

ACEP Now

The Official Voice of Emergency Medicine

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WILEY



NEWS FROM THE COLLEGE

UPDATES AND ALERTS FROM ACEP

ACEP Leads Congressional Briefing on ED Boarding

On June 21, ACEP organized a congressional briefing with the Emergency Nurses Association (ENA) and the National Alliance on Mental Illness (NAMI) to express strong concerns to legislators about the impact of emergency department (ED) boarding on our health care safety net. ACEP is urging legislators to prioritize finding solutions to the boarding crisis. View ACEP's proposed solutions at acep.org/boarding-briefing.

State Advocacy Win: Closing the Road to Alternative Certification in Puerto Rico

The legislation was touted as a way to help alleviate the growing physician shortage in Puerto Rico. Instead, Senate Project 1134 would have created an alternative pathway to a certification in emergency medicine avoiding the training and certification standards supported by ACEP and the American Board of Emergency Medicine. Puerto Rico ACEP (ACEP PR) responded with a comprehensive advocacy campaign that included grassroots, coalition outreach, direct lobbying, and earned media to push against the legislation. Read the full story at acep.org/puerto-rico-win.

ACEP Now Welcomes New Resident Fellow

Carmen Marie Lee, MD, MAS, is the newest member of *ACEP Now's* editorial team. As the 2023–24 Resident Fellow, Dr. Lee will oversee the Resident Voice column while contributing the resident perspective to the editorial board. Dr. Lee is a resident at Highland Hospital within the Alameda Health System in Oakland, California, with a strong background in health communications, education, and research.



Dr. Lee

Enter the Medical Humanities Writing and Visual Arts Awards

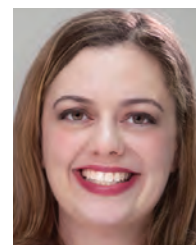
ACEP's Section of Medical Humanities is hosting its 16th annual awards honoring excellence in creative writing and visual arts. For the writing awards, eligible pieces are creative, not scientific, works related to emergency medicine published in print or online between September 2022 and August 2023. Word count limit is 2,500, and poetry and prose are judged in separate categories. The visual arts awards are an opportunity for artists to show off their paintings, photography, etc. Nominators can submit a digital image or file of the artwork (photograph, sculpture, textile, pottery, painting, etc). Learn more at acep.org/writing-awards-2023.

Featured Lectures for ACEP23

The countdown is on until ACEP23 in Philadelphia, and we are pleased to spotlight the faculty who will deliver our named lectures.



Dr. Hedayati



Dr. Haddock



Dr. Nordlund



Dr. Adams



Dr. Sanson



Dr. Kang



Dr. Strauss



Dr. Diercks

- **Tarlan Hedayati, MD, FACEP**, will discuss equitable cardiovascular care during the Leon L. Haley, Jr. Lecture on Oct. 9.
- **Alison J. Haddock, MD, FACEP**, and **Diana Nordlund, DO, JD, FACEP**, will speak about practicing emergency medicine in post-Roe era during the Colin C. Rorrie, Jr. Lecture on Oct. 9.
- **Jim Adams, MD, Christopher Kang, MD, FACEP**, **Tracy G. Sanson, MD, FACEP**, and **Robert W. Strauss, MD, FACEP**, will discuss employment models during the James D. Mills, Jr. Lecture on Oct. 10.
- **Deborah B. Diercks, MD, MSc, FACEP**, will talk about using data to work smarter during the Brooks F. Bock Lecture on Oct. 11.
- **Marie-Carmelle Elie, MD, FACEP, FCCM**, will discuss combatting compassion fatigue during the Nancy J. Auer Lecture on Oct. 11.

Did you know EM:RAP is coming to ACEP23? Join the EM:RAP faculty as they work through the story of a patient who presented with a common complaint, but ended up with a tragic outcome. For three hours, you will be engrossed in the narrative of a case that extends from urgent care to critical care, with world-class experts providing insights you can use on your next shift.

ACEP Now readers save \$50 on ACEP23 registration with promo code acepnow50 at acep.org/acep23. Don't forget that for the first time ever, all four-day registrations come with free access to Virtual ACEP23. 📺

IN THE EVALUATION OF MILD TRAUMATIC BRAIN INJURY (mTBI)

NAVIGATE CHALLENGING CASES WITH AN OBJECTIVE BIOMARKER TEST



i-STAT TBI Plasma

for use with the i-STAT Alinity System

A DUAL BIOMARKER ASSAY THAT
CAN REDUCE AVOIDABLE CT USE
FOR SUSPECTED mTBI BY UP TO 40%^{1,2}



SCAN TO
LEARN MORE

The *i-STAT TBI Plasma* test is a panel of in vitro diagnostic immunoassays for the quantitative measurements of glial fibrillary acidic protein (GFAP) and ubiquitin carboxyl-terminal hydrolase L1 (UCH-L1) in plasma and a semi-quantitative interpretation of test results derived from these measurements, using the *i-STAT Alinity* Instrument. The interpretation of test results is used, in conjunction with other clinical information, to aid in the evaluation of patients, 18 years of age or older, presenting with suspected mild traumatic brain injury (Glasgow Coma Scale score 13-15) within 12 hours of injury, to assist in determining the need for a CT (computed tomography) scan of the head. A 'Not Elevated' test interpretation is associated with the absence of acute traumatic intracranial lesions visualized on a head CT scan.

The test is to be used with plasma prepared from (EDTA) anticoagulated specimens in clinical laboratory settings by a healthcare professional. The *i-STAT TBI Plasma* test is not intended to be used in point of care settings.

References; 1. *i-STAT TBI Plasma* Cartridge. Instructions for use. Abbott Point of Care Inc. Abbott Park, IL; 2021. 2. Data on file. Abbott Point of Care Inc.

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Not all products are available in all countries.



RESIDENCY SPOTLIGHT

BAYLOR UNIVERSITY MEDICAL CENTER (BUMC) EMERGENCY MEDICINE RESIDENCY

Location: Dallas, Texas

Social media handles: bumc_em (Instagram) and @bumc_em (Twitter)

Year founded: 2021

Number of residents: 8 per class

Program length: 3 years



Residents and faculty at BUMC's monthly journal club.

What does your program offer that residents can't get anywhere else?

A very high volume of critical care. Large volume of critical procedures—we have a ton of specialties represented at BUMC but keep the majority of the procedures in the ED. ECMO cannulation for ECPR in ED. Large volume penetrating and blunt trauma. Weekly conference with guest lectures given by top specialists in their fields. All centrally localized in beautiful downtown Dallas.

What is the work-life balance like?

We pride ourselves in promoting resident wellness by focusing on shift scheduling and allowing time for family and extracurricular activities. We hold group get-togethers with faculty and have wellness events for team building quarterly in lieu of regular conference didactics. We attempt to promote a feeling of family at BUMC. Residents enjoy many of the amenities that Dallas offers - restaurants, breweries, outdoor spaces, trails, and local lakes.

How should potential applicants learn more about your program?

Check out our social media accounts and our website (bumcem.com)

—Karina Reyner, MD, and Bobby Barnes, MD

EMERGENCY IMAGE QUIZ with VISUAL DX



Question: A 67-year-old man presents to the emergency department (ED) following syncope. He denies any antecedent symptoms. He has a witnessed episode of syncope in the ED, and the following ECG, is obtained What is the likely diagnosis?

- Left bundle branch block
- Supraventricular tachycardia with aberrancy
- Wolff-Parkinson-White syndrome
- Ventricular tachycardia

ANSWER on page 23

Livia Santiago-Rosado, MD, FACEP, FAAEM
Poughkeepsie, NY

Badge of Honor

Now more than ever, the FACEP distinction allows you to show your pride and commitment to EM as you wear this badge of honor for your specialty.

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American College of Emergency Physicians®
ADVANCING EMERGENCY CARE

ACEP4U: Hard Questions, Honest Conversations

YOU'RE CONCERNED ABOUT THE FUTURE OF YOUR SPECIALTY. LET'S TALK ABOUT IT.

In these challenging times, we know you have questions about what ACEP is doing to tackle the biggest issues: ED boarding, workforce concerns, consolidation, and scope of practice. That's why ACEP hosted an Open Forum on June 15 to share what the College is doing to protect and support emergency physicians—and to listen to your concerns.

To make sure you're up to speed on the latest developments, we are providing you all the facts. From our humble beginnings to today, ACEP's mission has not veered. We use our hard-earned seat at the most influential tables to push for changes that protect you and your patients.

"ACEP is not a one topic, one issue organization," said ACEP President-Elect, Aisha T. Terry, MD, MPH, FACEP. "We cover the breadth of all things related to emergency medicine – from issues that impact your ability to treat patients, to protecting your livelihood, to helping members achieve their career dreams. From day one to the end, we're there for you."

Federal Legislators and Regulators Invite ACEP to the Decision-Making Table

ACEP joined several emergency physician group representatives who participated in a listening session with the Federal Trade Commission (FTC) regarding consolidation of health care employers. However, ACEP was exclusively involved in important conversations leading up to the session and the dialogue between ACEP and the FTC is ongoing.

The FTC, and other regulatory agencies, look to ACEP as the united national voice for emergency physicians.

ACEP proudly sits as EM's sole representative on the AMA's RVS Update Committee (RUC), the highly influential group that makes recommendations to the federal government on how physicians are paid. This year alone, ACEP prevented proposed reductions in the relative value units (RVUs) assigned to the ED Evaluation and Management (E/M) codes. ACEP's work prevented a \$30 million loss for just Medicare patients treated with code 99284. This alone keeps around \$800 in every emergency physician's pocket—more than the cost of national ACEP annual dues!

ACEP Has Invested \$1 Million to Push Back on Scope Creep at Federal and State Levels

ACEP has made it clear - there is no substitute for a licensed, trained, and board-certified emergency physician. ACEP launched a campaign to educate patients and policymakers about the importance of physician-led care teams. The campaign included a series of short, animated videos highlighting the value of emergency physicians and explaining in plain language how specialized training and education sets emergency physicians apart from others on the care team.

We developed chapter toolkits with op-eds and talking points, PR support for the launch and monitoring of campaign efforts. We funded two public opinion polls that confirmed not only do the vast majority of adults most trust a physician to lead their medical care, but many patients would be concerned if a physician was unavailable during their medical emergency.

ACEP joined the AMA's Scope of Practice Partnership to stand with the House of Medicine. We invested in staff support, including multiple communications and legislative staff members to manage these initiatives. We have fought at the state levels to block bills that would expand the scope of non-physicians and have supported policies that prioritize emergency physician-led teams in the ED and establish common sense principles for model state legislation.

Learn more at acep.org/scopeofpractice.

ACEP is Currently Involved in Nine Lawsuits to Protect Your Autonomy and Reimbursement

In 2022-2023, ACEP's legal advocacy increased by 400 percent. We participated in 12 lawsuits and filed nine amicus briefs in courts from California and Idaho to Illinois, New Jersey and Texas.

Four amicus briefs were filed in cases vital to protecting physician autonomy, three related to post-Dobbs decisions and one was filed as part of AAEM's suit against Envision. Two briefs lent support to protecting the scientific integrity of medical journals and medical societies publishing treatment guidelines, respectively. ACEP also filed suit against the Departments of Health and Human Services, Labor and Treasury to address concerns about the implementation of the new surprise billing law, a case years in the making, where ACEP offered EM-specific improvements to every phase of the independent dispute resolution (IDR) process. When the original suit was dismissed, we pivoted and filed four amicus briefs in the resulting cases heard in Texas.

Less than 1% of ACEP's Total Revenue Comes from Private Equity Staffing Groups

In total, revenue from private equity-funded staffing groups for advertising, sponsorship and exhibits is less than 1 percent of our total organizational revenue, despite claims to the contrary.

In response to member requests, ACEP conducted a thorough legal review and analysis of the risk if the organization were to prohibit all advertisements or exhibits from certain companies that refuse to disclose their business practices. Internal and external legal counsel confirmed an anti-trust risk to ACEP because the groups in question are made up of our members. This may not be the

case for every EM association but based on ACEP's size and membership, the legal risk was concerning.

Further, our membership includes emergency physicians from all walks of life who are employed in a variety of work environments ranging from academic settings to emergency physician groups small and large.

No staffing group is a member of ACEP—they have no role in the democratic election of our Board nor the development of advocacy efforts or policy positions. ACEP has checks and balances in place, including a strong conflict of interest policy, that ensures no one voice outweighs what is in the best interest of our members or the specialty.

