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The Official Voice of Emergency Medicine

NOVEMBER 2023 Volume 42 Number 11

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## Texas Member Dr. Alison Haddock Chosen ACEP President-Elect

New leaders elected by Council at ACEP23

**A**lison Haddock, MD, FACEP, was chosen as ACEP's new President-Elect by Council at ACEP23, Oct. 8 at its meeting in Philadelphia. Dr. Haddock will serve one-year as President-Elect before becoming ACEP President during ACEP24 in Las Vegas.

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## Pediatric Mental Health in the Emergency Department

An escalating public health crisis

by JOYCE LI, MD; VERA FEUER, MD; AND MOHSEN SAIDINEJAD, MD

**A** 15-year-old male is brought to the emergency department (ED) after he jumped from the second floor of a building in a suicide attempt and sustained a complex ankle fracture.

His fracture was placed in a splint in the ED, but he requires outpatient surgery for definitive fracture repair. He was evaluated by psychiatry and deemed to need inpatient psychiatric care, but due to concern that he may use his splint to harm himself, he was deemed not eligible for the inpatient psychiatry floor and has been boarding in the ED.

### Background

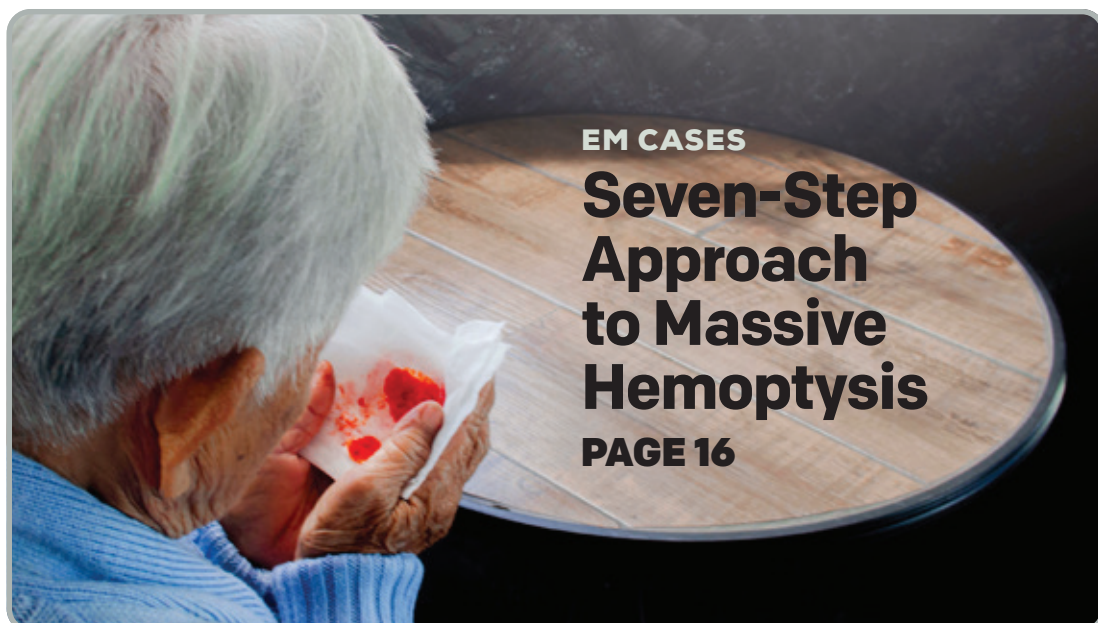
Over the past decade, the number and complexity of pediatric mental-health emergencies have increased at an alarming rate.<sup>1</sup>

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### EM CASES

## Seven-Step Approach to Massive Hemoptysis

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NEWS FROM THE COLLEGE

UPDATES AND ALERTS FROM ACEP



In October, ACEP President Dr. Aisha Terry spoke at the Summit on Emergency Department Sickle Cell Care, and discussed point of care tools, standardization of care processes, improving ED care and more.

ACEP Calls Out Insurer Abuses During Surprise Billing Congressional Hearing

ACEP member Seth Bleier, MD, FACEP, testified in front of the influential House Ways and Means Committee during a public hearing in October to call out insurers and advocate for fixes to the severely flawed implementation of the “No Surprises Act.” Dr. Bleier raised concerns that the Independent Dispute Resolution process has been virtually inaccessible for smaller practices and called out cases where physician groups were subjected to significant reimbursement cuts. Learn more at [acep.org/ACEPCallsOutInsurerAbuses](http://acep.org/ACEPCallsOutInsurerAbuses).

ACEP Tells the FTC About the Devastating Impact of Corporatization in Emergency Medicine

During an September Federal Trade Commission (FTC) meeting, ACEP Executive Director Sue Sedory delivered candid remarks about emergency physicians severely challenged by the fallout from ever-increasing acquisitions in health care. Read more at [acep.org/corporatization-testimony](http://acep.org/corporatization-testimony).

