 myoclonic jerks witnessed makes the cause more likely to be seizure.9

Step 2: Consider Vascular **Catastrophes Leading the Syncope**

Acute vascular catastrophes such as subarachnoid hemorrhage, massive gastrointestinal bleeding, pulmonary embolism, and ruptured ectopic pregnancy may present as syncope, however additional clinical features make these diagnoses more apparent compared to syncope that presents in isolation.

Step 3: Distinguish Cardiac Syncope from Non-Cardiac Syncope

After considering syncope caused by vascular catastrophes, the priority in the ED should be distinguishing cardiac syncope from noncardiac syncope, as cardiac syncope carries significant morbidity and mortality and usually requires hospital admission. All other categories of syncope (such as reflex syncope and orthostatic syncope) are generally more benign. One exception is Eagle's Syndrome, a rare cause of reflex syncope that involves a calcified, elongated stylohyoid ligament that presses on the carotid during neck extension that can lead to syncope. In patients who present with recurrent syncope after activities :

ic, yoga, stargazing, etc.) with associated tinnitus or throat pain, consider a CT of the neck to rule out this rare syndrome.10

Clinical clues that should heighten one's suspicion of cardiac syncope include the presence of multiple cardiovascular risk factors, history of structural heart disease, such as aortic stenosis or hypertrophic cardiomyopathy, pacemaker, syncope in the supine position, absence of prodrome prior to the syncopal event or prodrome that includes chest pain, shortness of breath, or palpitations, and syncope during exertion.11,12,13,14

One lesser-known clinical clue for cardiac syncope is associated facial injury (including dental injury, eyeglasses damage, or tip of tongue bite), which is less likely to occur with reflex or orthostatic syncope. 15,16 While many emergency physicians appropriately ask about a family history of unexplained sudden death as a risk factor for cardiac syncope, the astute clinician will ask specifically about unexplained drowning and single motor vehicle crash in young first-degree relatives, which may uncover a positive family history of unexplained sudden cardiac death and prompt a referral to a cardiac electrophysiologist to rule out a hereditary life-threatening cardiac dysrhythmia as the cause of syncope.¹⁷ One physical examination finding suggestive of cardiac syncope is a new aortic stenosis murmur. Uncovering critical aortic stenosis in a patient



ACEP Advanced Pediatric Emergency Medicine Assembly

BE PREPARED FOR YOUR NEXT PEDIATRIC PATIENT!

MARCH 31 - APRIL 3, 2023

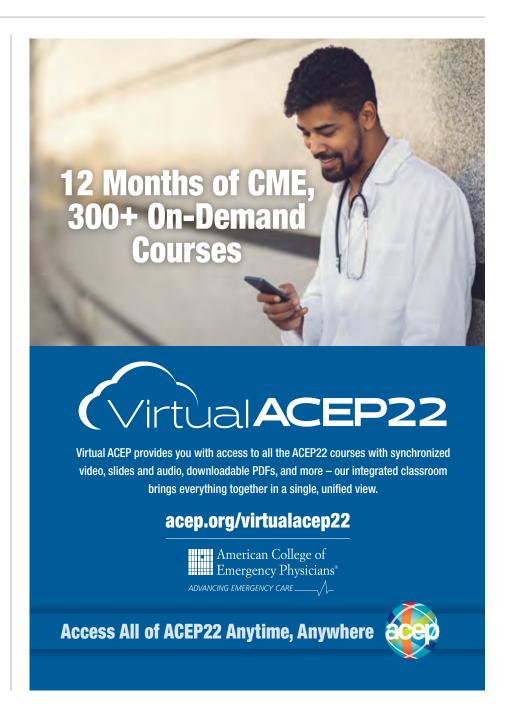
Reconnect with your peers IN PERSON at this year's Advanced Pediatric Emergency Medicine Assembly March 31 - April 3, 2023 | New York, NY

Learn More Online at acep.org/pem





Approved for AMA PRA Category 1 Credit**





EM CASES | CONTINUED FROM PAGE 15

with syncope may be lifesaving, as this combination portends a high short-term mortality rate that can be prevented if they undergo timely aortic valve replacement.¹⁸

Two further common clinical pitfalls are worth noting. One is assuming that the cause of syncope in older patients is orthostatic syncope in those that have an orthostatic drop. ¹⁹ This may lead to failure to search further for cardiac causes. Orthostatic vital signs do not predict 30-day serious outcomes in older emergency department patients with syncope. ²⁰ Many older patients will have an orthostatic drop at baseline, and some patients with orthostatic symptoms will not have an orthostatic drop; orthostatic vitals are non-specific and may lead to premature closure. The other common pitfall is assuming that presyncope alone is less morbid than syncope. The differentials for patients with pre-syncope and syncope are similar. ²¹ Older patients with syncope or pre-syncope have comparable one-month risk of major adverse cardiac events. ^{22,23}

Clinical factors that are more often associated with a noncardiac cause of syncope include syncope only following position change from sitting or lying to standing position, presence of a prodrome of nausea, vomiting or feeling warm, presence of a specific trigger such as pain, stressful stimulus or blood draw, and presence of a situational trigger such as coughing, laughing, micturition, defecation, or deglutition. 19,24

Do Clinical Decision Tools Perform Better Than Physician Gestalt for Determining Low Risk Syncope for Safe Discharge?

Decision tools, despite their varying levels of external validation, can be used to reassure clinicians and assist in shared decision-making when considering safe discharge of patients who have presented to the ED after a syncopal episode. The problem with these decision tools is that they include laboratory tests that are generally not useful in the evaluation of isolated syncope. For example, the San Francisco Syncope Rule (SFSR) requires a hematocrit. The SFSR's sensitivity for adverse events was poor in external validation studies and a meta-analysis (86 percent and 87 percent, respectively). 25,26

The Canadian Syncope Risk Score (CSRS) requires a troponin level which, alone, has questionable value in the evaluation of syncope. The CSRS has shown excellent sensitivities in internal validation studies. Scores of negative two or higher were found to have a sensitivity of 99 percent and on secondary internal validation in Canada, patients with "very low"

and "low" risk scores had 0.3 percent and 0.7 percent risks of a serious outcome, respectively.^{27,28} However, a 2021 external validation in Italy demonstrated that the CSRS is no better than physician gestalt at predicting outcomes for patients with syncope. Additionally, physician gestalt had a lower rate of adverse events compared to low-risk patients on the CSRS.²⁹ Physician gestalt is incorporated into the score, which may limit its usefulness

Physician gestalt garnered from the three-step approach outlined here should be used to identify low-risk patients who are safe for discharge from the ED. A thorough history and thoughtful but directed physical examination, rather than laboratory tests and imaging, should guide management. Syncope decision tools, laboratory testing, and imaging still have a role—lab tests and imaging should be used in patients suspected of a secondary vascular catastrophe as the cause of syncope and decision tools can be used to reassure physicians and patients. •

A special thanks to Dr. David Carr, the guest expert on the EM Cases podcast from which this column was inspired.



DR. HELMAN is an emergency physician at North York General Hospital in Toronto. He is an assistant professor at the University of Toronto, Division of Emergency Medicine, and the education innovation lead at the Schwartz/Reisman Emergency Medicine

Institute. He is the founder and host of *Emergency Medicine Cases* podcast and website (www.emergencymedicinecases.com).