None of ACEP's Board of Directors are Employed by a Group that has Majority Private Equity Ownership

The current Board of Directors works in academia, the military, small independent and large groups, in rural and metropolitan settings, with expertise in EMS, informatics, advocacy, policy and more.

The Board is as diverse as our membership and they represent the many practice settings of our members.

Board members are democratically elected by the ACEP Council, which consists of members representing ACEP's chapters (50 states, Puerto Rico, the District of Columbia and Government Services), our sections of membership, the Association of Academic Chairs in Emergency Medicine, the Council of Emergency Medicine Residency Directors, the Emergency Medicine Residents' Association and the Society for Academic Emergency Medicine.

ACEP is the Only EM Organization with a Full-Time Dedicated Advocacy Staff in a DC Office

The ACEP DC office currently has nine full-time staff with roles that span public relations, congressional relations, political affairs and grassroots advocacy, regulatory and external affairs. We retain consultants periodically for support services while ACEP staff lobbies directly on behalf of its members. We also manage reimbursement efforts from our DC office, with additional staff leading point on key issues and training.

"We have an office in Washington DC with full-time staff members working to make sure that ACEP has strong relationships with policymakers and influencers in Washington DC and on Capitol Hill," Dr. Terry said.

"The work in our DC office results in our ability to get fair reimbursement as emergency physicians. Their full-time attention results in our ability to eat and nourish ourselves at our work stations on shift. Their commitment allows us to make sure that when it comes to taking care of Medicare patients and Medicaid patients, there is fund-

ing resources, so we can do our job. The work from this team impacts our ability to work in a safe environment," she added.

ACEP Provides Members with Over 240 Hours of Free CME

ACEP members have 246 credits of complimentary CME education available and non-members can access 194.5 free credits. Most courses expire within three years and are refreshed annually.

ACEP Partnered with All EM Organizations to Study the EM Workforce—And We're Using Our Power and Influence to Change Our Specialty's Trajectory

An important part of protecting our specialty is anticipating future threats. In 2021, EM workforce projections indicated a likely oversupply of EPs in 10 years. To protect and stabilize the workforce, ACEP:

- Launched a new Task Force to help develop innovative practice models for the future of EM, including freestanding facilities, telemedicine and home-based care.
- Built a comprehensive plan to expand your opportunities while addressing rural challenges, residency standards, and work environment.
- Continues to pivot efforts as the market fluctuates. As our realities change, ACEP is committed to monitoring current data and adjusting strategies.

ACEP is Fighting for Emergency Physicians

ACEP defends your right to practice with medical autonomy. In March 2023, ACEP responded to the FTC regarding their proposed ban on non-compete clauses in employment contracts and we outlined how this unfair, predatory practice affects our members.

In April 2022, the ACEP Board approved the ACEP Statement on Private Equity and Corporate Investment in Emergency Medicine, reaffirming our core belief of the physician-patient relationship as the moral center of medicine.

We fight bad actors, counter misinformation that threatens you and your patients, and push for solutions to systemic challenges that complicate care delivery.

"We realize that some people may feel that ACEP isn't doing enough or should be showing up in a different way. The fact is many people don't know all that ACEP does," Dr. Terry said. "ACEP plays a lot of defensive work—defending of our specialty. We're preventing catastrophe from happening and that work is unseen by most.

"But I promise you the work that ACEP does is tireless in support of our members," she said.

Details of ACEP's key initiatives can be found at acep.org/acep4u. ➔

2023 ACEP ELECTIONS PREVIEW

CONTINUED FROM PAGE 1

MEET THE BOARD OF DIRECTORS CANDIDATES

Board of Directors Candidates



ACEP BOARD OF DIRECTORS

What would you do to ensure that emergency medicine remains an attractive specialty?

William B. Felegi, DO, FACEP (New Jersey)

Current Professional Positions: Medical director, Van Buren County Hospital emergency department and Van Buren County Hospital ambulance, Keosauqua, Iowa; EMS medical director, Farmington Ambulance; medical director, Atlantic Health, Morristown Medical Center, Travel MD, Corporate Health

Internships and Residency: Emergency medicine residency, Morristown Memorial Hospital, Morristown, New Jersey
Medical Degree: DO, University of New England College of Osteopathic Medicine, Biddeford, Maine (1989)

✓ Response

With the decline in applicants for emergency medicine residencies, the number of physicians either retiring or deciding to leave our field to pursue other interests, and our aging workforce, it is imperative that we prioritize making emergency medicine attractive for a rewarding career. We must focus on exploring why individuals have lost interest in our specialty and why practicing physicians have left to pursue other interests.

We can make some assumptions as to why our specialty has become less attractive and why physicians are leaving or retiring early. Our work can be very rewarding, whether we resuscitate a cardiac arrest patient who is discharged neurologically intact, save the life of a badly injured individual, or render pain control to a child with an earache. During COVID, we were heroes. But after COVID, many physicians felt physically and emotionally exhausted due to the volume of patients, high acuity, and the lack of supplies, medication, etc.

Post-COVID, some of our partners left. More importantly, nurses and ancillary care professionals left, which led to

increased overcrowding, closure of inpatient beds, and a further lack of resources. I read an article where a physician thought that we could offer a fellowship in emergency “hallway” medicine. I did appreciate the satire, but the reality is, in many emergency departments, we do practice hallway medicine that frequently results in sub-optimal care and leads to poor patient outcomes and experiences for not only the patient, but also their families.

Evidence suggests that physicians would rather have better working conditions than additional income. Yes, fair reimbursement is important, but it may not be the primary driver for dissatisfaction. Unless we focus on the quality of work life for all of us, more individuals will no longer want to practice our specialty. Better work life equals better personal life where you can enjoy more personal freedom and rejuvenation.

ACEP needs to continue to advocate for better working conditions. We have always been the saviors because of a fragmented and broken health care delivery system, but our specialty continues to suffer. We need to be more forceful and vocal in advocating for drastic reforms. Why do we think that long waits resulting in deaths and delays in care, hallway medicine, overcrowding, longer turnaround times, left-without-being-seen rates, the lack of resources especially in rural hospitals, and the difficulty in finding a bed for a transfer patient is acceptable?

No elected official or VIP who comes to an ED would have to endure what our patients experience. VIPs always go to the front of the line. We need to stand firm and aggressively advocate for change. This is not an easy task, but I fear that unless we improve our work life, we will lose more physicians to attrition and less students will join our specialty. This will have an even greater impact on emergency

medicine and lead to a further decrease in our membership, which will ultimately make it harder for our organization to survive.

Robert J. Hancock, DO, FACEP (Texas)

Current Professional Positions: Clinical assistant professor, Oklahoma State University Center for Health Sciences, Comanche County Emergency Medicine Residency Program; attending emergency physician, Comanche County Memorial Hospital; attending emergency physician, Northwest Texas Medical Center

Internships and Residency: Emergency medicine residency, Parkland Hospital, Dallas, Texas (2007)

Medical Degree: DO, University of North Texas Health Science Center (2004)

✓ Response

The decline in the popularity of emergency medicine and the subsequent significant decline in the Match statistics should be very concerning for all of us. The underlying causes of the decline are multifactorial, and many were significantly worsened during COVID.

The issue with boarding evolved into a crisis during COVID. This required many of us to see a significant percentage of our patients in the waiting room or hallway chairs. While this was a necessity during COVID, it definitely had a negative impact on medical students during rotations. I actually had several medical students tell me that they did not want to train and practice under those conditions. This resulted in many students choosing specialties that were in a more controlled environment with fewer variables.

While many of us were initially treated as “health care he-

Agitation Treatment in the Emergency Department

Clinical perspectives from the field of agitation science

by GREGG MILLER, MD, FACEP, ENRIQUE ENGUIDANOS, MD, FACEP AND MICHAEL WILSON, MD, PHD, FACEP

This is the second in a multi-part ACEP Now series focused on mental health emergencies. Last month's article focused on ACEP's efforts and resources to support EDs and patients with psychiatric emergencies. Future articles will highlight solutions and success stories. This month, we are discussing the medical management of patients with mild to moderate agitation.

Emergency departments (EDs) focus on rapid initiation of medical treatment. Patients with sepsis get antibiotics. Patients with opiate overdose get naloxone. Patients in DKA get insulin. And yet, when many patients arrive with a mental health crisis, they get nothing—until they escalate, at which point they often get too much and remain over-sedated for hours. Just as for patients experiencing other emergencies, ED physicians should rapidly initiate appropriate medical treatment for patients experiencing mental health crises, before they decompensate.

Calming Measures

Sometimes ED physicians are reluctant to initiate calming treatment in lower acuity patients, preferring to wait until more aggressive sedation is absolutely necessary. They might have been instructed that early calming measures lead to an inaccurate evaluation of the patient by a mental health professional or worry about over-sedating the patient. However, rapid initiation of treatment is actually patient-centered care that can both lead to better outcomes and limit ED boarding. Mental health evaluation teams can rely on documentation and interviews to understand a patient's initial agitation level. It is also equally important for mental health evaluators to understand how patients respond to calming medication, as that can help guide inpatient versus outpatient treatment decisions.

This article focuses on calming medication in patients with mild to moderate agitation. The article also will not address severe agitation, which is already well covered elsewhere and is the topic of an ACEP clinical policy currently in development.¹⁻³

When to Consider Calming Treatments

Calming treatment should be considered immediately upon arrival for patients who are experiencing agitation or anxiety, even if the symptoms are not severe.⁴ The first step is to establish a therapeutic alliance and engage in verbal de-escalation.⁵ ED physicians should use a calm, non-confrontational tone, respect the patient's personal space, set polite but firm boundaries for behavior, and offer choices where appropriate. Sometimes investing an extra two to five minutes—certainly a significant time commitment on a busy shift—to establish trust can limit the need to spend even more time later in the shift managing escalating behavior (or permit a much earlier disposition).

Once trust is established and patients are

Table 1: Agitation Chart

Medication	ED Oral Dosing Range	Maximum dose	Timing	Notes
FIRST-GENERATION ANTIPSYCHOTICS				
Haloperidol (Haldol)	2.5-5 mg PO	30 mg/day	30-minute onset	Preferred agent for agitation from alcohol intoxication (not withdrawal) Coadministration with diphenhydramine or benztropine may reduce EPS, though increase sedation Higher risk than SGAs for EPS, prolonged QTc, and NMS
SECOND-GENERATION ANTIPSYCHOTICS				
Aripiprazole (Abilify)	10-15 mg			Less efficacious than other SGAs; not typically first-line
Quetiapine (Seroquel)	25-50 mg	400 mg/day		Higher risk of hypotension than other SGAs; not typically first-line
Olanzapine (Zyprexa)	5-10 mg PO or ODT	20 mg/day	< 60-minute onset	
Risperidone (Risperdal)	1-2 mg PO or ODT	10 mg/day	< 60-minute onset	Risperidone + lorazepam orally proven to be as effective as haloperidol + lorazepam IM
Ziprasidone (Geodon)	20 mg PO	40 mg/day		Least amount of evidence in ED setting; Highest risk of QTc prolongation in SGAs (although still less than haloperidol)
BENZODIAZEPINES				
Alprazolam (Xanax)	0.5-1 mg PO	6 mg/day		Half-life is 11 hours.
Lorazepam (Ativan)	1-2 mg PO	6 mg/day	20 minutes	
Diazepam (Valium)	5-10 mg PO	40 mg/day		

willing to accept calming medication, emergency physicians should consider these guiding principles.

First, oral administration is preferred, as this route can often be as effective as intramuscular administration.^{6,7} Oral medications are typically cheaper, easier for the patient, reduce the risk of needlesticks, and limit plastic waste.

Second, to avoid increased side effects, the dosing should usually start lower, especially for elderly patients. Treatment should typically begin with just one agent, rather than multiple different medications.⁸

Third, patients may express a preference for a specific medication or dose based on prior experience. As long as this request is not for a narcotic or other medication with potential secondary gain, it should be respected if feasible.

Fourth, ED treatment should be approached as the first step in a long-term treatment plan, and not as an isolated decision confined to just the ED stay. This means that for patients who have outpatient prescriptions, preference should be given to reinitiating those medications in the ED if feasible, instead of starting a different regimen.

Finally, other interventions focused on comfort should also be considered. These might include medications such as ibuprofen, acetaminophen, or nicotine patches. Meals should be offered, especially if the patient will

have a prolonged stay. Environmental stimuli, such as noise and light, should be minimized as possible.