On the heels of this compelling testimony, FTC Chair Lina M. Khan joined ACEP23 to share the agency’s perspective on its work and how it could help protect emergency physicians.

And in our comment letter responding to the FTC and Department of Justice’s proposed

updates to health care merger guidelines, ACEP urged the agencies to finalize these changes that would bring more scrutiny to health care mergers and slow down consolidation.

New ACEP Resource Encourages Employer Transparency, Information Sharing

ACEP Open Book, developed with Ivy Clinicians, is a new tool for emergency physicians that uncovers employer practices and shares important information to help every emergency physician make the career decisions best for them. Vetted details, unparalleled access, and actionable insights about group structure, leadership, policies and more, make ACEP Open Book an indispensable resource. Learn more at [openbook.acep.org](http://openbook.acep.org).

Expand Your Knowledge of the Business of EM

Practice Essentials, an online, asynchronous curriculum developed by ACEP and EMRA, dives into reimbursement, contracts, operations and risk management, and other topics that may not have been covered in depth during medical school or residency. Developed for physicians, by physicians, this tool is free for ACEP and EMRA members and is sure to impact your practice every day. Learn more at [acep.org/PracticeEssentials](http://acep.org/PracticeEssentials) +

MEMBERS IN THE NEWS

Ricardo Martinez, MD, FACEP has been appointed to the Executive Committee of the Transportation Research Board (TRB) of the National Academies of Science, Engineering and Medicine. An increasing focus of the TRB is to strengthen the link between mobility, transportation, and health.

He is the former Administrator of the National Highway Traffic Safety Administration and during his tenure, the Agency reframed traffic safety injuries as a national public

health issue.

Dr. Martinez is an adjunct associate professor of emergency medicine in the Emory Department of Emergency Medicine, co-founder and senior advisor of the Injury Prevention Research Center at Emory, and senior advisor to the Crash Injury Research Engineering Network at Emory in Atlanta, Georgia. He practices clinically at Grady Memorial Hospital in Atlanta. +



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Residents and faculty at Ohio ACEP's Resident Assembly.

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

We are the first community emergency medicine program in the country. Residents train at an academic Level I trauma center and several freestanding emergency departments (EDs). We offer innovative ultrasound training, which includes nerve blocks in the ED, and annually participate in SAEM SonoGames. We even offer an ultrasound rotation for medical students. We also have a unique geographic location, low cost of living, a national park, and the city of Cleveland is 30 minutes away. We are celebrating our 50th year!

**What are some fun activities residents like to partake in or recently participated in?**

Annual Wilderness Night at a faculty member's house to discuss Mt. Kilimanjaro trip, and Wilderness Medicine hikes through Cuyahoga Valley National Park. We also hosted a welcome party for our intern class at the Rubber Ducks baseball game. Our Annual Chili Cook-Off is coming up in the fall!


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Dr. Jamie Shoemaker, (left) was re-elected to the ACEP Board of Directors by the Council, and will be joined by newly elected members Dr. Henry Pitzele, Dr. Abhi Mehrotra, and Dr. Chadd Kraus.

Dr. Haddock is an associate professor of emergency medicine and education at Baylor College of Medicine in Houston. She works clinically at Ben Taub, one of Harris County's public hospitals.



Scientific Assembly  
PHILADELPHIA, PA  
2023

Within ACEP, Dr. Haddock is a past Chair of the State Legislative Committee and a past board member for the Emergency Medicine Residents' Association and the Texas College of Emergency Physicians. She attended medical school at Weill Medical College of Cornell University, in Ithaca, N.Y., and completed her emergency medicine residency at the University of Michigan, in Ann Arbor, Mich.

First elected to the Board in 2017, Dr. Haddock served as Chair of the Board in 2021-22.

ACEP's Council also elected four members to the ACEP Board of Directors: Chadd K. Kraus, DO, DrPH, CPE, FACEP of Pennsylvania; Abhi Mehrotra, MD, MBA, FACEP of North Carolina; Henry Z. Pitzele, MD, FACEP of Illinois; and James L. Shoemaker, MD, FACEP (incumbent) of Indiana.

On Oct. 12, ACEP's Board of Directors elected its new officers for 2023-24. Jeffrey M. Goodloe, MD, FACEP, is the Chair of the Board, and Kristin McCabe-Kline, MD, FACEP, is Secretary/Treasurer. The Vice President position was divided into two new roles: Ryan Stanton, MD, FACEP, is the first Vice President of Communications, and James L. Shoemaker, MD, FACEP, is the first Vice President of Membership.