References

- Yiadom MYAB, Napoli A, Granovsky M, et al. Managing and measuring emergency department care: results of the fourth Emergency Department Benchmarking Definitions Summit. Acad Emerg Med. 2020;27(7):600–611
- Goyal N, Donnino MW, Vachhani R, et al. The utility of head computed tomography in the emergency department evaluation of syncope. *Intern Emerg Med*. 2006;(1):148–150.
- Giglio P, Bednarczyk EM, Weiss K, et al. Syncope and head CT scans in the emergency department. Emerg Radiol. 2005;12:44–46.
- Grossman SA, Fischer C, Bar JL, et al. The yield of head CT in syncope: a pilot study. Intern Emerg Med. 2007;2:46–49
- Huff JS, Decker WW, Quinn JV, et al. American college of emergency physicians. clinical policy: critical issues in the evaluation and management of adult patients presenting to the emergency department with syncope. Ann Emerg Med. 2007;49(4):431–44.
- Albassam OT, Redelmeier RJ, Shadowitz S, et al. Did this patient have cardiac syncope? JAMA. 2019;321(24):2448
- 7. Petkar S, Cooper P, Fitzpatrick AP. How to avoid a misdiagnosis in patients presenting with transient loss of consciousness. *Postgrad Med J.*

- 2006;82(972):630-41.
- 8. Benbadis SR, Wolgamuth BR, Goren H, et al. Value of tongue biting in the diagnosis of seizures. *Arch Intern Med.* 1995;155(21):2346–9.
- Shmuely S, Bauer PR, van Zwet EW, et al. Differentiating motor phenomena in tilt-induced syncope and convulsive seizures. Neurology. 2018;90(15):e1339–e1346.
- Saccomanno S, Greco F, DE Corso E, et a. Eagle's syndrome, from clinical presentation to diagnosis and surgical treatment: a case report. Acta Otorhinolaryngol Ital. 2018;38(2):166–169.
- Taniguchi T, Morimoto T, Shiomi H, et al. Sudden death in patients with severe aortic stenosis: observations from the current as registry. J Am Heart Assoc. 2018;7(11):e008397.
- Williams L, Frenneaux M. Syncope in hypertrophic cardiomyopathy: mechanisms and consequences for treatment. Europace. 2007;9(9):817–22.
- 13. Sutton R. Syncope in patients with pacemakers. Arrhythm Electrophysiol Rev. 2015;4(3):189–92.
 14. Arthur W, Kaye GC. Important points in the clinical evaluation of patients
- with syncope. *Postgrad Med J.* 2001;77(904):99–102.

 15. Furtan S, Pochciał P, Timler D, et al. Prognosis of syncope with head injury: a
- tertiary center perspective. Front Cardiovasc Med. 2020;23(7):125

 16. Mizrachi EM, Sitammagari KK. Cardiac Syncope. StatPearls [Internet]. http
- bi.nlm.nih.gov/books/NBK526027/ Published January, 2022. Accessed December 23, 2022.

 17. Koene RJ, Adkisson WO, Benditt DG. Syncope and the risk of sudden
- cardiac death: Evaluation, management, and prevention. *J Arrhythm.* 2017;33(6):533–544.
- Otto CM, Nishimura RA, Bonow RO, et al. 2020 ACC/AHA Guideline for the management of patients with valvular heart disease: executive summary: a report of the American College Of Cardiology/American Heart Association joint committee on clinical practice guidelines. Circulation. 2021;143(5):e35–e71.
- Goyal P, Maurer MS. Syncope in older adults. J Geriatr Cardiol. 2016;13(5):380-6.
- White JL, Hollander JE, Chang AM, et al. Orthostatic vital signs do not predict 30 day serious outcomes in older emergency department patients with syncope: A multicenter observational study. Am J Emerg Med. 2019;37(12):2215–2223.
- Kapoor WN. Current evaluation and management of syncope. Circulation. 2002;106(13):1606–9.
- 22. Sun BC et al. Predictors of 30-day serious events in older patients with syncope. *Ann Emerg Med.* 2009;54:769–778.
- Thiruganasambandamoorthy V, et al. Outcomes in presyncope patients: a prospective cohort study. Ann Emerg Med. 2015;65:268–276.
- Alboni P, Brignole M, Menozzi C, et al. Diagnostic value of history in patients with syncope with or without heart disease. J Am Coll Cardiol. 2001;37(7):1921–1928.
- Quinn J, McDermott D, Stiell I, et al. Prospective validation of the San Francisco Syncope Rule to predict patients with serious outcomes. *Ann Emerg Med*. 2006;47(5):448–54.
- Saccilotto RT, Nickel CH, Bucher HC, et al. San Francisco Syncope Rule to predict short-term serious outcomes: a systematic review. CMAJ. 2011;183(15):F1116–26
- Thiruganasambandamoorthy V, Kwong K, Wells GA, et al. development of the Canadian Syncope Risk Score to predict serious adverse events after emergency department assessment of syncope. CMAJ. 2016;188(12):E789–E298
- Thiruganasambandamoorthy V, Sivilotti MLA, Le Sage N, et al. multicenter emergency department validation of the Canadian Syncope Risk Score. JAMA Intern Med. 2020;180(5):737–744.
- Solbiati M, Talerico G, Villa P, et al. Multicentre external validation of the Canadian Syncope Risk Score to predict adverse events and comparison with clinical judgement. Emergency Medicine Journal. 2021;38(9):701–706.

ANSWERING CLINICAL QUESTIONS

PROBLEM SOLVERS



DR. MARCO is professor of emergency medicine at Penn State Health-Milton S. Hershey Medical Center and associate editor of *ACEP Now*.

Making Choices

Does this patient have decisional capacity?

by CATHERINE A. MARCO, MD, FACEP

Case

21-year-old man presented to the emergency department (ED) with bizarre behavior. He was found by bystanders running naked in the street and 911 was called. On initial ED presentation, he was awake and alert and appeared anxious. He attempted to get off the stretcher, and yelled, "I'm out of here! You can't keep me here. I know my rights!"

Problem: Does this patient have decisional capacity to refuse ED care?

Clinical questions arise regularly in the ED. How should such on-shift clinical questions be researched? There are numerous options for answers to clinical questions. Clinical textbooks such as "Tintinalli's Emergency Medicine: A Comprehensive Study Guide" or "Rosen's Emergency Medicine" are valuable resources for studying and answering clinical questions. Internet search engines may provide current information. Online review sources such as UpToDate are rapidly accessible. Review of the literature is important, but can be difficult to accomplish in real time in the clinical environment.

Organizations may provide guidance on important clinical issues. To answer this question, let's turn to the American Medical Association (AMA) and The American College of Emergency Physicians (ACEP). The AMA has an extensive list of policies. AMA policies can be searched using the AMA Policy Finder.¹The policy "Decisions for Adult Patients who Lack Capacity"²states:

Respect for patient autonomy is central to professional ethics and physicians should involve patients in health care decisions commensurate with the patient's decision-making capacity. Even when a medical condition or disorder impairs a patient's decision-making capacity, the patient may still be able to participate in some aspects of decision making. Physicians should engage patients whose capacity is impaired in decisions involving their own care to the greatest extent possible, including when the patient has previously designated a surrogate to make decisions on his or her behalf.

The ACEP Code of Ethics includes "Principles of Ethics," "Overview of Ethics," and a "Compendium of ACEP Policy Statements on Ethical Issues." This document provides the following guidance:

Emergency physicians may treat without securing informed consent when immediate intervention is necessary to prevent death or serious harm to the patient, when the patient lacks decision making capacity, and when no one legally authorized to consent on behalf of the patient is available. These are, however, limited exceptions to the duty to obtain informed consent. When the initiation of treatment can be delayed without serious harm, informed consent must be obtained. Even if

Mini-Marital State Examination (MMSE)

Project V Nov.