Exceptions

Certainly, each of these guiding principles has clear exceptions, and treatment decisions are at the discretion of the ED physician. For patients with mild to moderate agitation, treatment often begins with second generation antipsychotics (SGAs).⁹⁻¹¹ Surprisingly to many ED physicians, these meds are preferred over first-generation antipsychotics (FGAs) such as haloperidol given a lower risk of extrapyramidal symptoms and QTc prolongation. Common injectable SGAs with evidence in the ED setting include olanzapine or ziprasidone, or if oral, risperidone. Of these, olanzapine and ziprasidone are most frequently used in the ED setting for mild to moderate agitation. Aripiprazole for acute agitation is approximately as efficacious as lorazepam, and quetiapine has a higher risk of orthostatic hypotension. Table 1 reviews common dosing regimens and notable side effects.

Benzodiazepines are also frequently used, though ideally not concomitantly with SGAs in patients who have alcohol intoxication.¹² Benzodiazepines are ideal for patients whose agitation is due to stimulant use or alcohol withdrawal. They may also be preferred in patients with an unknown etiology for agitation. However, when agitation is due to an underly-

ing psychiatric disorder, SGAs are preferred.

Finally, once patients with mild to moderate agitation are stabilized and ready for discharge, the ED physician should consider re-starting outpatient medications. While the initiation of a new outpatient antipsychotic regimen is beyond the scope for most ED physicians, it is certainly reasonable for ED physicians to refill or restart an existing medication regimen. ➔

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DR. MILLER is Chief Medical Officer of Vituity. Dr. Miller leads an EMPC sub-committee focused on mental health issues in the ED.



DR. ENGUIDANOS is Chair of ACEP's Emergency Medicine Practice Committee (EMPC). He is Founder/CEO of Community Based Coordination Solutions.



DR. WILSON is board-certified in emergency medicine and is an associate professor (tenured) in the Departments of Emergency Medicine and Psychiatry at the University of Arkansas for Medical Sciences.

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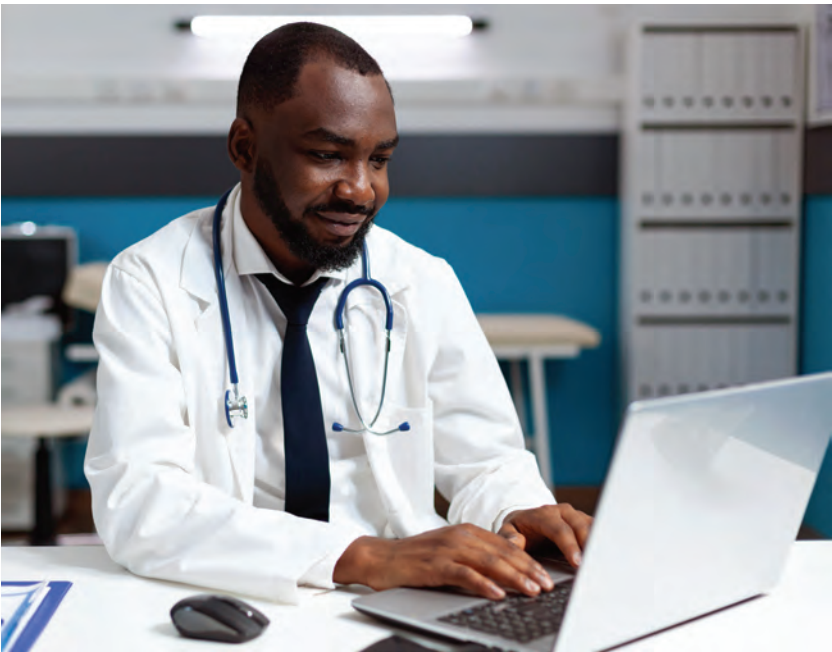
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Q&A WITH ACEP PRESIDENT DR. CHRIS KANG

Our mid-year overview of the College, from ACEP's President

by CEDRIC DARK, MD, MPH, FACEP

Twice a year, *ACEP Now* speaks to the President of ACEP. This conversation with Christopher S. Kang, MD, FACEP, assesses how his term leading the College has gone so far, and how the profession is weathering the storms of boarding, burnout, and a challenging Match season.

This boarding crisis seems to have exploded this year. Yesterday on shift, I had a patient that's been in our ER for at least 120 hours. What's changed over the past six months that you've heard about in terms of the boarding crisis?

Dr. Kang: I think there are three aspects to talk about. One is actually what you and I and others of our colleagues see every day, and that is the boarding crisis has not improved, and in some ways, it's gotten worse. It depends on regionally and individually of each institution, but I think overall most people would say that boarding has not improved. Second of all is, what is the College trying to do about this? In November, we submitted a letter to the White House asking for a summit to bring all stakeholders together to talk about this issue because it's going to require every part of the healthcare system to address and it's not going to be an easy fix.

Over the past few months, we've been waiting as the new congressional session has begun to see what actions are taken. We provided them with some data and some anecdotes about how things were actually getting worse, specifically for mental health ... they were intrigued, but unfortunately offered no other further actions other than to ask for some additional data.

In the meantime, thanks to ACEP staff and leaders, a task force was formed and concluded its work to identify that if we needed to hold our own summit, who would we invite? What would be our overarching objectives and how would we proceed about doing so? And thankfully that task force has completed its report and has outlined what our objectives are financially, operationally, personnel-wise, patient care-wise.

If we don't hear back from the White House in the next few weeks, there was a letter that was recently circulated in conjunction with our LAC meeting to see how much congressional support we could have to encourage the White House to hold this. And if not, then we will likely move forward to hold our own summit sometime this summer.

Third is the receptiveness of the rest of the health care community. And as we've seen, our nursing colleagues, whether it's violence, burnout, or overall staffing models has also been impacted, as well as some of our other health care professionals.

Let's get into some of the solutions that I've seen proposed around the country. There was this shooting in a school in Tennessee recently, in recent months, and some of the lawmakers there are talking about investing in a system to help EDs recognize where there might be open psychiatric beds earlier on. Do you think that something as simple as that, just making sure that EDs have the ability to identify open psychiatric beds in nearby communities is a solution that would work at all for this crisis?

Dr. Kang: I think that is a key starting point. During the COVID-19 pandemic, as many readers may be aware, regional care coordination, including Washington State, the Los Angeles area, San Antonio, and Michigan, started utilizing these systems to identify available beds including critical care beds as well as ventilators to be able to distribute patients accordingly. That model has continued to be embraced by some parts of the federal government. And just a couple of days ago we had a meeting with American Psychiatric Association and their members and they also identified the need to be able to better understand where those beds are available. There is a precedent that's set. The catch now becomes, is it private versus public



Dr. Kang (left) and Dr. Dark (right) during their virtual interview.

beds? What's really available? What happens when we're short adolescent beds or geriatric psych beds? And then is it just a region or does this now look to include neighboring states?

Talking about mental health, we also need to talk about ourselves as physicians as well. We're back-to-back burnout champions, according to reports from Medscape, which is a dubious honor to have, what are we doing to prevent the three-peat?

Dr. Kang: This is not one of those cases to be proud of being number one. In terms of burnout itself, I think we need to identify a couple of different factors. One of them is we need to acknowledge it's happening. There's a mantra before, and it's also associated with ED violence and other hardships that we endure that it's part of what you do. Some things are not acceptable, as we've talked about with ED violence. Part of it is then understanding what are the causes. For everybody, it's an individual thing.

Sometimes it may be work conditions, sometimes it may be the terms of your employment, sometimes it could be social stressors, and sometimes it could be from a bad outcome or a bad event. So somewhere along the way overall, I think physicians are seeking to have greater autonomy and respect. And the catch with that is that almost every other part of the health care system no longer necessarily provides and affords the same amount of respect that I think we need to be able to provide the right care, but also for our professional sense and our well-being. Somewhere along the way, we've been asked to do more and more and more with less and less, including respect and the support from everybody else.

What is ACEP doing to maintain the attractiveness of the profession amid things like salary declines and all these other factors that are being demonstrated by fewer medical students wanting to go into the profession.

Dr. Kang: I want to start with the last part of your statement and that is why would people not want to go into emergency medicine versus why did people want to go into emergency medicine? And I would say that the College right now is identifying and celebrating what makes our specialty so unique and so good for so many.

We still have many physicians who are generally satisfied with the career and the chance and opportunity to serve their patients, as well as communities. And if you still want to be that quintessential doctor who is there for your patients, regardless of their background, regardless of their needs, 24/7,

that's emergency medicine.

Second, what does emergency medicine offer? If you're still motivated to see patients and then utilize the skillsets to be able to see any acute undifferentiated patient, to be able to identify, prioritize concerns, and then stabilize and/or disposition patients, that skillset can take you many different places.

Whether it may be telehealth, whether it is pre-hospital, whether it's innovation simulations, whether it's concierge medicine, wilderness medicine, space medicine, or emergency medicine provides you with a skillset that can help you provide the best patient care and be prepared in almost any scenario. That has not gone away.

The working conditions, the respect from others has declined. And so we know that some medical school deans, as well as advisors, are directing people not to go into emergency medicine. But as rural hospitals close, as health care systems and practices are changing rapidly, sometimes month to month, we're still there. We're still the ones that will care for patients, and we still have that overall critical mission.

One of the things I also want to address is the increase in the number of residency programs, and there is no doubt when you look at the numbers, the rapid explosion of the number of programs being started. We need to have a conversation about some programs, existing programs, still expanding.

If I'm a young person, early 20s, and I'm thinking of pursuing something that puts me in an emergency department, why would I pick a pathway that takes me four to eight years when I could be doing something fairly similar in a pathway that might be two to three years long?

Dr. Kang: I think part of it is do you want to be the leader? Do you want to, be the best educated, to be the best trained to be able to have those and take advantage of those opportunities, whether it's working in different environments part-time, whether or not your career may transition somewhere else? The physician should still be the leader of the emergency care team and emergency medicine residencies provide that training.

You may be touching upon a scope of practice and where, hey, maybe I can find a different profession that would allow me to work in certain environments but not take as long and that we know are rapidly growing. In the end, do you want to be working for somebody or do you want to be leading the team? And I would argue that again, emergency physicians are the best educated, best trained, and best qualified to lead the teams in almost any variety of acute care settings.

Let's talk a little bit about diversity within the workforce

itself. So, you're the first Asian American president that ACEP has had and in the fall, Dr. Aisha Terry is going to become the first black president for the American College of Emergency Physicians, but the leadership of the College and sort of the overall numbers within emergency medicine, in general, tend to not be reflective of the overall population, the diversity in this country. So what is ACEP's commitment to diversity, equity, and inclusion, especially considering the recent backlash we've seen in places like Texas and Florida?

Dr. Kang: It comes to three things. One is what is our overall mission, both as emergency medicine physicians, but also as ACEP. And that is to be able to best take care of our patients. And so giving those voices to those who may be the minority, who may be overlooked. So when we talk about reproductive rights, when we talk about transgender rights, when we talk about other things, how can we better care for those patients?

We have to understand and recognize them and try to make sure that we can provide the best care possible. When you mentioned that, does the College reflect its leadership, reflect its membership? Well, it may or may not reflect its membership in terms of the population. We know that it falls short and over the last several years, we've started to have those conversations.

In terms of personal actions, I think one of the things that I'm proudest of is always looking at the diversity of any of our members when we look at committees, objectives, task forces, and even the leadership track. And if you look at our committee chairs that I had a hand in nominating and/or confirming there's a greater diversity of ethnicity, as well as gender, practice settings, and age.

And so when we talk about diversity, it's incredibly important that we need to start somewhere, but diversity should be diversity. And so when we talk about ethnicity or race, when we talk about gender, let's also talk about practice backgrounds, where they are in their careers, geography, part-time/full-time,

other specialties, and what they may represent, geriatrics, or psych, or critical care.

I think our leadership track is better reflective of our membership, especially when you start to take a look at our committees and sections. Can we do better at the chapter and national level? Yes, but as I said before, this needs to be a commitment that is permanent, that is long-lasting, and so such a journey is going to require just a little bit of time, patience, commitment, and dedication.

I got a notice recently that my dues were going up, and I bet a bunch of people see that and they're freaking out a little bit. Why are we raising the dues? (Clarification: ACEP dues were raised \$60 for regular members; no other membership category dues were increased.)

Dr. Kang: This was a difficult decision that was a subject of discussion for the Board for the last three to four months. This was not done readily or easily, but at times it was identifying how do we continue to best serve our members. And we hope we've demonstrated that with a change a little bit in the focus, our strategic plan, and some of the results that members may or may not have seen overtly or subtly.