### ACEP Council Elects New Leaders

During the ACEP23 Council Meeting, Michael James McCrea, MD, FACEP, FAAEM, was elected as Council Vice Speaker. He has served for more than a decade on ACEP Task Forces and Committees, including his current role on the Educational Meeting Planning Committee and Chair of the Bylaws Committee. Dr. McCrea is a Past President of the Ohio Chapter of ACEP and current member of its Board of Directors.

Melissa Wysong Costello, MD, MS, FACEP, FAEMS, is Council Speaker. She is the national medical director of revenue cycle and patient advocacy for Global Medical Response and has 30 years of EMS experience as a clinician and a medical director. Dr. Costello is a Past President of the Alabama Chapter of ACEP and a Past Vice President of the Medical Association of the State of Alabama. +



**ABOVE:** During the ACEP Council Meeting, Dr. Melissa Costello became Speaker and Dr. Michael McCrea was elected Vice Speaker.

**LEFT:** Dr. Aisha Terry began her ACEP presidency with an outline of her vision for this year, focusing on mentorship and developing EM's pipeline.



Immediate Past President Dr. Christopher Kang handed over the gavel to Dr. Terry at the ACEP Council Meeting in October. The ACEP President is elected by the Council, the College's representative governing body, and serves a one-year term.



# ACEP Council Tackles Key Issues During Philadelphia Meeting

More than 60 resolutions were considered during the ACEP23 Council Meeting in Philadelphia in October, with many of them drawing considerable debate before 44 were ultimately adopted.

The ACEP Council, the College's representative governing body, meets annually to discuss and consider resolutions on issues impacting emergency physicians.



Scientific Assembly  
PHILADELPHIA, PA  
2023

The Council consists of members representing ACEP's 53 chapters, 39 sections of membership, the Association of Academic Chairs of Emergency Medicine, the Council of Emergency Medicine Residency Directors, the Emergency Medicine Residents' Association, and the Society for Academic Emergency Medicine.

Any member can submit a resolution, as long as it is supported by at least one other ACEP member. If adopted, the resolutions become official ACEP policy.

The 2023 Council considered 62 resolutions: 44 adopted, 10 were not adopted, and 7 were referred to the Board of Directors. In addition to 7 commendation resolutions and 12 memorial resolutions, the following non-bylaws resolutions were adopted:

- 19- Scientific Assembly Vendor Transparency (as amended)
- 20- Emergency Medicine Research Mentorship Network (as substituted)
- 21- Mitigation of Competition for Procedures Between Emergency Medicine Resident Physicians and Other Learners
- 22- Supporting 3-Year and 4-Year Emergency Medicine Residency Program Accreditation
- 24- Addressing the Growing Epidemic of Pediatric Cannabis Exposure
- 28- Facilitating EMTALA Interhospital Transfers
- 29- Addressing Pediatric Mental Health Boarding in Emergency Departments (as amended)
- 31- Combating Mental Health Stigma in Insurance Policies (as amended)
- 35- Declaring Firearm Violence a Public Health Crisis
- 36- Mandatory Waiting Period for Firearm Purchases
- 37- Support for Child-Protective Safety Firearm Safety and Storage Systems (as amended)
- 38- Advocating for Sufficient Reimbursement for Emergency Physicians in Critical Access Hospitals and Rural Emergency Hospitals (as amended)
- 39- Medicaid Reimbursement for Emergency Services (as amended)
- 40- Support for Reimbursement of Geriatric ED Care

Processes (as amended)

- 42- On-site Physician Staffing in Emergency Departments (as amended)
- 43- Adopt Terminology "Unsupervised Practice of Medicine"
- 45- Emergency Physicians' Role in the Medication and Procedural Management of Early Pregnancy Loss (as amended)
- 46- Policy Statement on the Care of Pregnant Individuals with Substance Use Disorder (as substituted)
- 47- Clarification of and Taking a Position Against Use of Excited Delirium Syndrome (as amended)
- 48- Medical Malpractice Certificate of Merit (as amended)
- 51- Quality Measures and Patient Experience Scores (as amended)
- 53- Treating Physician Determines Patient Stability (as amended)
- 54- Opposition to The Joint Commission Credentialing Requirements for Individual Emergency Conditions
- 55- Uncompensated Required Training (as amended)
- 61- ACEP Financial Decision Transparency (as amended)

Interested in the work that happens after a resolution is approved? Visit [acep.org/council](https://acep.org/council) to view actions taken on recent resolutions and track their progress. ➕



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**ACEP TELLS FEDS ABOUT EPS BILLING DISPUTE ISSUES**

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# EQUAL Management in the ED

A straightforward approach to caring for patients living with disabilities

by JULIANNE EARLE, DO

A disability is any condition of the body or mind that makes it more difficult for the person with the condition to do certain activities and interact with the world around them.<sup>1</sup> This includes impairments or difficulty with: vision; movement, processing, or thinking and remembering; verbal or non-verbal communication; mental health; hearing; or relationships. People often compartmentalize others based on their abilities and disabilities, but these patients are the opposite; instead, their range of ability should be viewed on a spectrum.