Dom

Intelligence of the second control of the second c

all the information needed for an informed consent cannot be provided, emergency physicians should, to whatever extent time allows, inform the patient (or, if the patient lacks capacity, a surrogate) about the treatment they are providing, and may not violate the explicit refusal of treatment of a patient with decisionmaking capacity. In some cases, for personal and cultural reasons, patients ask that information be given to family or friends and that these third parties be allowed to make treatment choices for the patient. Patients may, if they wish, waive their right to informed consent or delegate decision-making authority for their care to others. Other exceptions to the duty to obtain informed consent apply when treatment is necessary to protect the public health and in a limited number of emergency medicine research protocols where obtaining consent is not feasible, provided that these research protocols satisfy the requirements of federal research regulations and are approved by appropriate review bodies.

Review of the medical literature using Pub-Med may also provide guidance. A literature search using the term "decisional capacity in the emergency department" found an article published in 2017 by members of the ACEP Ethics Committee, entitled "Refusal of Emergency Medical Treatment: Case Studies and Ethical Foundations." The article states:

Decisional capacity (decisionmaking capacity) is essential to patients' autonomous medical decisionmaking. The assessment of decisional capacity is an essential skill for emergency physicians. The burden of proof is on the physician to determine whether the pa-

tient possesses appropriate decisional capacity. Patients who do not possess it should not be allowed to refuse necessary medical treatment until decisional capacity is restored. There may be significant variation in providers' assessment of decisional capacity, which underscores the need for a better understanding of decisional capacity and its assessment in the ED environment. Capacity is composed of four essential elements: understanding, appreciation, reasoning, and expression of choice. Thus, an individual must be able to understand the information delivered, appreciate how to apply it to his or her own situation, reason to make an appropriate decision, and communicate that choice.

Case Summary

Assessment of decisional capacity is essential. Decisional capacity is dynamic and may vary over time, as the patient's mental status or clinical or environmental factors may change. In cases where decisional capacity is unclear, standardized tests may be valuable in the determination of capacity. One standardized test which is easily administered in emergency medicine is the Mini-Mental Status Examination (MMSE). Low scores on the MMSE might indicate a patient might lack capacity but normal scores do not assure capacity is present.

Decisional capacity may be impaired by numerous conditions, including dementia, intoxication, psychiatric conditions, language impairment, cultural issues, physical communication impairments, severe pain, organic disease states and numerous other conditions.⁶

Decisional capacity is frequently impaired in cases of impaired consciousness, intoxication with alcohol, drugs, or toxins, severe pain, impaired cognition or any condition rendering a patient unable to participate in medical decision making. In these circumstances, and when no one legally authorized to act on the patient's behalf is immediately available, physicians should act in the patient's best interest according to what a "reasonable person" would want in similar circumstances. If the patient is unable or unwilling to cooperate with assessment of decisional capacity, he should be detained until assessment can safely be completed to allow respect for patient autonomy when the patient is fully capable of medical decision making. •

References:

- AMA policy finder. AMA website. https://policysearch. ama-assn.org/policyfinder. Accessed October 6, 2022.
- AMA. Decisions for adult patients who lack capacity. Code of medical ethics opinion 2.1.2. AMA website. https://www.ama-assn.org/delivering-care/ethics/decisions-adult-patients-who-lack-capacity. Published 2016. Accessed October 6, 2022.
- American College of Emergency Physicians. Policy statement: Code of ethics for emergency physicians ACEP website. https://www.acep.org/globalassets/ new-pdfs/policy-statements/code-of-ethics-foremergency-physicians.pdf. Published January 2017. Accessed October 6, 2022.
- Marco CA, Brenner JM, Kraus CK, McGrath NA, Derse AR, ACEP Ethics Committee. Refusal of emergency medical treatment: Case studies and ethical foundations. Ann Emerg Med. 2017;70(5):696-703. doi:10.1016/j.annemergmed.2017.04.015.
- Folstein MF, Folstein SE, McHugh PR: "Mini-mental state": a practical method for grading the cognitive state of patients for the clinician. J Psychiatr Res. 1975;12:189-98.
- 6. Freer J. Decision making in an incapacitated patient. Journal of Clinical Ethics. 1993;4:55-58.

The Official Voice of Emergency Medicine

ONE MORE REASON NOT TO ORDER AN X-RAY

SOUND ADVICE

DR. NAGDEV is emergency ultrasound director at Highland Hospital/Alameda Health System.

DR. HOWELL is ultrasound fellow at Highland Hospital/Alameda Health System. **DR. DESAI** is ultrasound fellow at Highland Hospital/Alameda Health System. **DR. MARTIN** is medical student/resident director at Highland Hospital/Alameda Health System.

DR. MANTUANI is emergency ultrasound fellowship director at Highland Hospital/ Alameda Health System.

Ultrasound-Guided Nerve Block (UGNB) Program

How to build an UGNB program

by ARUN NAGDEV, MD; KAITLEN HOW-ELL, MD; AKASH DESAI, MD; DAVID MARTIN, MD; AND DANIEL MANTUANI, MD, MPH

Introduction

Itrasound-guided nerve blocks (US-GNBs) are gradually becoming an important skill set for the emergency physician and will soon be an expected core competency for emergency medicine (EM) residents. Understanding the importance of a multimodal strategy for acute pain control has become an imperative during the current opioid crisis, as well as an ideal method to provide optimal pain control to patients. Similar to other procedures that emergency physicians have learned and adapted from our anesthesia colleagues (endotracheal intubation, central venous cannulation, etc.), USGNBs have been integrated into clinical practice at various emergency departments (EDs). Academic emergency physician groups have published research detailing reduced reliance on opioids as well as improvements in patient pain scores and functional outcomes when USGNBs are performed in the ED.1 A recent large multicenter study demonstrated decreased mortality when USGNBs are used for patients who present with acute hip fractures.2 Additionally, integrating USGNBs as part of a multimodal pathway for acute pain management may decrease or even prevent the development of chronic pain.3

Some may argue that specialized academic EDs are the only place where USGNBs can be performed, but we believe the opposite. Smaller non-academic and/or non-trauma centers without specialty pain services are where many patients present with acute injuries; emergency physicians are often the only physicians available during off-hours with the procedural skills to perform USGNBs for optimal pain control. The development and integration of USGNBs into modern emergency care is imperative in reducing overreliance on monomodal opioid-centered therapy and providing patients with optimal evidence-based care. We hope to describe a framework for EDs when developing an USGNB program that can be a part of a multimodal pain management pathway at various medical centers around the country. (**See figure 1**)

USGNB Champion Skill Development

Integration of new techniques in emergency care always requires a clinician champion to develop domain knowledge. This was seen with the ED implementation of diagnostic point-of-care ultrasound (POCUS), laryngoscopy, and more recently resuscitative transesophageal echocardiography (TEE). These self-appointed clinician leaders have

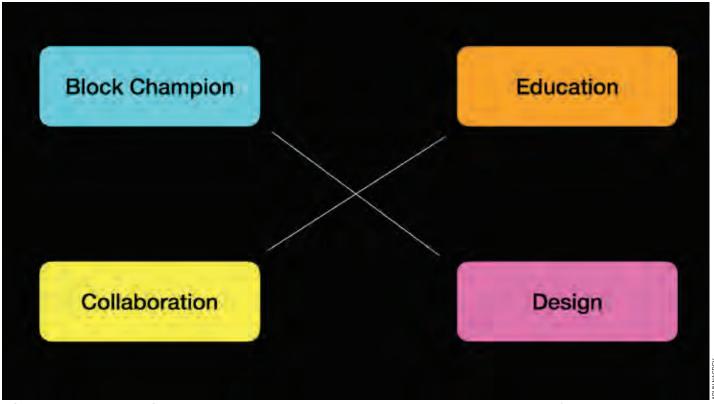


FIGURE 1: In order to build an UGNB program in your department, various aspects will need to taken into consideration (champion skill acquisition, education, collaboration and design).

several methods available to obtain the skills and knowledge that are required to be champions for USGNBs in their respective EDs.