ACEP has not increased its national dues for nearly 10 years. So if you take into account that inflation has increased by maybe nearly 25 to 30 percent, if you've seen that inflation increased eight percent last year, and you want us to continue to advocate for you at the state level, the federal level, our clinical policies, our representations and liaisons with other organizations, we believe that we needed to raise the dues here to continue to fund those avenues, those projects, and those opportunities to better serve the individual physicians and their practices and their careers.

To emergency physicians who are not currently members of ACEP, what's your pitch to them as to why they should become ACEP members?

Dr. Kang: I would encourage every emergency physician to get more involved. I hope ACEP is the one that earns the trust and provides and shows its value. When we talk about why you should join ACEP, I think some of it is for what people acknowledge, but may not necessarily give due credit to, the clinical policies that help you fight to better take care of your patients. The clinical policies that aren't adopted because of advocacy - such as the one-hour sepsis bundle. When we talk about how you can improve your workplace, not only the ability to have food and drink at work, but also security, or making sure that you are respected and can find additional resources, whether it's EMRs, scribes, practices that will help improve how you can deliver quality care to your patients.

Legislatively, who else can advocate on your behalf to make sure that you are respected and that you are the leader of the emergency care team? Every single emergency physician sees that whether it's because of our efforts with the RUC and the AMA, whether it's making sure that the battles of the scope of practice are being fought to better safeguard your role as the leaders of the health care team and the successes we've seen in multiple states thanks to our members at the chapter level, whether it's in your institution, whether it's training in the workforce ... ACEP does many, many things. I hope people will take a step back and say, if ACEP wasn't doing what it was doing, where would you be and where would your practice be now? And I hope that somewhere along the way, they will see that what they get back is multiples of those dues.

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DR. DARK (@REALCEDRICDARK) is associate professor at Baylor College of Medicine and medical editor in chief of *ACEP Now*.

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More Than Just More Shocks

Recent literature updates in the management of refractory VT or VF arrest

by DAVID TOOMEY, MD

Out-of-hospital cardiac arrest is a commonly encountered entity in U.S. emergency departments (EDs), with statistics reporting more than 356,000 out-of-hospital cardiac arrests per year.¹ Ventricular tachycardia (VT) and ventricular fibrillation (VF) represent the most common initial rhythms for patients presenting to the ED in out-of-hospital cardiac arrest, as well as for patients who develop cardiac arrest while in the ED.^{2,3} In general, patients who develop cardiac arrest with an initial rhythm of VT or VF tend to have favorable outcomes compared to patients who develop cardiac arrest from either asystole or pulseless electrical activity.² Standard management for VT and VF involves the use of electrical defibrillation, high-quality chest compressions, and epinephrine. However, between four and five percent of cases of VT or VF will be refractory to standard management, with nonperfusing arrhythmia persisting despite repeated shocks.⁴ Given this, more recent attention has been paid to management of refractory VT and VF, with several recent updates suggesting new strategies that can be employed by emergency physicians for such cases.

What is “Refractory” VT/VF?

There are some differing guidelines as to what constitutes “refractory” VT or VF. Initial guidelines defined “refractory” as VT or VF occurring despite three shocks from a cardiac defibrillator.⁵ More recent literature defines “refractory” as VT or VF that is persistent or recurrent despite three shocks from a defibrillator, three rounds of epinephrine, and use of an antiarrhythmic (i.e., amiodarone or lidocaine).⁶

What Can I Do Outside of Repeated Shocks and Standard ACLS?

1. Change defibrillation strategy

Standard defibrillation uses pads in the anterolateral position. Modified strategies for refractory cases of VT or VF involve either moving the pads to the anteroposterior position or using two sets of pads for dual sequential external defibrillation. Prior retrospective reviews of dual sequential defibrillation showed promising results with regard to termination of refractory VF, return of spontaneous circulation, and survival to hospital discharge.⁸ More recently, the DOSE VF pilot study and subsequent cluster randomized control trial, Defibrillation Strategies for Refractory Ventricular Fibrillation, have demonstrated significant benefit of both anteroposterior pad placement and dual sequential defibrillation in cases of refractory VF compared to continued anterolateral shocks.^{9,10}

To perform dual sequence defibrillation, place pads in the anterolateral and anteroposterior position. One operator should perform defibrillation in the anterolateral position, followed by another operator providing a second shock in the anteroposterior position after a delay of less than one second.

Tips for use of dual sequence defibrillation¹¹:

- » Use the same model of defibrillator.
- » Pads need to be as close together

as possible but *not* touching to avoid capacitor overload.

» Do not use synchronization.

2. Medications: think about using esmolol

Amiodarone has been traditionally used in the management of VT or VF as an adjunct to defibrillation. More recent literature and guidelines support the use of lidocaine as an alternative agent, and currently both are included in standard advanced cardiovascular life support.^{12,13}

Prior systematic reviews have looked at the use of beta blockade in the management of refractory VT or VF.¹⁴ A more recent review article looked at two retrospective studies with a combined total of 66 patients who were given esmolol in the treatment of refractory VT or VF.^{6,15,16} These studies were small but did suggest significantly higher rates of return of spontaneous circulation in the esmolol group compared to standard care. There was insufficient data to suggest improvement in survival to discharge or degree of neurologic recovery. Proposed dosing for esmolol in the management of refractory VT or VF is 500 mcg/kg bolus, followed by a continuous infusion of up to 100 mcg/kg/min.

3. Extracorporeal membrane oxygenation

Of patients with out-of-hospital cardiac arrest presenting to the ED in refractory VF, a majority have significant coronary artery disease, much of which is amenable to percutaneous coronary intervention.^{17,18} Given this, the advent of extracorporeal membrane oxygenation (ECMO) presents an opportunity to bridge care between traditional resuscitation of refractory VF patients in the ED and more definitive management in the catheterization lab. Post-resuscitation ECGs demonstrating ST

segment elevation are significant in delineating which patients might benefit most from advanced reperfusion techniques.¹⁷ While previous evidence for the use of ECMO in refractory VF arrest has come from observational studies, the ARREST trial in 2020 represented the first open-label randomized trial evaluating the use of ECMO in the management of patients presenting to the ED in refractory VF arrest.¹⁸ This trial showed significant improvement in performance of patients treated with ECMO compared to standard care with regard to survival to hospital discharge, survival at six months, and overall functional outcome.¹⁹ Some aspects of the study, including rapid EMS response times and training as well as rapid time to cannulation, limit the generalizability of the data, but overall this study suggests significant promise in the use of ECMO for the management of this patient cohort.

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DR. TOOMEY (@DAVIDTOOMEYMD) is a senior instructor of Emergency Medicine at the University of Rochester Medical Center in Rochester, NY.



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Xylazine: “Zombie Drug” is an Emerging Threat

Combined with fentanyl, this drug is increasingly found in patients with opioid overdose

by ISHA JOSHI, MBA, CATHERINE A. MARCO, MD, FACEP, AND JEFFREY LUBIN, MD, MPH, FACEP

Case

A 30-year-old woman presents to the emergency department with left arm pain from a chronic wound. She notes that the wound has been present for greater than a year and it becomes malodorous and painful and oozes intermittently. She reports fevers up to 103 degrees Fahrenheit. She endorses a one-year history of near-syncope episodes associated with shortness of breath, headache, and neck pain. She reports polysubstance use including fentanyl, xylazine, and cocaine, and has a history of injection drug use and Hepatitis C. Her last hospitalization was one month ago for a similar wound, at which time she received intravenous antibiotics and was subsequently discharged. Two years prior, she reports having a similar wound on her right arm, which required debridement and skin grafting. Due to her drug use, she states that she has visited several medical centers who have denied her surgical intervention for her wounds.

Physical examination was notable for tachycardia. The left upper extremity had a malodorous wound on the left dorsal antebrachium, extending down to the wrist (Figure 1). Complete blood count and comprehensive metabolic panel revealed microcytic anemia, elevated transaminases, and elevated alkaline phosphatase. X-ray of the wrist, forearm, and elbow were normal. CT of the upper extremity revealed chronic radial and ulnar osteomyelitis. Cefepime and vancomycin were administered. She was admitted and treated with intravenous antibiotics and skin graft, and was discharged to a rehabilitation facility.

Xylazine is a veterinary sedative that has been increasingly implicated in overdose deaths throughout the United States.¹⁻³ It was first reported as a heroin adulterant in Puerto Rico in the early 2000s and again in the 2010s as a drug of its own.⁴⁻⁶

Since 2020 to 2021, the Drug Enforcement Administration has reported a sharp rise in xylazine use across the U.S., with the first cases beginning in the northeast. Recently, Philadelphia has been reported as having the highest prevalence of xylazine, with xylazine present in 25.8 percent of all overdose deaths in 2020.¹ Known by street names such as “tranq,” “tranq-dope,” or “zombie drug,” xylazine is increasingly found in patients with opioid overdose.

Brief history of xylazine

The drug was first developed in Germany in 1962 by Bayer as a non-narcotic analgesic and muscle relaxant for animals.⁶ It is an alpha-2 agonist, similar to clonidine, which inhibits the release of dopamine and norepinephrine in the central nervous system, causing decreased sympathetic activity which results in sedation. In humans, acute intoxication presents with findings typical of an opioid toxidrome, such as miosis, central nervous system depression, respiratory depression, hypotension, lethargy, and coma.⁷ Xylazine withdrawal may be severe, with agitation, anxiety, or hypertension, and may require in-



Skin necrosis due to patient using xylazine.

patient or intensive care treatment.⁸ Chronic side effects of xylazine may include skin ulcers associated with foul-smelling purulent discharge and associated complications such as soft-tissue necrosis (often extensive), bacteremia, and osteomyelitis.^{1-9,10} The pathophysiology of skin ulcers is thought to be due to the vasoconstricting effect of xylazine, which causes a chronic state of decreased skin perfusion, impaired wound healing, and subsequent tissue necrosis.

Treatment in patients

Xylazine should be considered in all patients who present with history of injection drug use and chronic wounds. Initial stabilization includes airway management and circulatory support. Currently, there is no FDA-approved pharmacotherapy for either the reversal of xylazine in humans or the management of withdrawal. Typically, xylazine is mixed with fentanyl. While naloxone can treat fentanyl overdose, overdose symptoms may persist when xylazine is involved.

Workup may include metabolic panel, complete blood count, and imaging in cases where trauma or infection occur. Xylazine is not detected by routine toxicologic studies. Xylazine-induced skin ulcers typically begin as a blackened eschar that progresses to a cribriform appearance.¹⁰ The wounds are purulent and often polymicrobial. Many of these infections require hospitalization with intravenous antibiotics and surgical debridement. However, xylazine withdrawal is often so miserable that patients are at risk of leaving the hospital against medical advice before treatment is completed. ☹

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ISHA JOSHI (@ISHAJOSHI) is a third-year medical student at Penn State College of Medicine in Hershey, Pa. Prior to medical school, she received her MBA in Healthcare Management and currently works on health policy and outcomes-based research.



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



DR. LUBIN is a professor of emergency medicine and public health sciences and the program director for the MD/MPH dual degree program at the Penn State College of Medicine in Hershey, PA, where he is also the vice chair of research for the department of emergency medicine at the Penn State Health Milton S. Hershey Medical Center.

TAKE-HOME POINTS

- Xylazine does not respond to naloxone.
- Supportive care should include airway and circulatory support.
- Xylazine may present with withdrawal symptoms of polysubstance use.
- Consider xylazine use in patients with chronic soft tissue or bone infection.



Technological changes have helped emergency physicians become more efficient. Photos courtesy of ACEP.

REBRANDING | CONTINUED FROM PAGE 1

safely, via processes that did not exist at the time the American Board of Emergency Medicine became recognized by the American Board of Medical Specialties in 1979, or even at the time I entered emergency-medicine residency training in 1986.

After convincing ourselves that we save our systems large sums of money, we need to educate our critics. We don't deserve the recurrent blame and scorn from individuals who shape public opinion, including some politicians and journalists, who repeatedly focus on the charges accrued for ED care, with only passing acknowledgement of the critical role we all play as the nation's 24/7/365 resource for medical care for all who present at our doors, without regard for their ability to pay.