The care of patients with disabilities in the emergency department (ED) requires more attention, as not much data are available. Krahn, et al., highlight some discrepancies in experiences that may result in ED visits.<sup>2</sup> For example, patients who live with disabilities are twice as likely to report sexual assault compared to those without a disability.<sup>2</sup> They are one and a half times more likely to be a victim of a nonviolent crime.<sup>2</sup> Having a disability alone puts them at higher risk for unintentional injuries, more than the impact of their age, gender identity, racial background, or education level.<sup>2</sup>

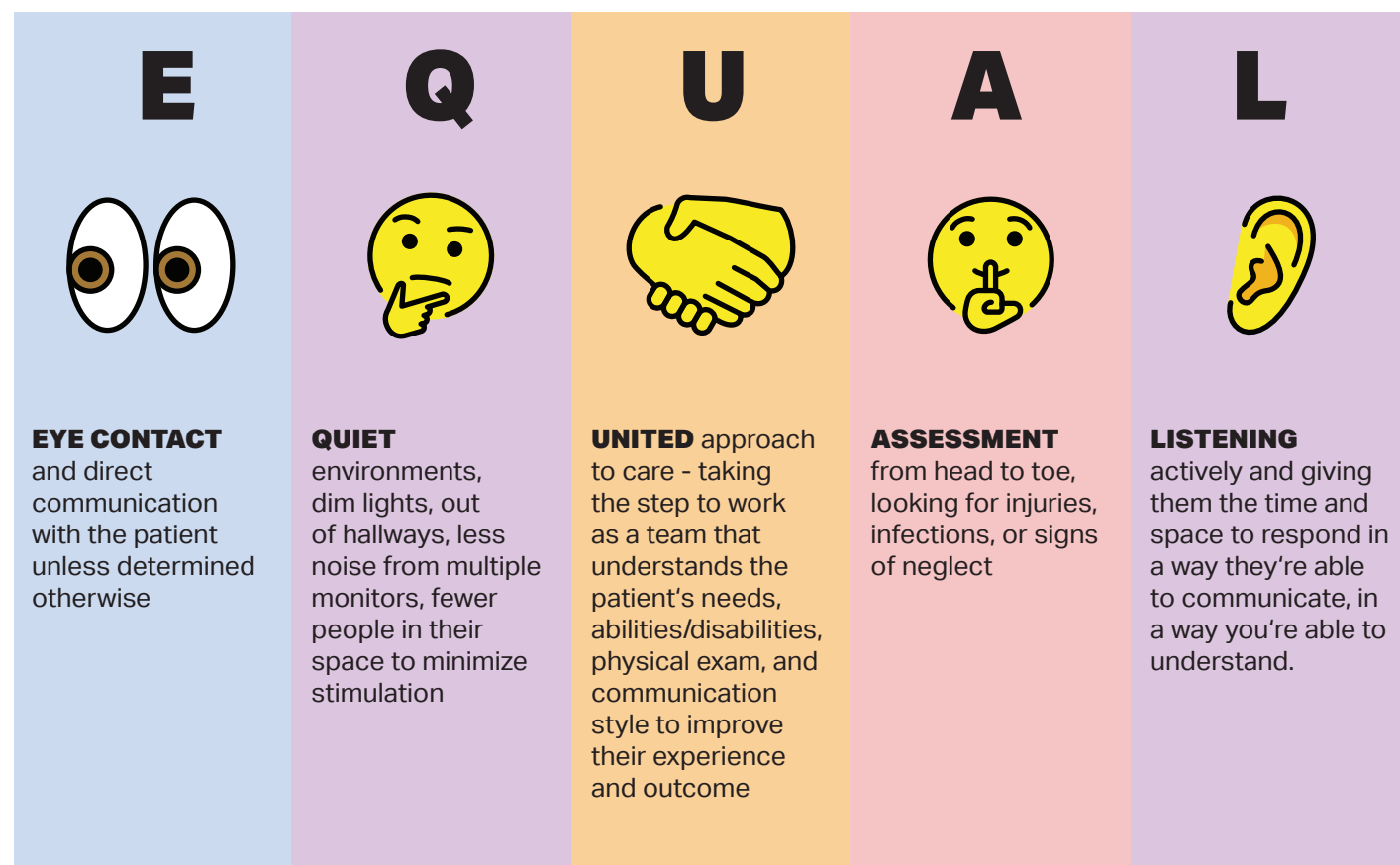
There have been calls to implement educational resources for emergency medicine residents, but there have not been any tools to better manage these patients.<sup>3</sup> The need for this type of investigation was further highlighted in an article by York, et al., which extensively reviewed the care these patients receive and how it can be improved.<sup>4</sup>