The first and often easiest method that fosters interdepartmental collaboration is to learn from trained regional anesthesiologists at your respective center. Especially in smaller hospital systems where non-siloed partnerships are common, learning essential blocks and needling skills in the operating room (OR) or post anesthesia care unit (PACU) can be an easy option for education. This also allows the ED champion to determine the equipment, medications, and tools already used in their hospital for USGNBs and to integrate them into ED practice.

An alternative method for USGNB skill acquisition is to take courses offered by various anesthesiology institutions (NYORA, ASRA, etc.). Regional and national EM conferences also offer such courses for novice clinicians that may be more tailored to the emergency physician. We recommend that the hands-on component (either in phantoms or cadavers) be a central aspect of the course, since proper needling technique is an essential skill.

Finally, the champion's learning can be supplemented and refreshed at any time using numerous online resources and didactics. An online repository of USGNBs that are most useful for EPs, along with material and procedural considerations, can be found at highlandultrasound.com. Other high-yield free open access medical education (FOAMed) resources for USGNBs are Core Ultrasound: coreultrasound.com/, The Pocus Atlas: thepocusatlas.

com/, NYSORA: nysora.com/ and Duke Regional videos: youtube.com/@regionalanesthesiology. Guidance is also easily referenced at the bedside on your smartphone via several highly regarded applications, such as the "Nerve Block," "The POCUS Atlas," or "NYSORA Nerve Blocks" applications.

Teaching

Once a USGNB champion has acquired the skills to perform blocks, they will need to establish a training pathway for other physicians at their institution. Scaling beyond the superuser is often the most challenging step. The champion should identify one or two high-yield USGNBs based on common injury patterns seen in their ED population. Many centers will likely find the femoral nerve block for hip fractures, the serratus anterior plane block for rib fractures, and forearm nerve blocks for hand injuries to be the easiest to teach and pertinent to their population's needs. Limiting the number of USGNBs included in the initial training of novice staff will allow learners to focus on the general principles of regional anesthesia as well as good needling techniques. After proficiency is obtained with baseline principles, programs can choose to introduce further USGNBs via continuing educational training modules. We recommend a training pathway that incorporates both lecture-based and hands-on training. Trainers can leverage the large quantity of existing FOAMed resources already available, as referenced above.

Hands-on teaching is a crucial compo-

nent of learning any procedural technique. Training should be tailored to the learner's baseline level of experience with procedural ultrasound. Learners with minimal experience performing ultrasound-guided procedures or in-plane needle visualization technique may benefit from the use of needle trainer devices. These devices can either be purchased or created at home using household supplies (intelligentultrasound.com/needletrainer/, simulab.com/collections/regional-anesthesia-trainers). Programs can also use existing internal hospital simulation centers if available to provide this component of training.

Clinical hands-on training can be accomplished in the ED when learners are working alongside the USGNB champion. However, a busy ED shift can be suboptimal for teaching a new procedure, and learners can consider scheduling training shifts in the ED with the USGNB champion to perform blocks on acutely injured patients. The USGNB champion can also consider establishing agreements with the Anesthesia Department to allow learners to gain expertise from anesthesiologists performing USGNBs in the perioperative setting.

Collaboration

An USGNB program requires buy-in from multiple hospital departments. Anesthesia, orthopedics, surgery, and other services may not be aware of the benefits of USGNBs for acute pain in the ED. We recommend formal meetings with various stakeholders to develope a clear interdepartmental plan for optimal pain control in patients with acute injuries. Using





FIGURE 2 (LEFT): Our block cart allows clinicians to perform UGNBs without looking for various components.

FIGURE 3 (ABOVE): Our UGNB template has been built for the ED clinician. Documentation allows for proper data transfer to other clinicians as well as billing.

previously published data that defines benefits of ultrasound-guided femoral nerve blocks for hip fractures, we recommend service lines (emergency medicine, anesthesia, and orthopedics) build a vertical protocol (from the ED to the OR) that relies on a patient-centric approach to pain management. A collaborative, multidisciplinary, non-siloed care pathway provides patients with optimal care and leverages our anesthesia colleagues' knowledge to teach the ultrasound-guided femoral nerve block to their more novice emergency medicine colleagues. This patient-centered approach to pain management can translate to other injuries that will be managed in conjunction with other service lines (e.g., rib fractures for the trauma service).5,6,7

First demonstrating USGNB proficiency on non-admitted ED patients (palmar lacerations, metacarpal fractures, rib fractures, etc.) will generate respect and trust from consultants. Prior to expanding USGNBs to patients whose care is multidisciplinary, it is essential to communicate and collaborate with everyone who will be caring for the patient downstream (orthopedics, trauma surgery, anesthesiology). Common concerns include documentation, masking of the neurologic exam or compartment syndrome, and peripheral nerve injury. While the body of literature supports the benefits and safety of USGNBs in the ED, these risks are rare, but real.

Having to rely upon nursing to retrieve medications can introduce barriers and time delays to executing USGNBs in your department. Protocols with pharmacy colleagues can provide access to local anesthetics, adjuvants, and intralipid outside of the Pyxis (or other automated medication dispensing systems) which can drastically improve clinician workflow. In our department, EPs bring a "block box" containing all of these medications to the bedside, place a patient sticker on the included inventory sheet and mark what medications were used, then return the block box to the ED pharmacist or charge nurse.

Credentialing

In 2021, ACEP issued a policy statement specific to USGNBs, affirming that USGNBs performed by emergency physicians are not only within the scope of practice but a "core component" of pain control for ED patients, pointing to their rising role as the new standard of care for acutely ill or injured patients (acep.org/ patient-care/policy-statements/ultrasoundguided-nerve-blocks/). Landmark-based nerve blocks have long been a part of the American College of Graduate Medical Education's EM residency education requirement. Ultrasoun-guidance improves the safety profile of nerve blocks. According to ACEP guidelines the physician with emergency ultrasound privileges needs no outside certification to perform USGNBs (acep.org/patient-care/policy-statements/emergency-ultrasound-certification-by-external-entities/). While this may seem surprising to some, note that no other clinical procedure requires special external certification, e.g., central venous access or intubation, which follow a similar historical path of being brought into EM after initially exclusively being performed by anesthesia or critical care specialists. As with EM, anesthesia physicians also require no additional certification to perform nerve blocks.8

Initiating and updating emergency physicians' USGNB privileges can be safely done via intradepartmental credentialing approval process. ACEP guidelines require individuals obtaining initial credentialing complete the training and proof of competency determined by their own emergency department.9 In departments with established emergency ultrasound programs (i.e., an ultrasound division or an ultrasound fellowship) newly branching into USGNBs, the ultrasound director should partner with the USGNB champion to create an appropriate process for credentialing of individuals.10 In EDs without a distinct ultrasound division, the USGNB champion should partner with the EM chairperson to determine what training and proof of competency would be appropriate.