Here are some illustrative examples demonstrating how emergency physicians save our system money every day, compared to status quo of the late 1970s and early 1980s:

Formerly, nearly all acute pyelonephritis patients were admitted for several days of intravenous (IV) antibiotic therapy. Now, many acute pyelonephritis patients receive an IV antibiotic, analgesia, and an antiemetic in the ED. Once patients demonstrate they can keep oral liquids down, most are prescribed oral antibiotics, analgesics and antiemetics, and discharged. Acute pyelonephritis has become a disease for which outpatient management is often feasible and appropriate.¹

Formerly, most patients with Pelvic Inflammatory Disease (PID) were admitted for several days of IV antibiotics, under the now-disproven dogma that IV antibiotics decreased the scarring of the Fallopian tubes and enhanced the patient's future fertility. Now, many PID patients are treated and released after ED administration of appropriate antibiotics to eradicate possible infection by *Neisseria gonorrhea* and *Chlamydia trachomatis*, often with added treatment for anaerobic microbes. Female upper genital tract disease has been transformed to a disease for which outpatient management is often feasible and appropriate.²

Formerly, all patients diagnosed with the venous thromboembolic (VTE) diseases of deep venous thrombosis (DVT) or acute pulmonary embolism (PE) were admitted for several days of inpatient care to enable therapy with intrave-

nous heparin as a bridge to oral warfarin. Warfarin pills are inexpensive, but the associated hospital care is not. Warfarin is a drug highly prone to drug-drug and drug-food interactions.³ Further, warfarin dosing requires regular monitoring of the international normalized ratio (INR), which is both a cost and an inconvenience to patients. We can now safely treat most DVT patients as outpatients by prescribing direct oral anticoagulants (DOACs) such as Factor Xa Inhibitors. Subsequently, we also learned that PE patients without hypoxia or evidence of right heart failure can safely be discharged with DOAC prescriptions. DVT and PE have been transformed to diseases for which outpatient management is feasible and appropriate.⁴

Formerly, chest pain patients without an S-T Elevation Acute Myocardial Infarction (STEMI), whose pain was suspected to be cardiac in nature, became inpatients for sequential monitoring of their lactate dehydrogenase and creatine kinase isozyme profiles. This process required at least a full day. Now, for selected patients, emergency physicians can leverage low and non-rising high sensitivity troponin values and a low HEART score (composed of history, ECG, age, risk factors, and troponin level) to implement outpatient follow-up plans safely, within a few hours.⁵

Patients with acute ischemic strokes, STEMIs, and trauma, as well as many other diagnoses, have their workup largely completed, and even sometimes definitive therapy executed, before they leave the emergency department, rather than requiring inpatient units. We could do even better if only our patients would permit it. We already know how to apply validated and highly reliable clinical decision rules (CDR) such as the Ottawa Ankle Rules, the Ottawa Knee Rules, the NEXUS and Canadian C Spine rules and the PECARN (for children) and Canadian Head CT (for adults) rules.⁶⁻¹¹ All perform with high accuracy and validity. However, we know that patients often expect radiographs that these CDRs would establish as contraindicated.

Our collective experience is that a signifi-

cantly long time is required to explain these CDRs to patients, so it becomes more cost- and time-effective simply to obtain the non-indicated imaging. Emergency medicine should advocate directly to patients to allow doctors to implement these CDRs more efficiently by applying effective bedside "plug and play" teaching tools and explaining CDRs. Such resources could dissuade patients from false beliefs and persuade them that omission of the contraindicated radiographs or tests represents appropriate care. This would both save money and shorten the patient's ED stay. Added benefit would accrue when a pediatric patient avoids CT images, thereby decreasing the potential risk for a subsequent cancer.¹²

To enable this vision and further enhance our role toward cost savings will require emergency medicine researchers to complement validated CDRs with the creation, testing and validation of accurate and persuasive patient-education tools, sufficient to dissuade most patients from dogmatic and erroneous beliefs regarding imaging. Emergency physicians have exploded incorrect dogmas before. For instance, consider the previous dogmatic belief that no abdominal-pain patient can be administered an opiate until they have been examined by a surgeon.¹³ Hopefully, patients' beliefs regarding radiographs can also become consigned to the dustbin of history.

In re-branding ourselves, we should also work to explode other myths that plague us, by refuting certain misleading beliefs that cause the public to conclude wrongly that ED care is a larger source of health care expenditures than is the case.

Brian Zink captured a wonderful initial vision statement for our specialty with the title of his book, "Anyone, Anything, Anytime," which documented the history of our specialty. In 2023 we must move beyond that title. Emergency physicians help not only save lives, but also save significant sums of money, 24/7/365. Might I suggest: Emergency Medicine: Saving lives, but also dollars, with our quick, efficient, and effective care. ☺

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DR. GADDIS is a "PGY-37" who has stepped away from full-time employment after a 32-year full-time career in academic emergency medicine, and now works a limited number of shifts in a rural Critical Access hospital in Missouri. He also currently serves as a professor of Biomedical and Health Informatics at the University of Missouri-Kansas City School of Medicine, and enjoys exploring contrarian views of issues that impact the specialty of emergency medicine.



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



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

Riding the BUS to Make Surgical Decisions in Suspected Biliary Colic

by KEN MILNE, MD

Case

A 50-year-old woman presents to the emergency department (ED) complaining of epigastric pain and nausea for 36 hours. The physical examination is consistent with biliary colic and the blood work shows a mild elevation in C-reactive protein while her white blood cell count and liver function tests are normal. You perform a biliary ultrasound (US) in the ED (BUSED) which shows a gallbladder (GB) full of stones, some GB wall thickening and a positive Murphy's sign. Will this be enough for the general surgeon, or will they want an US performed by the radiology department to make their surgical decision?

Clinical Question

What is the value of radiology-performed US (RUS) compared to BUSED in terms of the surgical decision-making in acute biliary disease?

Background

Ultrasound is typically the first-line imaging modality for the diagnosis of acute biliary disease. ED physician-performed point of care ultrasound (POCUS) has increased in popularity over the last decade. Several small trials have compared the accuracy of POCUS versus the "gold standard" of radiology-performed ultrasound. Little is known regarding whether the department in which the US is performed (ED or radiology) impacts the surgeon's clinical decision making.

Reference: Hilsden, et al. Point of care biliary ultrasound in the emergency department (BUSED) predicts final surgical management decisions. *Trauma Surg Acute Care Open*. 2022;7(1):e000944.

- **Population:** Adult ED patients 18 years of age or older with abdominal pain whom the EM physician felt had biliary disease after performing a history, physical examination, and BUSED.
- **Excluded:** Cases in which surgery was completed prior to formal ultrasound imaging, there was failure to gain consent, or patient's age was less than 18 years.
- **Intervention:** Surgical decision (offer surgery, endoscopic retrograde cholangiopancreatography/magnetic resonance cholangiopancreatography [ERCP/MRCP], or no surgery) based on the clinical, laboratory and BUSED data. There were 11 specially trained ED physicians and 20 surgeons.
- **Comparison:** Surgical decision made after formal radiology ultrasound (RUS).
- **Outcome (Primary):** Percentage of patients in which the management changed after RUS was performed.
- **Type of Study:** Observational, prospective, cohort study performed at a tertiary care center in Canada.

Authors' Conclusions

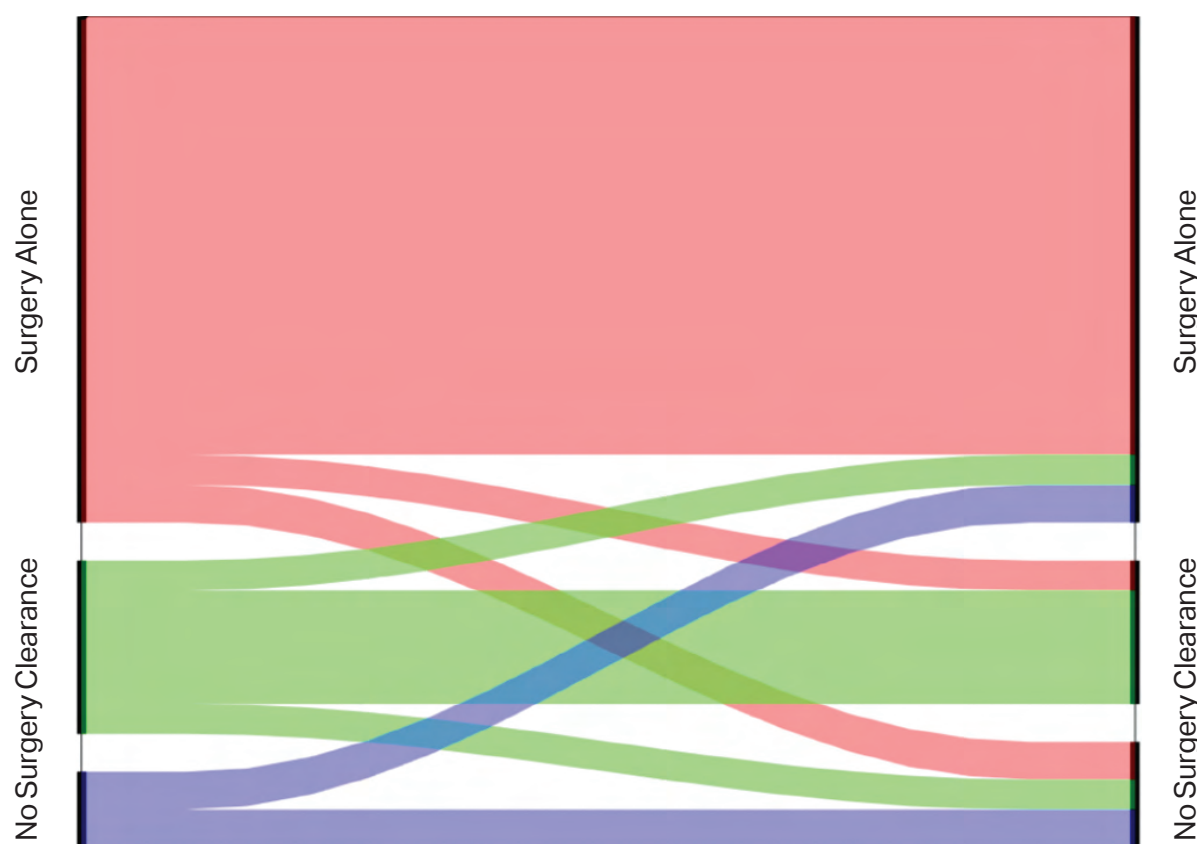
This prospective study has shown that in the vast majority of cases the additional information afforded by formal RUS does not alter clinical management. Point-of-care biliary ultrasound has been demonstrated to be reliable in the diagnosis of acute biliary disease and offers a safe and efficient diagnostic pathway for patients presenting in the emergency department.

Results

There were 100 consecutive patients recruited into the study available for analysis. The mean age of participants was 50 years. They admitted 68 patients for surgery, 21 for duct clearance (ERCP/MRCP), and 11 for no surgery.

Alluvial Diagram

POCUS Plan



Gallstones removed via surgery.

Key Result

- The surgical plan was not changed often after a formal radiology US was performed.
- Primary outcome: The initial plan based upon the ED POCUS was changed 10 percent of the time after RUS was performed. See the alluvial diagram.

EBM Commentary

1. **Unmasked surgeons:** The surgeon in this study knew that the patient was going to have both a BUSED and RUS ex-

amination. This could have introduced some confounders depending on the surgeon's opinion of BUSED. This issue could have been addressed by masking the surgeon to which report was from the ED and which was a formal US from the radiology department.

2. **External validity:** This is a small study of 11 emergency physicians and 20 surgeons performed at a single, tertiary, university-affiliated hospital in Canada. Hospitals have their own culture of practice patterns. This group of physicians may not reflect practice in other tertiary centers, smaller community hospitals, or different countries.
3. **Location versus experience:** Ultimately, this is not a comparison between BUSED and RUS, but between US and US. The skill to obtain and interpret an US image is operator-dependent. It can be tricky to detect gallstones in the neck of the GB or common bile duct; it is a learned skill. Sensitivity for these subtle findings goes up with experience. The difference observed in this study could be due to less-experienced versus more-experienced sonographers.

Bottom Line

An emergency physician trained in BUSED can correctly inform surgical decision-making in most cases of non-jaundiced adult patients with suspected acute biliary disease.

Case Resolution

You present the surgeon with the clinical case, including the BUSED results. The surgeon agrees the patient has acute cholecystitis and admits the patient to the surgical team for further management.

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

Thank you to Dr. Casey Parker, an emergency physician working in Broome, Australia, for his help with this review. 🙌

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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.emergencymedicinescases.com).