This new approach to caring for patients with disabilities uses the concept of EQUALity, which stands for Eye contact, Quiet environment, United approach, Assessment from head to toe, and Listening actively (See Figure). The idea is this model will be an easy reference tool for physicians to monitor their bias when caring for these patients.<sup>5</sup>

This new mnemonic aims to expand further not only on using inclusive language, but also on improving our physical exam, environment, and comprehensive care. The barriers these patients experience can result in delayed or missed diagnoses if the physicians are not thorough in examinations, history taking, and obtaining collateral information. One case report highlighted an unfortunate outcome from aspiration pneumonia, later found to be due to crayons rather than the expected culprits such as food, secretions, or beverages.<sup>6</sup> Some cases may be unavoidable, but it is very important to consider alternative diagnoses.

Eye contact is important as a part of non-verbal communication and body language to demonstrate understanding, respect, and attention. Upon entering a room, make eye contact with your patient and address them directly as you would any other patient. It is important not to assume their communication abilities based on their diagnosis. Introduce yourself, explain your goals, and evaluate their response. If there is a caretaker available, you can ask the patient for permission to have the caretaker contribute to the history. You can also always ask, with the caretaker or family member at bedside, "How do you communicate?" They can tell

FIGURE 1: The EQUAL approach for patients with disabilities



you if the patient uses words, hand squeezes, gaze changes, blinking, sounds, or changes in expression. You also can ask about how the patient expresses pain, as this will be helpful in how you evaluate for tenderness.

Quiet environments can be crucial for patients with sensory or processing difficulties, namely those living with autism spectrum disorder. For these patients, the ED can be a very overstimulating place to be, especially when they are already experiencing new feelings due to getting sick. Evaluating them in a less stimulating space can be helpful in getting the best possible exam, improving outcomes, and reducing the need for de-escalation and sometimes, chemical sedation. The ED is constantly overloaded with patients, so this will require some teamwork to coordinate, including nursing staff, pod lead, and other clinicians.

United approaches to care for these patients are also needed, in that communicating with all staff interacting with this patient can improve their experience. The care team should be aware of how this patient communicates and expresses pain, what their needs are, what their abilities are, and their physical exam findings. This preserves patients' dignity because everyone acknowledges the abilities of this patient and how they are being addressed. It also helps with prevention. Communication between physicians and nursing regarding indwelling devices, bed sores, cleanliness, or signs of neglect is important, as the thoroughness of each examination may vary. This makes documentation and communication of the utmost importance for these patients for their health and safety.

This leads into the next part of the model—Assessment. This is important in most of our patients with disabilities, but especially those who cannot communicate their complaints verbally or with a device. Instead, we resort to vital-sign abnormalities, physical exam findings, or suspicion from their care

partners. Their care partners typically know when something is abnormal, and more often than not their concerns are correct.

In the scenarios where we are unable to find a care partner or family member, a head-to-toe physical assessment is important, starting with vitals. While vitals may be abnormal for some, they may be normal for that patient. The inverse is also true; what's normal for most may be significantly abnormal for that patient and be the first red flag. One commonly used example is tachycardia. Oftentimes, it can be an indication of pain, infection, distress, anxiety, dehydration, or the first sign of sepsis. Remove all braces, prosthetics, and clothing, check the undersurfaces and intertriginous areas, look for bruising or fractures, evaluate all indwelling devices (tracheostomy sites, gastrostomy-jejunostomy tubes, foles, peripherally-inserted central catheter lines and ports), and inspect nail beds, ears, and teeth. These are all important places to examine, as they can hide infections, or be signs of possible neglect. As mandated reporters, especially for vulnerable populations, this type of exam is necessary.

Listening actively is the final portion—and arguably one of the most meaningful portions of patient care. When a patient can communicate with you in a way that you can understand, give them the time and space to communicate. Be patient and give them your attention.

If they are part of the deaf community, ensure that they have an American Sign Language interpreter present, as well as an in-person interpreter to best communicate the emotion behind their speech. Body language is especially important here and reinforces why maintaining good eye contact, using appropriate language that includes the patient in the dialogue, and asking permission to speak with family or care partners are pivotal factors in their care.

Using the EQUAL model will hopefully improve our care of patients living with disabilities, as well as their experience in the ED and accessing health care. Historically, they have multiple comorbidities, making them sicker at baseline. One study highlighted that those with a disability have higher adverse outcomes and incidence of cardiovascular disease and diabetes across the board, and that disabled women receive fewer health maintenance screenings.<sup>2</sup> This means their presentation is likely higher risk and requires more diligent examination.

With this model, there will hopefully be improved patient satisfaction and better outcomes.