At this time, the exact number of supervised nerve blocks an ED provider needs to perform to be independently capable is unclear. ACEP guidelines suggest an approximate threshold of 10 when new ultrasound procedures which build upon existing procedural skills, e.g., 10 transvaginal ultrasounds for those who already perform POCUS, rather than the usual threshold of 25 when learning a new application of ultrasound. The principles of needle visualization required to safely perform ultrasound-guided vascular access, along with identification of neurovascular bundles and their relationship to surround-

ing muscle and other structure, are similar skills needed for USGNBs. This suggests that 10 total USGNBs may be an appropriate minimum threshold. However, given the broader range of USGNBs than typical vascular access sites, some departments may select a higher minimum for credentialing each provider. For reference, anesthesiology residency requires 40 nerve blocks across three years, recognizing that the spectrum of blocks performed by anesthesiology providers is likely much broader than those carried out in the emergency department. The American Institute of Ultrasound in Medicine recommends anesthesiologists perform 20 USGNB per year to maintain competence. As modeled in ACEP's ultrasound guidelines, we feel it is best to leave it to each ED to determine their own credentialing threshold (aium.org/officialStatements/6o).9

Design

Block Cart: A user-based design approach will reduce barriers needed to perform USGNBs. Keeping all supplies needed for performing an USGNB in one location (either in a tray, bag or in a cart) will make the process of performing USGNBs easier. A block cart should be mobile, well organized, and routinely restocked to ensure its functionality. It should contains all of the equipment needed to perform US-GNBs (skin preps, protective adhesive barriers, needles/block needles, syringes, sterile gel, marking pens), in addition to a diverse array of local anesthetics, adjuncts, and stocking of intralipid in case of rare but life-threatening complications (see Figure 2).

Documentation/Templates: Documentation of your USGNB is required for communication to other providers/services as well as for accurate and consistent billing. Clear templated notes in the electronic medical record will allow the clinician to document important information (indication for the block block type, laterality, anesthetic amount used, complications, time the block was performed etc.). This information allows clear communication to colleagues who may see the patient during the inpatient stay or on a subsequent ED visit (see Figure 3).

Conclusion

USGNBs are becoming more common in the practice of emergency medicine. Along with:

being an excellent part of a multimodal pain regimen in an acutely injured ED patient, USGNBs may be an ideal alternative to time consuming procedural sedation. Like various procedural skills that have been adopted from other specialties (e.g., laryngoscopy, transesophageal echocardiogram, etc.), there are multiple challenges to integrating USGBNs into clinical care. We recommend that each department find a clinical USGNB champion who can acquire procedural skills as well as teach their EM colleagues a few commonly needed blocks. Also, working in collaboration with other hospital service lines will allow you to build patient centered protocols that address timely pain control. Finally, leveraging user based design principles by having all supplies required for USGNBs in one mobile location will reduce barriers to performing blocks. •

References

- 1. Morrison RS, Dickman E, Hwang U, et al. Regional nerve blocks improve pain and functional outcomes in hip fracture: a randomized controlled trial. J Am Geriati Soc. 2016;64(12):2433-2439.
- 2. Lin DY. Woodman R, Oberai T, et al. Association of anesthesia and analgesia with long-term mortality after hip fracture surgery: an analysis of the Australian and New Zealand hip fracture registry. Reg Anesth Pain Med. 2023;48(1):14-21
- Levene JL, Weinstein EJ, Cohen MS, et al. Local anesthetics and regional anesthesia versus conventional analgesia for preventing persistent postoperative pain in adults and children: A Cochrane systematic review and meta-analysis update. J Clin Anesth. 2019;55:116-127.
- NR, Gibson Kl. A home-made phantom for learning ultrasound-quided invasive techniques. Australas Radiol. 1995:39(4):356-357
- Schultz C, Yang E, Mantuani D, Miraflor E, Victorino G, Nagdev A. Single injection, ultrasound-guided planar nerve blocks: An essential skill for any clinician caring for patients with rib fractures. Trauma Case Rep. 2022;41:100680.
- Wroe P, O'Shea R, Johnson B, Hoffman R, Nagdev A. Ultrasound-quided forearm nerve blocks for hand blast injuries: case series and multidisciplinary protocol. Am J Emerg Med. 2016;34(9):1895-1897.
- Johnson R Herring A Shah S Krosin M Mantu Nagdev A. Door-to-block time: prioritizing acute pain management for femoral fractures in the ED. Am J Emerg Med. 2014;32(7):801–803.
- Herring AA. Bringing ultrasound-guided regional anesthesia to emergency medicine. AEM Educ Train. 2017;1(2):165-168. doi:10.1002/aet2.10027
- 9. Ultrasound guidelines: emergency, point-of-care and clinical ultrasound guidelines in medicine. Ann Emerg Med. 2017;69(5):e27-e54.
- 10. Amini R. Kartchner JZ. Nagdev A. Adhikari S. ultrasound-guided nerve blocks in emergency medicine practice. J Ultrasound Med Off J Am Inst Ultrasound Med. 2016;35(4):731-736.

FOR TODAY'S **EMERGENCY**

AIRWAY



DR. YAVORSKY is an attending physician at MetroHealth Medical Center in



DR. GLAUSER is professor of emergency medicine at Case Western Reserve University at MetroHealth Cleveland Clinic in Cleveland, Ohio.

Upper Airway Obstruction in the Emergency Department

Utilization of face-to-face intubation

by RYAN YAVORSKY, DO, JONATHAN GLAUSER, MD, FACEP, MBA

Case Report

25-year-old female with history of shellfish allergy presented to the emergency department (ED) via ambulance with the complaint of difficulty breathing. The patient was previously at dinner when she became acutely short of breath and had difficulty speaking.

On arrival to the scene, EMS noted a woman in respiratory distress, sitting with her hands on her knees and leaning forward. She had a muffled voice and difficulty with phonation. Vitals on scene included HR 112, blood pressure 130/82, and 99 percent oxygen saturation on room air. EMS placed the patient on nasal cannula for comfort and brought her to the ED.

On arrival to the emergency department, she was sitting in a tripod position, unable to phonate with inspiratory stridor, and spitting saliva into an emesis basin. Vitals revealed that she was afebrile, mild tachycardia of 115 beats per minute, tachypnea, BP 120/80, and 100 percent oxygen saturation on room air. As she could not phonate, the patient was only able to shake and nod her head to questions. Per history, it was determined that her symptoms had started two days prior, but acutely worsened after eating "surf and turf" for dinner prior to arrival. She endorsed inability to speak, dysphagia, odynophagia, and shortness of breath. She reported a similar prior episode but not as severe as her current presentation. She denied rash, nausea, vomiting, chest pain, choking sensation, eating food with bones, family history of facial or tongue swelling, or taking any medications at home including angiotensin converting enzyme inhibitors or angiotensin receptor blockers.

Physical exam revealed a clear oropharynx with no appreciable lesion, edema, or uvular deviation. Palpation of her neck revealed fullness without induration or erythema. She had equal, clear breath sounds bilaterally with no wheezing. Cardiovascular exam was without pathologic finding. Patient had no appreciable rash.