ED Management of Drowning

Next time you are faced with a drowning victim, consider and co-manage secondary causes

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

Drowning is any degree of respiratory impairment because of immersion or submersion in a liquid.¹ It is the third leading cause of unintentional injury death worldwide, and there are an estimated 4,000 fatal unintentional drownings and 8,000 non-fatal drownings annually in the U.S. alone.² Drowning tends to occur in those aged 1 to



25, with trauma or a toxicologic event often accompanying many of those aged 17 to 25.³ Drowning also occurs at a greater frequency in those aged 55 or

more.³ In this latter group a primary cardiac event should be considered as an inciting event.

Cardiac Arrest in Drowning

The progression to cardiac arrest in drowning starts with water entering the upper airway. This may cause laryngospasm and up to 4L of swallowed liquid.⁴ Once the upper airway is overwhelmed, the liquid then enters the lower airways which causes bronchospasm, direct alveolar injury, surfactant washout, foam formation, and hypoxemia.⁵ After approximately 1 minute of submersion, patients typically lose consciousness and become apneic. It is imperative to understand that hypoxemia is the key pathophysiologic mechanism that leads to cardiac arrest, typically pulseless-electrical-activity (PEA) arrest, which occurs typically after 10 minutes of submersion. Thus, management should be directed toward correcting hypoxemia.

The mainstays of correcting hypoxemia in the unstable drowning patient include high fraction of inspired oxygen, positive end-expiratory pressure, mechanical ventilation, and extracorporeal membrane oxygenation.⁶ Patients with severe respiratory distress are at risk of respiratory failure within hours of drowning as surfactant regeneration takes about two days to occur.⁷ Some indications for a definitive airway include impending respiratory failure or apnea, failed non-invasive ventilation, inability to protect the airway, and presence of upper airway foam.³ After the airway has been secured, if hypoxemia persists, the patient should be considered for extracorporeal membrane oxygenation, especially if concomitant severe hypothermia is at play.⁸

Drowning may be secondary to trauma or a toxicologic or cardiac event, and parallel management should also be directed at these whenever present. Hypothermia is not uncommon in drowning victims. It is imperative to identify hypothermia using a rectal temperature and manage it appropriately in tandem with drowning management.

Cervical spine (C-spine) immobilization in



trauma patients has been associated with increasing time to definitive care, difficult airways, and increased mortality in patients with penetrating injuries, and also with pressure ulcers.^{9,10} Thus, C-spine immobilization of the drowning patient should be limited to those cases with a mechanism of injury concerning for significant C-spine injury. An analysis of 2,000 drowning victims found that only one in 200 suffered C-spine injuries, and all of these patients had both neurologic signs on physical exam and a concerning mechanism of injury.¹¹

A key clinical pitfall in the management of the drowning patient is to suction the foam that comes up from the lungs into the oral cavity during resuscitation. This is often intuitive for the emergency physician as we typically suction blood, emesis, or anything else that could potentially hinder oxygen exchange. Foam in drowning is a result of lung surfactant mixed with water that bubbles up like soap and water. It is non-toxic and contains lung surfactant that patients' lungs need. As such it should not be suctioned, as such attempts will delay definitive airway management. Rather, positive pressure ventilation should be used to push the foam back down into the lungs.

Foam in the upper airway is an indication for endotracheal intubation.

The SALAD Technique

As soiling the airway with emesis is common in drowning, the resuscitation team should be prepared to perform suction assisted laryngoscopy airway decontamination (SALAD).^{12,13} This technique is used to prevent airway soiling during laryngoscopy as a result of aspirated emesis. SALAD involves using a rigid suction catheter as a sort of tongue depressor to allow the laryngoscope blade to be placed in the ideal position (see more about this technique on page 18). The suction catheter is then used to decontaminate the proximal esophagus and stays pinned in the left corner of the patient's oral cavity. Antiemetics, which may prevent soiling of the airway from emesis, are reasonable to administer during the resuscitation of the drowning patient.

Dysrhythmias typically progress from sinus tachycardia to bradycardia to PEA arrest. Thus, if bradycardia is present, the resuscitation team should anticipate and be prepared for cardiac arrest. In the event of cardiac arrest, consider tailoring the usual adult algo-

rithms, as the arrest is most likely a respiratory one, as opposed to a primary cardiac event.⁴ It is therefore reasonable to administer five rescue breaths *before* chest compressions are started.⁴

Therapies that have traditionally been used but have subsequently shown to carry no benefit include steroids and empiric antibiotics.¹⁴ Studies of empiric antibiotic use in drowning victims demonstrated increased antibiotic resistance and no improvement in rates of pneumonia.¹⁵

Next time you are faced with a drowning victim, consider and co-manage secondary causes, understand that it is primarily a hypoxic event with treatments directed at ventilation and oxygenation, anticipate PEA arrest with consideration of breaths before chest compressions in the event of an arrest, and manage oral foam with positive pressure ventilation instead of suctioning.

A special thanks to Dr. Dave Jerome for the EM Cases podcast from which this article was inspired. 🎧

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

Unstable Epistaxis and the Airway

by JONATHAN GLAUSER, MD, FACEP, MBA, AND MATTHEW CARVEY, MD

Standard reviews of epistaxis in the emergency medicine literature center on the epidemiology, etiology, whether the bleeding is anterior or posterior, and methods by which bleeding can be controlled. As with other entities, management of the airway must take precedence. While unusual, nosebleeds may present with life-threatening airway compromise. This is a discussion of a potentially disastrous airway outcome.

Case

A 91-year-old Russian-speaking female on dual-antiplatelet therapy presented to the ED via ambulance with a left-sided nosebleed. She was reported to have had a mechanical fall, landing face forward without loss of consciousness, and has had a continuous nosebleed since then, per EMS and the home care provider.

On EMS arrival, it was noted that the patient had what seemed to be a controllable nosebleed with difficulty locating the source due to constant oozing. She was alert and awake with an intact airway. Due to her sole language being Russian, the initial history was limited. Vital signs on scene included heart rate 90, blood pressure 193/97, and 92 percent oxygen saturation. EMS placed her on non-rebreather at 10 L per minute due to the significant amount of bleeding through the nose, and brought her to the ED. On arrival she remained alert and oriented, sitting upright and face forward with an intact airway. The source of bleeding was identified as venous oozing out of the left naris, and she was spitting blood into an emesis basin. Her Glasgow Coma Scale was 15, and her vitals revealed she was afebrile, had mild tachycardia at 103 beats per minute, bradypnea, BP 189/95 and oxygen saturation varying between 88 and 93 percent on the non-rebreather. A translator was called; however, she was not answering questions appropriately per the translator's dictation. Per discussion with family over the phone it was determined she had mild dementia, but had been feeling well prior to her mechanical fall. She had no history of anticoagulation, cerebrovascular accident, or myocardial infarction. Review of systems was unable to be obtained due to confusion.

Physical exam of the nasopharynx was difficult due to constant dark venous oozing of blood, with the oropharyngeal exam showing gross blood collections which she could clear on coughing and spitting. After clearing the nasal hemorrhage, an anterior source was ruled out based on lack of clot formation and oozing from a specific source. Posterior epistaxis from Woodruff's plexus was assumed based on the dark-red consistency

of the bleeding. Physical exam of the neck showed no fullness, erythema, or induration. She had a mild decrease in breath sounds to the bases; otherwise lungs were clear. The remainder of the exam was unremarkable.

Initial Management

The posterior nosebleed was initially addressed using gauze soaked in oxymetazoline with viscous lidocaine placed into the left naris, with no significant bleeding coming from the right naris. At this time, the patient started to have a larger amount of oropharyngeal contamination with gurgling and increased coughing. Assuming failure of the initial management strategy, the oxymetazoline-soaked gauze was replaced by a nasal packing soaked in tranexamic acid, and a nose clamp was applied. The external venous oozing was controlled; however, it was found that the patient was becoming lethargic and had decreasing mental status and oxygen saturations. Otolaryngology (ENT) was emergently consulted and the patient was brought to a resuscitation bay because of worry concerning possible aspiration secondary to posterior epistaxis, requiring further airway stabilization. Assuming a difficult airway, both a video laryngoscope and cricothyroidotomy kit were prepared at bedside. ENT arrived and placed bilateral nasal packing with 10-cm nasal packing. The non-rebreather was increased to 15 L per minute without initial bag-valve mask assistance due to concern for worsening an already aspirated airway.

She was kept upright until immediately before paralytic administration. The patient was transitioned to a reverse Trendelenburg position to keep the head upright, and direct laryngoscopy was performed. There was a significant amount of blood collecting in the laryngopharynx with rundown from the nasopharynx obscuring the vocal cords. These contents were suctioned vigorously. A DuCanto suction device was placed along the base of the tongue towards the upper esophageal inlet and left in place to continuously suction the airway, preventing further aspiration of gastric and nasopharyngeal contents utilizing the suction assisted laryngoscopy and airway decontamination (SALAD) technique. The laryngoscope blade was introduced shortly afterwards. Three attempts at passing the endotracheal tube were made, due to significant hemorrhaging from the nasopharyngeal area, anterior location of the vocal cords, and an anatomically small laryngeal opening.

It Was a Difficult Airway

After the third attempt at intubation, the vocal cords were visualized and a size 6.5 endotracheal tube was passed, with eventual airway stabilization. Blood continued to accumulate in the laryngopharynx, but was eventually

stopped with the combination of bilateral nasal packing and constant suctioning. A total of 400 mL of blood was suctioned throughout the procedure

The SALAD Approach to Airway Management

The presence of contaminants in the airway has been shown to decrease first-pass success at intubation, regardless of whether direct or video laryngoscopy is employed.^{1,7} Patients with significant blood, emesis and secretions seen during laryngoscopy can be alleviated by continually suctioning the hypopharynx, reducing the chance of failure to intubate.^{8,9} The SALAD maneuver was developed to overcome the challenges faced during intubation of a massively contaminated airway.¹⁰ This technique is not only valuable for preventing aspiration of contents from the gastrointestinal system during intubation, but also those from nasopharyngeal sources such as epistaxis. Therefore, the SALAD approach should be considered in any instance where an aspiration risk exists, whether it be esophageal, nasopharyngeal, or oropharyngeal.

The SALAD technique is performed once the patient has been adequately sedated and paralyzed if necessary. Pre-oxygenation and standard intubation preparation are performed. Proactive suctioning of the airway is at the heart of this maneuver, utilizing a rigid suction catheter to decontaminate the airway of blood, fluid, or emesis prior to full insertion of the laryngoscope blade into the laryngopharynx. The suction catheter is left at the esophageal inlet, preventing aspiration of gastric contents, or in this patient's case, nasopharyngeal blood. The laryngoscope is slowly inserted, preventing fogging or collection of fluid on the camera if utilizing a video approach to intubation. At this point, if there are continued fluid collections in the laryngopharynx, a second suction catheter can be utilized prior to attempting passage of the endotracheal tube. Once adequate secretions have been alleviated from the area, passage of the endotracheal tube can be done. Once the endotracheal tube has been secured, consistent suctioning must be ensured until the fluid collections have been controlled.

There are certain considerations that must be taken into account when utilizing the SALAD technique. Firstly, the physician should be proficient in this maneuver to avoid impeding the view of the vocal cords with the rigid suction device. Secondly, especially with significant hemorrhaging into the airway, monitoring of the volume of suctioned contents should be done. As in this case, 400 mL of blood had been suctioned in less than two minutes. Adequate replacement of blood products should be considered when massive

The health care benefits of a nice SALAD

hemorrhaging such as this occurs. Lastly, active suctioning for the entirety of an intubation attempt may lead to increased risk of hypoxemia.¹⁰ Direct laryngoscopy is the preferred method of intubation when there is a large amount of fluid collected in the airway. Video laryngoscopy can be performed; however, there is a significant risk that the camera may become obstructed with the laryngopharyngeal contents, preventing an adequate view of the vocal cords. An additional operator should be present at the airway for any intubation deemed to be difficult, notably when using the SALAD technique.

The SALAD maneuver is an efficient approach to the airway where contamination with blood, secretions or emesis is suspected. With increasing literature favoring the use of this technique in the aforementioned circumstances, consideration of SALAD to secure the airway in high-aspiration-risk scenarios should be applied. ☺

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DR. CARVEY (@MATTCARVEY123) is a second-year resident through the MetroHealth and Cleveland Clinic Foundation emergency medicine residency program in Cleveland, Ohio.

Q&A
ABOUT OUR
LITTLEST
PATIENTS

KIDS KORNER



DR. JONES is assistant professor of pediatric emergency medicine at the University of Kentucky in Lexington.