*Special thanks to my older brother, Mikey, for allowing me to share part of his experience with the world, and inspiring me to write this article.* +



**DR. EARLE** is a third-year emergency medicine resident at Baystate Medical Center in Springfield, Mass.

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# Unfolding the ESEM Story: A Decade of Excellence in Emergency Medicine

Looking at the first 10 years of the Emirates Society of Emergency Medicine

by RASHA BUHUMAID, MBBS, FACEP, ARDMS

**A**s it is in many other countries around the world, emergency medicine has proven to be one of the fastest-growing specialties, including in the United Arab Emirates (UAE).

The UAE government's support took the specialty to another level and on Aug. 28, 2012, the Emirates Society of Emergency Medicine (ESEM) was established by a group of emergency physicians who recognized the necessity for a unified body dedicated to the advancement of emergency medicine practice and research.

The official inauguration of ESEM occurred during the 10<sup>th</sup> Middle East Emergency Medicine Conference in Abu Dhabi on Oct. 14, 2012. This marked the culmination of concerted efforts to gather the specialty under one umbrella, paving the way for shared visions and collaborative strides in improving emergency medicine in the region.

## ESEM's Founding

The founding of ESEM was greeted with enthusiastic support from the emergency medicine community. Under the leadership of Dr. Saleh Fares Al-Ali, the first emergency physician from UAE to be certified by both the Canadian and American boards, the organization grew exponentially. Dr. Fares Al-Ali, who was later awarded the MEMC19 Founders Award during the Mediterranean Emergency Medicine Congress, dedicated the award to all Emergency Providers in the UAE and the Middle East and North Africa (MENA) Region.

## Collaborative Efforts

ESEM is committed to educating physicians, raising awareness of emergency medicine, and fostering collaboration among professionals in the field. Over the years, its range of initiatives has solidified its position as a pioneering institution. In alignment with ESEM's mission to enhance and broaden the scope of emergency medicine in the UAE, the society has conducted a large number of educational activities over the last decade.

A notable achievement was ESEM's co-organization of the International Federation of Emergency Medicine Trauma Update Symposium in 2015. These initiatives aim to equip physicians with an evidence-based approach and effective management strategies for common emergency-department scenarios.

ESEM hosted the second Global Network Collaborative Conference on Emergency Medicine in 2013 and organized its first large scientific conference in Dubai in December 2014. Since then, ESEM has been a consistent contributor in the field, organizing and participating in more than 48 conferences, along with its annual scientific conference. ESEM's growth over the past years has been exceptional, marked by the implementation of community outreach programs and various social activities.

These initiatives have helped expand ESEM's reach and impact, demonstrating its unwaver-



The Emirates Society of Medicine Conference in December 2022.

ing commitment to improving emergency medicine services in the UAE. During the COVID-19 pandemic, the ESEM swiftly took action to support the health care community. Recognizing the dire need for effective strategies, ESEM issued a comprehensive position statement detailing procedures for emergency departments and hospitals to effectively confront the health care challenges induced by the pandemic. Further, it participated in international virtual roundtables on COVID-19 to contribute expertise to the global conversation.

ESEM hosted a series of informative webinars to facilitate knowledge sharing among the medical community, thereby playing an instrumental role in shaping a robust response to the crisis.

## Key Milestones

Over the past decade, ESEM has achieved numerous milestones. In December 2014, ESEM brought together a group of local emergency physicians with specialized training in emergency ultrasound, establishing the emergency ultrasound committee, a key step in ESEM's mission to maintain the highest practice standards and promote professional growth in emergency medicine within the UAE.

Further, in 2015, ESEM proudly won the bid to host the International Conference on Emergency Medicine (ICEM 2021). In May 2018, ESEM was hailed as one of the most active societies within Emirates Medical Association and had the opportunity to attend the Formula 1 Grand Prix in Bahrain to examine the medical aspects of managing such a major event.

In terms of collaborations, ESEM joined forces with the Emirates Cardiac Society (ECS), Emirates Anaesthesia Society (EAS), Emirates Society of Neurological Surgeons (ESNS), and

the Emirates Critical Care Society (ECCS) to establish the Emirates Resuscitation Council (ERC). Further highlights included participating in setting a new Guinness World Record with the CPR Relay in Dubai in 2019, joining Medutopia in their efforts to modernize medical education, and winning the bid to host the Asian Conference on Emergency Medicine (ACEM) 2025 in Dubai.

ESEM continues to further emergency medicine in the region through annual outreach activities, extending its influence beyond the major hubs of Abu Dhabi and Dubai.