Initial Management

brought to the bedside. Anesthesia and otolaryngology were emergently paged to the department. Intramuscular epinephrine as well as intravenous methylprednisolone, diphenhydramine, and famotidine were administered. A lactated ringers bolus was started. As her oxygen saturation was normal, it was felt that a surgical airway was not immediately indicated. Anesthesia arrived and prepared for fiber-optic laryngoscopy, with a working diag-



nosis of likely angioedema given her shellfish allergy and having consumed seafood. Prior to initiation of this procedure, the patient began to close her eyes, and required repeat stimulation to maintain alertness. She was kept upright and awake, with nebulized lidocaine as the only pre-treatment measure.

As the scope was inserted, there was no edema at the uvula or posterior oropharynx and no lesion. When progressed further, the scope passed the base of the tongue to expose a large lesion protruding into the airway with near-complete occlusion. The scope, pre-loaded with a small-caliber endotracheal tube, could not be passed around the lesion for intubation. The glottis and epiglottis could not be visualized. There were no signs of bleeding, but copious secretions made complete visualization of the lesion difficult. With a failed fiber-optic intubation, we prepared to perform an emergency surgical airway.

However, the patient continued to oxygen-Intravenous access was obtained and equip- : ate and ventilate well. The lesion seen with : to Airway Management ment for difficult airway management was : the fiber-optic scope did not appear to be na- : Face-to-face intubation, commonly referred to : tive tissue. It was gray, poorly circumscribed, and avascular. There was concern for a foreign body, though a large pseudomembrane, abscess, and laryngeal mass were also considered. With foreign body now as the leading diagnosis, the patient was kept upright and video laryngoscopy was employed to try and visualize the obstruction via a face-to-face or "tomahawk" approach.

It Wasn't the Surf, It Was the Turf

After laryngoscope insertion, the lesion was clearly visualized. Magill forceps were quickly acquired to remove a large piece of masticated food. When removed, the food bolus was found to be directly superior to the epiglottis in the supraglottic region. The patient had immediate relief of symptoms and began speaking in a clear voice. Fiberoptic laryngoscopy was repeated, confirming no further foreign body, bleeding, or other

The patient was unaware of any aspiration and believed her symptoms were due to an allergic reaction to the seafood she was eating. After removal of the foreign body, she was asymptomatic, tolerating food and drink. She was observed for several hours with a chest Xray showing no pulmonary edema or aspiration pneumonitis/pneumonia.

The Tomahawk Approach

as tomahawk or axe intubation, is a difficult : airway intervention utilized in pre-hospital, emergency department, inpatient, and operating room settings. 2, 3, 4, 5 Patients with pulmonary edema, significant spine pathology, obesity, etc. may not be able to tolerate laying supine.4,6,8 This technique is valuable as it allows glottic visualization without placing patients in a supine position. As these patients are commonly seen in the emergency depart-

ment, tomahawk intubation is an extremely useful technique to consider when dealing with a difficult airway.

To begin, the patient is left in an upright position. Standard pre-oxygenation and preintubation preparation are performed. The physician then approaches the patient face-toface. As opposed to traditional intubation, the laryngoscope is held in the right hand and the endotracheal tube (ETT) is held in the left. This is to prevent crossing of arms while attempting to pass the ETT. The laryngoscope is held with the curved blade superior to the handle, resembling how one would hold a pickaxe (or tomahawk). The blade is then carefully inserted into the oral cavity and progressed posteriorly. During this progression, gentle traction is applied to the handle, thrusting the mandible anteriorly. Laryngoscope manipulation should be similar to that of supine intubation, avoiding "rocking" at wrist, and being cognizant of dentition. One the epiglottis and vallecula are visualized, the ETT is progressed with the left hand until the ETT is just superior to the vocal folds. At this point, the physician may intubate and immediately start sedation. Alternatively, if it is too challenging to pass ETT through vocal cords, a sedative and paralytic agent can be administered immediately before advancing the ETT. It should take seconds to pass the ETT once properly positioned, making it safer to administer medications that decrease respiratory drive.

CONTINUED on page 22

BRINGING DATA BEDSIDE

BENCHMARKING ALLIANCE

DR. AUGUSTINE is national director of prehospital strategy for US Acute Care Solutions based in Canton, Ohio; clinical professor of emergency medicine at Wright State University in Dayton, Ohio; and vice president of the Emergency Department Benchmarking Alliance.

DR. JOURILES is professor and chair of emergency medicine at Northeast Ohio Medical University and vice chair of emergency medicine at Summa Health and US Acute Care Solutions.

First Look: ED Operations in the Pandemic Year 2021

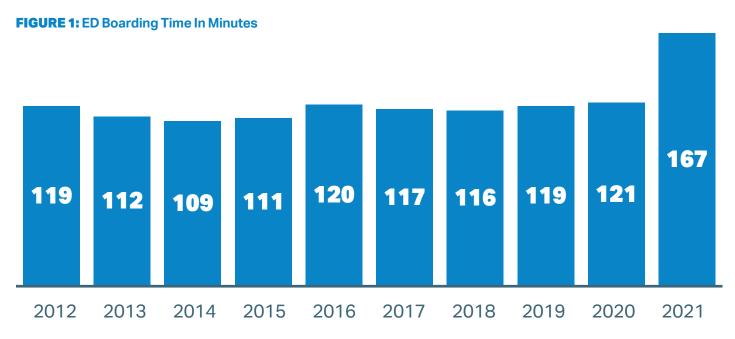
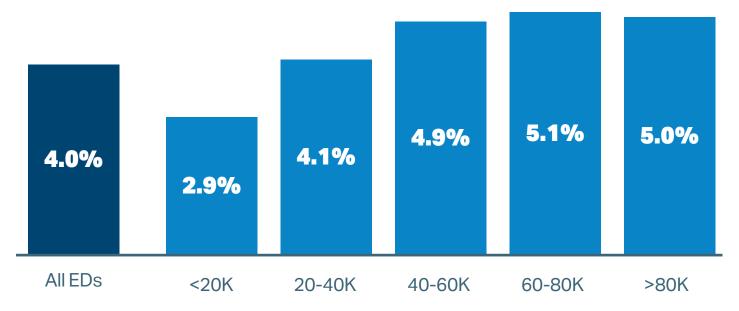


FIGURE 2. Percent of patients who Leave Before Treatment Complete (LBTC),



FIGURE 3. Percent of Patients who Leave Before Treatment Complete (LBTC), by Type of ED.



by JAMES J AUGUSTINE, MD, FACEP; NICHOLAS J JOURILES, MD, FACEP

here is no disguising it. 2021 was perhaps the most challenging year ever for American emergency department (ED). The combination of staff losses and hospital system failures caused unprecedented operational problems and patient and ED staff dissatisfaction.

The number of patients seen in American EDs has increased steadily since World War II. The early days of the pandemic from March 2020 to September 2020 saw a dramatic and uncharacteristic ED volume loss. While it takes a while for official government figures to be released, preliminary data found ED volume loss in 2020 that was approximately 14 percent compared to 2019. ED volumes increased from 2020 to 2021 and again from 2021 to 2022. Most EDs are now reporting volumes that are approximately the same as those in 2019, but acuity that is higher. The trend of EDs seeing older, sicker patients, combined with continued diversion of patients to retail clinics, telehealth, and other sources of care, has resulted in a net increase in patient severity/complexity for full-service EDs.