DR. CANTOR is professor of emergency medicine and pediatrics, director of the pediatric emergency department, and medical director of the Central New York Regional Poison Control Center at Upstate Medical University in Syracuse, New York.

by LANDON JONES, MD, AND RICHARD M. CANTOR, MD, FAAP, FACEP

The best questions often stem from the inquisitive learner. As educators, we love—and are always humbled by—those moments when we get to say, “I don’t know.” For some of these questions, you may already know the answers. For others, you may never have thought to ask the question. For all, questions, comments, concerns, and critiques are encouraged. Welcome to the Kids Korner.



Bacterial Meningitis and Steroids

Question 1: Do steroids have benefit in treating children with bacterial meningitis?

The incidence of bacterial meningitis has significantly decreased since the pre-vaccine era¹ and dexamethasone has been studied as an adjunctive treatment to antibiotics for bacterial meningitis. Is it helpful, though? Beyond the neonatal period, recent literature identifies the three most common pediatric bacterial meningitis pathogens in North America as *Streptococcus pneumoniae*, *Neisseria meningitidis*, and *Hemophilus influenzae*.² Fortunately, bacterial meningitis is relatively uncommon in the United States. So, does the addition of dexamethasone to antibiotic therapy improve clinical outcomes? With lower incidence of bacterial meningitis in the US and some of the most recent, randomized, controlled trials being about two decades ago, we rely on older data that has been revisited in systematic reviews and meta-analyses.

A 2015 Cochrane meta-analysis³ evaluated both pediatric and adult patients and included only randomized controlled trials. The primary outcomes of the analysis were mortality, hearing loss, and neurological sequelae (defined as focal neurologic deficits, new epilepsy, severe ataxia, and severe memory or concentration disturbances). Regarding mortality in children, there were 18 pediatric studies (n=2,511 children) eligible for the meta-analysis, which demonstrated no significant difference in mortality with the addition of dexamethasone to antibiotics (Relative risk [RR], 0.89; 95 percent confidence interval [CI], 0.74-1.07). Looking at severe hearing loss in children, there were 14 studies (n=1,524) included in the data which found that dexamethasone decreased the risk of developing severe hearing loss (RR, 0.67; 95 percent CI, 0.49-0.91) as well as any hearing loss (RR, 0.72; 95 percent CI, 0.61-0.86). Dexamethasone, overall, appears to decrease the risk of developing both severe and any hearing loss in children. When



broken down by specific pathogen, though, adjunctive dexamethasone had its significant beneficial effects when treating *H. influenzae* meningitis (RR, 0.34; 95 percent CI, 0.2-0.59) but no significant effects when treating non-*H. influenzae* meningitis (RR, 0.95; 95 percent CI, 0.65-1.39). The exact timing of dexamethasone dosing (before, simultaneously, or after) in relationship to the administration of antibiotics has not been definitively established. Most dosing regimens for children were 0.6 mg/kg/day for two to four days. A separate 2018 systematic review and meta-analysis found similar results with decreased odds ratios (OR) for both hearing loss (OR, 0.68; 95 percent CI,

0.53-0.89) and severe neurological sequelae (OR, 0.59; 95 percent CI, 0.37-0.95) without any significant change in mortality. There were 15 trials with 2,409 children included in this meta-analysis by Wang, et al.⁴

Summary

In children with bacterial meningitis, adjunctive dexamethasone appears to decrease the risk of developing secondary hearing loss and severe neurological sequelae. These effects appear to be strongest in cases where *H. influenzae* is the bacterial pathogen. ➕

Acrocyanosis Due to Bacteria?

Question 2: If children demonstrate acrocyanosis around the time of developing a fever, is the cause of fever more likely to be bacterial?

Near the time of developing a fever, we have anecdotally observed that children will sometimes demonstrate acrocyanosis. Does this acrocyanosis serve as a prognostic indicator of an underlying bacterial illness? To better address this question, we begin with a prospective observational cohort study of 239 children that evaluated the diagnostic ability of clinical recognition signs (CRS) to identify sepsis.⁵ The authors evaluated four parameters for their ability to predict severe illness in the pediatric ED setting: altered mental status, abnormal capillary refill, abnormal peripheral pulses, and cold or mottled extremities. In regard to abnormally prolonged capillary refill, the positive likelihood ratio for identifying organ dysfunction within 24 hours was average, at 0.5. The authors mention that “CRS were not associated with

intravenous antibiotics administration, SBI [serious bacterial illness], or admission.” This study did not suggest that abnormal capillary refill (a scenario similar to acrocyanosis) predicts SBI. A separate 2017 prospective observational study by de Vos-Kerkhof, et al., evaluated both peripheral (pCRT) and central (cCRT) capillary refill time and its utility in identifying children with serious bacterial infection.⁶ The study included 1,193 consecutive children aged 1 month to 16 years, and SBI was defined as pneumonia, meningitis, and UTI. Children had their capillary refill checked at arrival to the pediatric ED and it was classified as normal (less than or equal to 2 sec), prolonged (greater than 2 sec—less than or equal to 4 sec), or severely prolonged (greater than 4 sec). The authors state that “both pCRT and cCRT had no diagnostic value for the detection of SBI.” For the pCRT, the OR for an SBI was 1.10 (95 percent CI, 0.65-1.84), suggesting that the development of delayed capillary refill is not associated with an SBI.

Summary

While the data is overall rather limited on this topic, the development of delayed capillary refill does not appear to predict the likelihood of an SBI. ➕

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DR. GÖRGENS is
ACEP Now's 2022–
23 resident fellow
leading the Resident
Voice column.



DR. FERNANDEZ is a graduate of Northwell Northshore-LIJ emergency medicine residency where he served as chief resident. His passion includes education, DEI, and mentorship. He is born and raised in New York, NY, and will be pursuing his fellowship at Mount Sinai.

Diversity, Equity, and Inclusion in Resident Education

Addressing inequities in the physician workforce

by SOPHIA GÖRGENS, MD, AND DAVID FERNANDEZ, MD

The United States is a country of rich ethnic and cultural diversity, which, although a strength in many regards, makes health disparities readily apparent. According to the 2020 Census data, the population of the United States is 75.8 percent white, 18.9 percent Hispanic, and 13.6 percent Black/African American.¹ However, when comparing the current physician workforce, the 2022 Physician Specialty Data Report recorded nearly 64 percent of physicians as white, 20.6 percent Asian, only 6.9 percent Hispanic/Latino and only 5.7 percent Black/African American.² It is a growing belief, backed by evidence, that patients have better health outcomes

when the physician workforce reflects the complexity and diversity of the patient population.³ One recent study to assess the association between mortality rates in the US



and Black representation among primary care physicians found that greater Black workforce representation was associated with higher life expectancy and was inversely associated with all-cause Black mortality.³ Therefore, to better serve our diverse patient population, the field of medicine has been taking innovative and comprehensive steps on improving physician diversity, including pipeline programs, community outreach, and efforts to retain and advance faculty from underrepresented minorities.

Despite these efforts, medical students and residents from underrepresented minorities still face myriad obstacles when navigating their training, from macroaggressions such as overt racism to more subtle microaggressions such as being mistaken by a patient or colleague for a nurse or service worker. These types of encounters increase burnout and compassion fatigue and contribute to minority physicians leaving medicine altogether.^{4,6} Experiencing mistreatment and discrimination by patients, families, and visitors has significant occupational and personal implications. Discrimination negatively impacts career satisfaction, career advancement, and job turnover.^{4,6} Studies have showed that up to 62 percent of minority medical students note that microaggressions encountered at work lead to feelings of burnout while 40 percent of physicians who have experienced discrimination considered changing careers.^{4,5} Hence, acknowledging and discussing implicit bias, structural racism, and discrimination within the house of medicine is crucial.⁷



DANISH ISTOCK/ADORE.COM

Addressing such a vast issue is multifaceted

One proposed solution is incorporating diversity, equity, and inclusion (DEI) education into residency training—and faculty training. DEI encompasses everything from fostering and recruiting medical students from diverse backgrounds, to learning about how implicit biases and research biases affect patient care, to teaching physicians how to recognize and address macro- and microaggressions in the workplace. For example, why are myocardial infarctions in women often underdiagnosed? The answer includes the fact that many studies regarding cardiovascular disease and myocardial infarctions primarily recruited men as subjects, creating an unintentional bias.⁸ Biases like this have been enshrined in medical textbooks for decades—fighting to change such truisms can be challenging.

Moreover, certain states—Florida and Texas in particular—have begun to remove or outright ban DEI from public education. The Texas passed SB17, which curbs the ability of public universities to incorporate DEI initiatives into training, hiring, admission, or education.⁹ In earlier versions of the bill, this would have been enforced to the extreme that if faculty discuss DEI, they will have to take a year without pay for the first offense and will be fired for the second.⁹ Similarly, Florida passed a law called the Individual Freedom Act, commonly known as the Stop Wrongs to Our Kids and Employees (STOP WOKE) Act, which prevents employers—including uni-

versities—from promoting DEI in any form.¹⁰ While opponents cite these measures as blatantly racist and sexist, lawmakers in support of these restrictive bills claim that they actually uphold *equality* because diversity, *equity*, and inclusion endorses a culture of exclusion for those not considered diverse.

Preventing inequality

Laws and proposals like the ones in Florida and Texas may damage the public education system and threaten to impact DEI in residency training and medical education as well. If DEI is banned from primary school to graduate-level education, our society will create a physician workforce that is less diverse and less well versed in the socioeconomic intricacies affecting our patients. Broader laws attempting to cut off all employers from incorporating DEI would directly impact resident education and negatively affect both patient care and physician well-being.

Currently, there is no Accreditation Council for Graduate Medical Education requirement to include DEI training in resident education, nor is there a recommended standardized curriculum. But, if we hope to preserve and build on a culture of tolerance and diversity, medicine must encode DEI education into residency training. Emergency medicine, long a pioneer and advocate for social justice, is primed to take the lead. ➔

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By the Numbers

QUALITY INDEX FOR EM BLOGS AND PODCASTS

A recent *Annals of Emergency Medicine* article ranked 88 EM and critical care blogs and podcasts by Digital Impact Factor.

TOP BLOGS

Authored by ACEP
Now columnists



#6 EM CASES

By Anton Helman, MD, CCFP(EM), FCFP (see p. 17)

#10 SKEPTICS' GUIDE TO EMERGENCY MEDICINE

By Ken Milne, MD (see p. 16)

TOP PODCASTS



#1 FOAMCAST

Cohosted by Lauren Westafer, DO, MPH, MS, author of *ACEP Now's* Practice ChangERs column, and former *ACEP Now* Medical Editor in Chief Jeremy Faust, MD, MS, MA, FACEP

Source: Lin M, Phipps M, Chan TM, et al. Digital impact factor: a quality index for educational blogs and podcasts in emergency medicine and critical care [published online ahead of print, 2023 Mar 24]. *Ann Emerg Med*. 2023;S0196-0644(23)00119-1.

ELECTION PREVIEW | CONTINUED FROM PAGE 7

the Department of Emergency Medicine, University of North Carolina; adjunct professor, Kenan-Flagler Business School, University of North Carolina

Internships and Residency: Emergency medicine residency, University of North Carolina Hospitals, Chapel Hill, NC (2003)

Medical Degree: MD, The Ohio State University College of Medicine and Public Health, Columbus, Ohio

✓ Response

To ensure that emergency medicine remains an attractive specialty, several strategies can be implemented. First, it is important that we acknowledge and address the current challenges faced by our specialty. These include factors like the No Surprises Act, workforce shortages, hospital capacity concerns, and scope of practice. By recognizing these issues, we can work toward finding solutions that improve our practice environment and make emergency medicine more appealing.

One way to refocus on the joy of medicine is by emphasizing the sanctity of the physician-patient relationship. This core aspect of EM can bring fulfillment to emergency physicians and remind us of the meaningful impact we have on patients' lives. By nurturing this relationship, we can reignite the passion and sense of purpose of why we chose this specialty.

Advocacy efforts should continue to address issues like the No Surprises Act (NSA) and other regulatory barriers that affect emergency medicine, ensuring that we continue to highlight workplace violence, boarding, and behavioral health resource constraints. By actively engaging in advocacy, we can influence policy decisions that positively impact our specialty and create a more favorable working environment.