Of particular note was ESEM's role in helping the UAE become the first Arab nation to pass a "good samaritan law," by the approval of the late His Highness Sheikh Khalifa bin Zayed Al Nahyan. ESEM also initiated the establishment of the Emirates Collaboration for Residents in Emergency Medicine (ECREM), a non-profit organization devoted to advancing emergency medicine training among resident doctors in the UAE. Lastly, the launch of the International Federation of Emergency Medicine leadership and advocacy skills development program marks a collaboration between ESEM and IFEM, and exemplifies ESEM's dedication to promoting innovative medical practices.

Launched in 2013, the bi-annual newsletter from ESEM marked a significant stride in promoting the field of emergency medicine in the Middle East. Designed and curated by a dedicated team of nine committee members, the newsletter met with a positive reception, showcasing notable national and international advancements in emergency medicine.

Given the success of the bi-annual format, it was evident that there was an appetite for more regular updates. Consequently, in March 2018,

ESEM initiated a monthly edition of the newsletter. Within just 10 months of its introduction, the monthly newsletter has captivated an extensive readership that stretches across more than 20 countries worldwide, including the United States, the UAE, the United Kingdom, Australia, Canada, Pakistan, and India.

## Upon Reflection

In reflecting on a decade of remarkable progress and commitment, ESEM's journey is a testament to the power of collaboration, learning, and innovation.

Amid adversity, ESEM has stood as a pillar of strength for the emergency medicine community, fostering a robust response to unprecedented health care challenges. With achievements spanning from successful international symposia and conferences to the drafting of transformative laws, ESEM has been instrumental in pioneering changes in the field.

The society has not only impacted the local medical scene, but through its extensive newsletter, it has also reached all corners of the globe, showcasing the UAE's significant strides in emergency medicine. As ESEM steps into the future, it carries forward the spirit of unity, the pursuit of excellence, and the aspiration to keep serving and improving emergency medicine in the UAE and beyond. +



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# The Job Market in Emergency Medicine

Perspectives  
of graduating  
residents in 2023

by CATHERINE A. MARCO, MD; LOUIS J. LING, MD; FIONA E. GALLAHUE, MD; EDWARD SALSBERG, MPA; D.M. COURTNEY, MD

The emergency medicine workforce is an important issue with ramifications for physicians relocating or retiring, medical students considering the specialty, and graduating residents seeking their first jobs. In August 2021, an article published in the *Annals of Emergency Medicine* projected a surplus of more than 7,800 emergency physicians in 2030 based on multiple scenarios, including patterns of supply and demand for emergency physicians at that time.<sup>1</sup> The workforce in emergency medicine is constantly in flux, and dependent on numerous factors. It is important to monitor key issues, including annual emergency department (ED) visits, geographic distribution of physicians, and the equilibrium between new entrants and retirees in the workforce. This report provides information on the 2023 job search for the most recent residency graduates.

### Survey Results

The American Board of Emergency Medicine (ABEM) provides an opportunity for residents to express their experience and insights annually through an optional anonymous survey distributed at the same time as the annual in-training examination. This report is from the most recent survey administered in February 2023.

Study participants included 9,202 emergency medicine residents from 275 emergency medicine residency programs. Residents from combined programs were not included. The survey sampled 2,711 residents in the final year of their training.

The majority of respondents (84.4 percent) had been offered positions in emergency medicine. Most respondents (72.7 percent) reported no difficulty in finding positions. Graduating residents varied significantly in the number of jobs they applied to with the highest percentage of respondents (42.7 percent) noted that they had applied for between one to three positions (range: one to ten). 295 respondents answered “N/A” which approximates to the 295 individuals matching into Accreditation Council for Graduate Medical Education (ACGME) accredited emergency

medicine fellowships.<sup>2</sup> Respondents were spread across the full range of educational debt, ranging from none to greater than \$400,000, and with 62.6 percent of respondents reporting debt burdens of \$200,000 or above.

### Warranted Concerns?

While there is growing concern that emergency medicine graduates will have difficulty finding employment, the results of this survey show that the vast majority of graduates have already been offered a job and only a small percentage (three percent) have not received any job offer, four months prior to graduation.

Educational debt is of specific concern to graduating residents. The data from this year compared to similar data in 2019 shows fewer individuals with lower amounts of debt. 37.3 percent of 2023 graduates have over \$300,000 in educational debt compared to 32.1 percent of graduates in 2019. <sup>3</sup>

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**TABLE 1: Have you been offered employment as an emergency physician for this coming year (2023)?\***

CHOICE	FREQUENCY	PERCENT OF RESPONDENTS (2,227)
Yes, and I have accepted an offer/started the position	1,743	78.3
Yes, but I am still searching	136	6.1
No, I have not yet been offered a job	62	2.8
N/A	286	12.8
No response	484	—
<b>TOTAL</b>	<b>2,711</b>	<b>100.0</b>

\* The response rate of senior residents was 82 percent.