The Emergency Department Benchmarking Alliance (EDBA) has just released its 2021 Performance Measures Data Guide. Summary of the findings are as follows:

• The pandemic resulted in a significantly lower percentage of children presenting

CONTINUED on page 23

KEY POINTS

- Emergency department (ED) volume loss was dramatic from March 2020 through September 2020.
- The percentage of patients who left the ED prior to the completion of treatment increased to 4.0 percent, from 2.8 percent in 2020.
- In 2020, 3.8 million patients walked away from the ED before their evaluation was complete.
- Operational challenges are now layered onto the 2022 volume of patients that are about the same, if not higher, than 2019.

There are several special considerations while performing a tomahawk intubation. It is crucial to have additional airway specialists at bedside, if available. Identifying anatomy and preparing equipment for rapid cricothyrotomy should also be a priority. The patients that benefit most from tomahawk intubation are also most dependent on an increased respiratory drive to maintain ventilation and oxygenation. Agents that minimally effect respiratory drive, such as ketamine or dexmedetomidine, may be preferred. 9, 10 Glycopyrrolate has been used to help minimize airway secretions.3 A video laryngoscope is the preferred tool for glottic visualization. While a standard, direct laryngoscope can be used, it is much more difficult. If only a direct laryngoscope is available, a two-operator technique can be used. In this case, one operator inserts and manipulates the laryngoscope. The second operator used a flexible laryngoscope with a pre-loaded ETT to visualize the glottis and pass the ETT. If additional help is available, having a team member provide jaw thrust or tracheal pressure may provide better visualization.

Tomahawk intubation is an effective alternate approach to airway management in patients that cannot assume a supine position. While studies are limited, there are encouraging findings that tomahawk intubation is easier to learn than supine intubation, and both techniques have similar time to intubation.^{2,7} When managing UAO, consider tomahawk intubation to secure a difficult airway. •

References

- 1. OCathain E, Gaffey M. Upper Airway Obstruction. StatPearls [Internet] website, https://www.ncbi.nlm.nih. gov/books/ NBK564399/. Published January 2021. Updated October 22, 2020. Accessed December 23.2022
- 2. Venezia D, Wackett A, Remedios A, Tarsia V. The case for teaching face-to-face (tomahawk, icepick or inverse) intubation. Annals of Emergency Medicine. 2010;56(3). doi:10.1016/j.annemergmed.2010.06.340
- 3. Hill J. So you want to tomahawk somebody?-taming the SRU. University of Cincinnati College of Medicine website, https://www.taminathe.sru.com/bloa/ procedural-education/so-you-want-to-tomahawksomebody? Published April 14, 2014. Accessed April 29, 2021. Accessed December 23, 2022.
- Godlewski C. The "reverse c-mac tomahawk": A novel approach to the difficult airway and sedation in patients unable to lie supine. Anesthesia Experts website. https://anesthesiaexperts.com/uncategorized/ reverse-c-mac-tomahawk-approach-difficult-airwaysedation-patients-unable-lie-supine/. Published February 15, 2018. Accessed December 23, 2022
- 5. White S, Levitan R, High K, Stack L. Airway. In: Knoop K, Stack L, Storrow A, Thurman R., eds. The Atlas of Emergency Medicine. Fourth edition. McGraw Hill;
- 6. Gaszynski, T. Face-to-face intubation in morbidly obese. NIH website. https://clinicaltrials.gov/ct2/ show/ NCT04959149. Published Jul1, 2021. Accessed December 23, 2022.
- 7. Julliard D, Vassiliadis J, Bowra J, et al. Comparison of supine and upright face-to-face cadaver intubation. Am J Emerg Med. 2022;56:87-91
- 8. Jeong H, Chae M, Seo H, Yi J-W, Kang J-M, Lee B-J. Face-to-face intubation using a lightwand in a patient with severe thoracolumbar kyphosis: A case report. BMC Anesthesiol. 2018;18(1). Venn R, Hell J, Grounds R. Respiratory effects of dexmedetomidine in the surgical patient requiring intensive care. Crit Care. 2000;4(5):302-308.
- 9. Hell, J., Venn, R., Cusack, R. et al. Respiratory effects of dexmedetomidine in the ICU. Crit Care. 2000;4(1):193. https://doi.org/10.1186/cc913.



Figure 1: When removed, the food bolus was found to be directly superior to the epiglottis in the supraglottic region.

American College of Emergency Physicians® **NEW YEAR,**

NEW APP!

Access some of the most popular **ACEP** web features even without the best connection -

Clinical Policies

News

Reimbursement FAQs

Advocacy Alerts

Log in to access even more features!

More features added regularly. Simply visit your preferred app store and search for "ACEP" to install!









Private Democratic group in Norfolk, Virginia Beach, and Suffolk

Since 1972, Emergency Physicians of Tidewater has delivered exceptional emergency care to Emergency Departments throughout Southeastern Virginia. Our physicians are able to practice in a variety of settings from an academic Level 1, Quaternary Referral Center to a community-based practice. EPT leads the longest running Emergency Medicine Residency program in Virginia as well as multiple fellowships. EPT members enjoy coastal living in Virginia Beach and Norfolk, as well as plenty of American history, quaint towns, and mountains within a short drive.

Opportunities:

- Available two-year partnership track
- Leadership: Governing Board/Committee appointments
- Teaching: Faculty appointment at Eastern Virginia Medical School
- Career fulfillment with highly cohesive, LOCALLY-governed group
- Rich Benefits & Top-Ranked Retirement Plan

Practice Variety · Democratic Group · Partnership · Leadership · Teaching

For immediate consideration, send your CV to RECRUITER@EPT911.COM

to EDs that are not designated as pediat-

- Multiple indicators confirm that patient acuity has increased.
- Patient arrival by EMS increased in 2020 and again in 2021. About 37 percent of those patients were admitted, a relatively constant percentage.
- The percentage of patients transferred out of the ED to another hospital in 2020 and 2021 was higher than historical numbers.
- The use of CT scans and EKGs increased

- across all groups of EDs.
- There was no significant increase in the time that ED staff needed to greet patients and have those patients seen by an emergency physician despite all other measures of performance getting slower.
- Unprecedented high ED boarding times (about 39 percent greater than prior years) crushed most ED operations, negatively impacting all other areas of ED performance.
- The overall length of stay for all ED pa-
- tients increased to 194 minutes in 2021, up from 186 minutes in 2018, 184 minutes in 2020, and 182 minutes in 2019.
- Patient walkaway rates (e.g., Left Before Treatment Complete) almost doubled compared to 2019, most likely a victim of increased boarding.

The ED Walkaway Rate Jumped Dramatically

Secondary to lengthy ED boarding times, the median patient processing times [measured as

CLASSIFIEDS

length of stay (LOS)] increased dramatically.

ED leaders must work with hospital leaders to shorten boarding time. In CMS's language, boarding time is the median time (in minutes) from admit decision time to time of departure from the ED for patients admitted to inpatient status. Figure 1 shows that truly little progress had been made in reducing boarding time in the nine years ending in 2020. Then, in 2021, boarding times increased markedly by 39 percent (46 minutes).

Boarding time directly correlates with LBTC rates and ED length of stay. EDBA uses the "Left Before Treatment Complete (LBTC)" as the single statistic that counts all patients who present to the ED for care and leave before they are supposed to. This provides the most complete accounting for all patients who leave the ED, and includes those patients who leave before or after the medical screening exam, those that leave against medical advice (AMA), and those that elope.

The percentage of patients who left the ED prior to the completion of treatment increased to 4.0 percent, from 2.8 percent in 2020 (Figure 2).