While projecting the future workforce is important, it is crucial that we acknowledge the uncertainties associated with such predictions. It is essential to adapt recommendations to the current situation, considering factors such as changing demographics, COVID effects, technological advancements, and evolving health care delivery models. By remaining flexible and open to change, we can better address the needs of our colleagues and patients and ensure the specialty remains attractive.

ACEP should rededicate itself to the wellbeing and development of emergency physicians. This can be achieved through expanding the ongoing efforts, such as consultation services and providing support at each career stage – residency, early practice, mid-career, and exploring retirement. By offering guidance and resources, ACEP can help emergency physicians navigate our professional journeys, enhancing job satisfaction and retention.

As health care delivery evolves, it is important to emphasize the core of emergency medicine, which is acute and unscheduled care. No one else does this better than we do! Collaborating with thought leaders in areas such as telehealth, clinical decision support, and emergency preparedness can provide new opportunities for emergency physicians. By actively participating in these emerging fields, emergency medicine can continue to grow and remain relevant in the changing health care landscape.

Ultimately, our focus should be on what is best for both emergency physicians and

the specialty itself. ACEP should prioritize initiatives that support the wellbeing and satisfaction of emergency physicians and physician-led teams. Students and residents need to see the enthusiasm and enjoyment within the specialty, which can help attract the next generation of emergency physicians. By showcasing the rewards and fulfillment of emergency medicine, we can ensure its attractiveness as a specialty for years to come.

Henry Z. Pitzele, MD, FACEP (Illinois)

Current Professional Positions: Chief informatics officer and attending physician, Jesse Brown VA Medical Center and Advocate Illinois Masonic Medical Center, Chicago; attending physician, Mesa View Regional Medical Center, Mesquite, Nevada; attending physician, Advocate Illinois Masonic Medical Center, Chicago

Internships and Residency: emergency medicine residency, University of Illinois at Chicago (2023)

Medical Degree: MD, University of Illinois at Chicago College of Medicine (2000)

✓ Response

There are some elements of EM which have always made our specialty attractive—our ability to truly care for people in their time of need, to take care of anything and anyone, any time, in any place, and the freedom to do so in discrete and prescheduled shifts. The attractive elements have not changed,

and will not—but the last two Matches show that the outlook on the future of EM *has* changed, and ACEP can and must focus our most fundamental organs—those of advocacy and communication—towards even stronger defenses of workforce, autonomy, compensation, and community.

Our efforts on workforce are ongoing, but we can do even more—we have engaged the greater EM community and the ACGME, but exploring other partnerships (such as ABEM) can help us further demonstrate the value of EPs. More resources for public relations and increased support for definitive, original research could further bolster the greater public acceptance of the obvious good of physician-led teams. But where we excel, and where we can really create change, is in DC; it is time to commit to legislation regarding GME funding, which will help us not only with supply-side workforce increases, but also with distributive imbalances (urban vs. rural). Workforce cannot be an afterthought for the College.

While on the topic of legislative advocacy, it is time to legitimately explore legislation to end the Medicare funding cycle. ACEP is the only EM organization who has (and who can) step up and fight for our compensation from CMS, but every year at LAC, I sit in congressional offices describing our ever-decreasing compensation, and hear the same refrain from lawmakers: “This isn’t a good year to talk about this.” Well, given the state

CONTINUED on page 22



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- EM career success

of EM recruiting, this *must* be the year we talk about permanent legislation for Medicare increases.

We must also continue (and amplify) our fight against consolidation. Our March letter to the FTC decrying non-competes and our April letter to CMS about ownership disclosures were just an opening salvo—our attractiveness as a specialty will continue to plummet if the frontline EPs' sense of autonomy continues to erode, and EM consolidation is a direct cause of this erosion. We need to not only work against consolidation through our governmental interfaces, but in our own business practices as well.

Finally, the College needs to put more resources into our core function of providing community. Not only must we do a better job of communicating the immense value we provide to the frontline doc, but in showing all the work we do, and the fights we fight on their behalf, we will help to show students choosing a specialty that we do, still, work in the best corner of the house of medicine. And when we leverage our deep resources to foster that sense of community, we improve not only our own sense of wellbeing, but foster a pipeline of new leaders who will be the ones setting the landscape for the next chapter of EM.

James L. Shoemaker, Jr., MD, FACEP
(incumbent, Indiana)

Current Professional Positions: Partner and attending emergency physician, Elite Emergency Physicians, Inc.; volunteer clerkship faculty, Indiana University School of Medicine, South Bend, IN.

Internships and Residency: Emergency medicine residency, Michigan State University/Kalamazoo Center for Medical Studies, Kalamazoo, MI.

Medical Degree: MD, Indiana University School of Medicine, Indianapolis (2004)

✓ Response

Emergency medicine is truly the greatest specialty in medicine. Each day we treat all comers presenting to our emergency departments regardless of their ability to pay, circumstance or background. We are the true medical experts our patients seek for symptoms and concerns that scare them. Much like Hogwarts sorts students into their appropriate houses in the *Harry Potter* series, we sort and triage to separate the “sick” from the “not sick” and begin immediate resuscitative efforts when time is of the essence. We are hands-on. The first 15 minutes of the undifferentiated patient is where we thrive and apply our expertise and unique skill set. Emergent procedures such as airways, central lines, sedations, reductions and defibrillation are commonplace to us. We invite and embrace the full breadth and complexity constituting *all* of medicine. Many facets of emergency medicine make it highly attractive to the very best of medical students—the unpredictable variety of cases, high stakes decision-making, teamwork, the immediate impact of our interventions, and flexibility in scheduling and work-life balance.

To remain an attractive specialty, it is essential that we protect the integrity of our beloved specialty from the encroachment of non-physician clinicians and scope creep. With over 150 million annual ED vis-

its, our patients expect—and deserve—to be seen by a BC/BE EM physician leading a high-quality treatment team. There is no substitute for medical school and EM residency training. None. Further, we must ensure that business interests and entities *never* interfere with our medical judgment. Profits over patients is an unthinkable and untenable potential outcome of private equity involvement in the absence of well-established and enforceable guardrails. In addition, we must continue efforts to ensure adequate and fair compensation for the care we provide. We

should be unapologetic about the income we make—from the professional fee side we *are* the best value in medicine. It is essential that we tackle ED Boarding and ED violence head-on, making patient and colleague safety an unwavering priority.

Emergency medicine is truly the “safety net” of our health care system, and the work we do truly makes a difference. We *are* the front line of health care. ACEP needs to continue its multipronged approach to tackle the “four corners” of EM that I define as membership, reimbursement, workforce and ED vio-

lence/wellness to sustain the vibrancy of our specialty for colleagues past and present. Together we are stronger, and we must continue to educate future colleagues and the public about the integral role played by BC/BE emergency medicine physicians in every ED. Without us, the safety net will be forever broken, and patients will succumb to a lack of health care and societal resources. What we do *matters*. I will be your voice in the Boardroom, at the RUC, at the bedside and in the advocacy arena to propel our specialty forward and confront our challenges. 🙋

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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.



PennState Health

FOR MORE INFORMATION PLEASE CONTACT:
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.

EMERGENCY IMAGE QUIZ | CONTINUED FROM PAGE 4

Answer

The correct answer is ventricular tachycardia (d).

Ventricular tachycardia (VT) is more common in men and in individuals older than 65 years. The most common risk factors include structural heart disease (i.e., cardiomyopathies), and ion-channel mutations (i.e., catecholaminergic polymorphic VT). Idiopathic VT occurs in a structurally normal heart and is very rare.

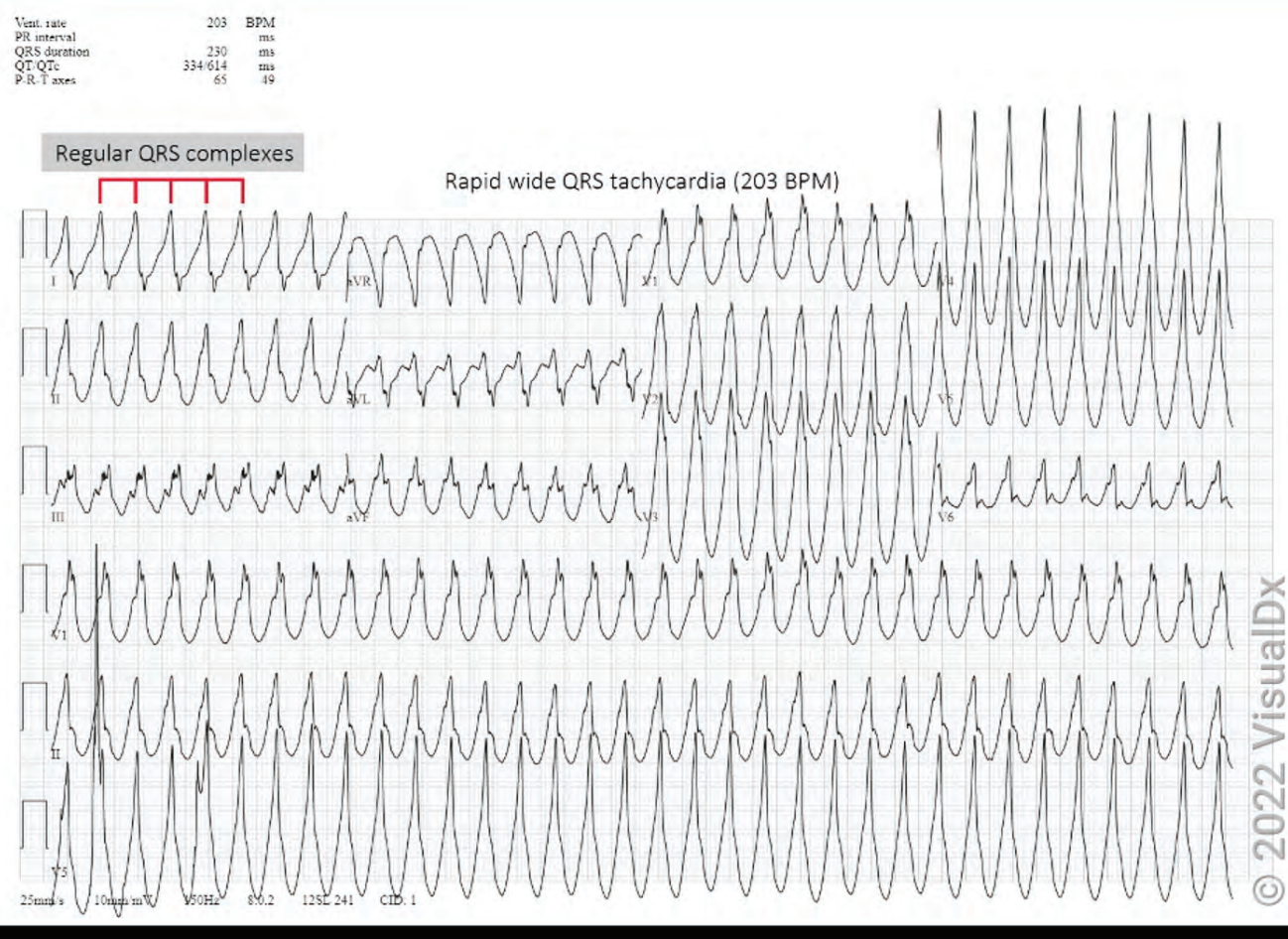
Presentation varies from asymptomatic to pulseless cardiac arrest. Common presenting symptoms are weakness, dizziness, palpitations, chest pain, shortness of breath, syncope, sudden collapse, and cardiac arrest.

Treatment varies depending on the presenting symptoms and the patient's hemodynamic stability. For pulseless VT, cardiopulmonary resuscitation needs to be started immediately. Other treatments include electrical cardioversion and the use of antiarrhythmic drugs (e.g., amiodarone or lidocaine). Patients with a history of life-threatening or recurrent VT will often undergo radiofrequency catheter ablation and/or placement of a cardioverter defibrillator (implantable or external).

MEMBER BENEFIT: All ACEP members receive a 20 percent discount on VisualDX ([acep.org/visualdx](https://www.visualdx.com)). +

Reference

1. Anjeza Cipi MD, et al. Ventricular tachycardia. Visualdx website. <https://www.visualdx.com/visualdx/diagnosis/ventricular+tachycardia?moduleId=101&diagnosisId=54599>. Updated 03/29/2023. Accessed June 16, 2023.



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Department of Emergency Medicine

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For questions, please contact:

Vik Bebarta, MD | Vice Chair, Strategy and Growth
Department of Emergency Medicine, University of Colorado School of
Medicine, Aurora, CO | Email: vikhyat.bebarta@cuanschutz.edu



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