LBTC tracks closely and worsens with increasing ED volume (Figure 3). Every cohort had record-high LBTC rates in 2021, higher than in any year since the EDBA began collecting data in 2004. Even Freestanding EDs saw a jump in LBTC rates. In 2019, FSEDs had a LBTC rate of 1.6 percent. In 2021, that rate increased to 2.3 percent.

How dramatic was the increase in patients who walked away from the ED?

The overall LBTC rate of four percent in 2021 also represents far more patients than any prior year. In 2020, 3.8 million patients walked away from the ED before their evaluation was complete. In 2021, that amounted to about 6 million patients. 2.2 million more ED patients left before their ED treatment was complete than in 2020.

Working Forward: Restoring Flow Through the ED and Reducing LBTC **Volumes**

At the present time, ED and hospital leaders should anticipate that ED volumes have returned to the trend of stable increases.

Emergency department operations in 2021 were significantly impacted by many factors which reduced flow, increased walkaway rates, and greatly stressed ED staff. These operational challenges are now layered onto the 2022 volume of patients that are about the same, if not higher, than 2019. Increasing patient acuity also further strains ED operations.

The EDBA data indicate a correlation between processing of inpatients (boarding time), overall flow (length of stay), and walkaway rates (left before treatment complete).

ED boarding of inpatients, and other impediments to ED flow, negatively impact the quality of patient care, result in higher walkaway rates, patient and staff dissatisfaction, and a gap in available emergency services in the community. Boarding is a hospital-wide problem that will require significant hospital and ED leadership to restore and/or preserve ED flow, improve quality of care, and attract and retain high-quality ED staff. •

JOIN OUR TEAM **EMERGENCY MEDICINE**

Penn State Health Emergency Medicine

About Us:

Penn State Health is a multi-hospital health system serving patients and communities across central Pennsylvania. We are the only medical facility in Pennsylvania to be accredited as a Level I pediatric trauma center and Level I adult trauma center. The system includes Penn State Health Milton S. Hershey Medical Center, Penn State Health Children's Hospital, and Penn State Cancer Institute based in Hershey, Pa.; Penn State Health Hampden Medical Center in Enola, Pa.; Penn State Health Holy Spirit Medical Center in Camp Hill, Pa.; Penn State Health St. Joseph Medical Center in Reading, Pa.; Penn State Health Lancaster Pediatric Center in Lancaster, Pa.; Penn State Health Lancaster Medical Center (opening fall 2022); and more than 3,000 physicians and direct care providers at more than 126 outpatient practices in 94 locations. Additionally, the system jointly operates various health care providers, including Penn State Health Rehabilitation Hospital, Hershey Outpatient Surgery Center, Hershey Endoscopy Center, Horizon Home Healthcare and the Pennsylvania Psychiatric Institute.

We foster a collaborative environment rich with diversity, share a passion for patient care, and have a space for those who share our spark of innovative research interests. Our health system is expanding and we have opportunities in both academic hospital as well community hospital settings.

Benefit highlights include:

- Competitive salary with sign-on bonus
- Comprehensive benefits and retirement package
- Relocation assistance & CME allowance
- Attractive neighborhoods in scenic central Pa.



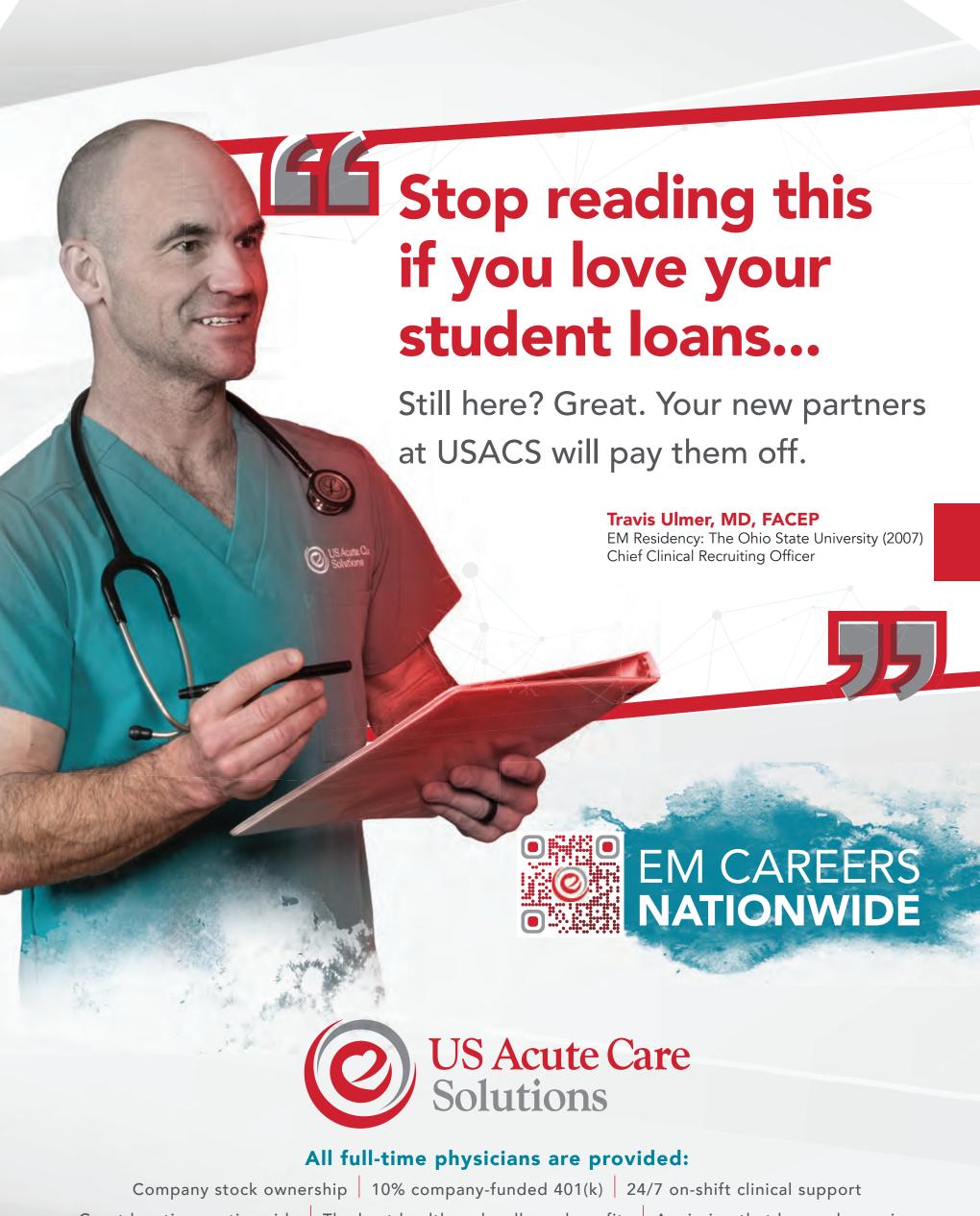






Heather Peffley, PHR CPRP - Penn State Health Lead Physician Recruiter hpeffley@pennstatehealth.psu.edu

Penn State Health is fundamentally committed to the diversity of our faculty and staff. We believe diversity is unapologetically expressing itself through every person's perspectives and lived experiences. We are an equal opportunity and affirmative action employer. All qualified applicants will receive consideration for employment without regard to age, color, disability, gender identity or expression, marital status, national or ethnic origin, political affiliation, race, religion, sex (including pregnancy), sexual orientation, veteran status, and family medical or genetic information.



Great locations nationwide The best health and wellness benefits A mission that has real meaning