**TABLE 2: How many jobs did you apply for during the previous academic year (2022-2023)(excluding residencies/fellowships and other training positions)?\***

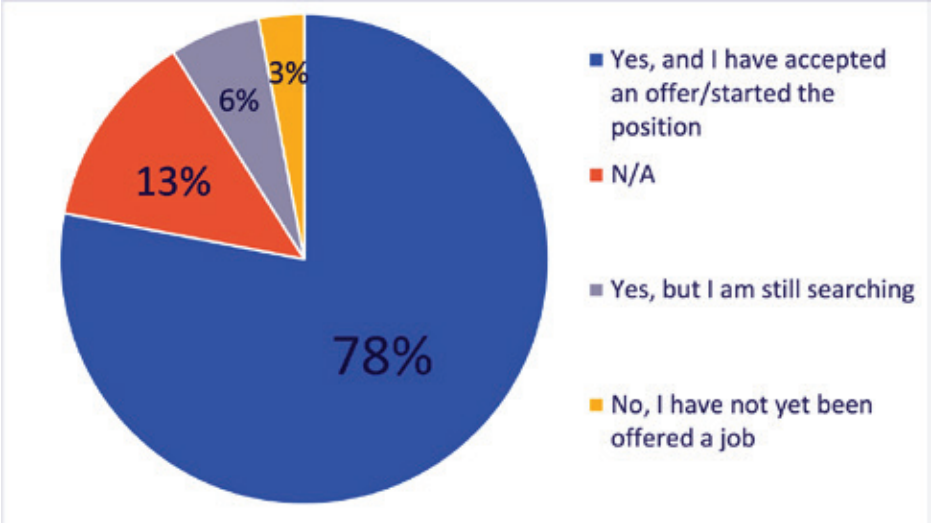
CHOICE	FREQUENCY	PERCENT OF RESPONDENTS (2,206)
None	214	9.7
1	345	15.6
2	288	13.1
3	309	14.0
4	191	8.7
5	179	8.1
6-10	199	9.0
Over 10	65	2.9
N/A	416	18.9
No Response	505	—
<b>TOTAL</b>	<b>2,711</b>	<b>100.0</b>

\* The response rate of senior residents was 82 percent.

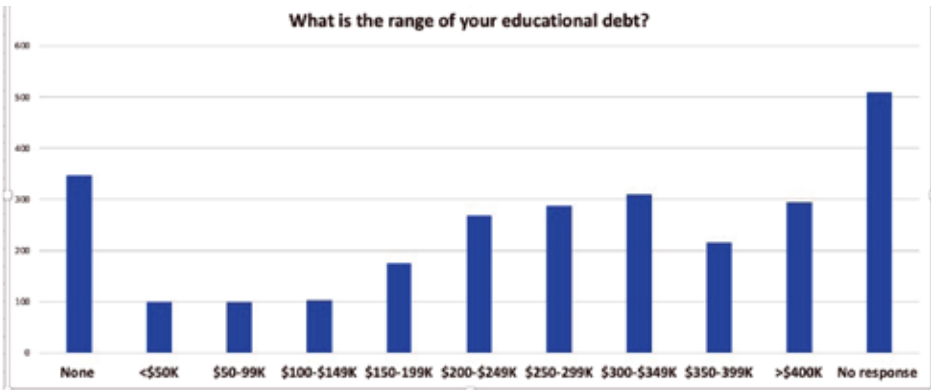
**TABLE 3: What is the range of your educational debt?**

CHOICE	FREQUENCY	PERCENT OF TOTAL SENIOR RESIDENTS (2,711)	PERCENT OF RESPONDENTS (2,201)
None	348	12.8	15.8
<\$50K	100	3.7	4.5
\$50-99K	99	3.7	4.5
\$100-\$149K	103	3.8	4.7
\$150-199K	175	6.5	8.0
\$200-\$249K	268	9.9	12.2
\$250-299K	288	10.6	13.1
\$300-\$349K	310	11.4	14.1
\$350-399K	216	8.0	9.8
>\$400K	294	10.8	13.4
No response	510	18.8	—
<b>TOTAL</b>	<b>2,711</b>	<b>100.0</b>	<b>100.1</b>

**FIGURE 1**



**FIGURE 2**





The COVID-19 pandemic significantly exacerbated this already existing problem.<sup>2</sup>

By 2021, mental-health visits to the emergency departments (EDs) by children five to 11 years old increased by 24 percent, while visits by adolescents aged 12 to 17 years increased by 31 percent, compared to 2019.<sup>3</sup> In addition to this, children of diverse groups have been disparately affected.<sup>4</sup>

This combination of historic increases in pediatric mental-health visits, lack of adequate mental-health-care infrastructure, and shortage of mental-health professionals prompted several organizations to declare a national crisis in pediatric mental health.<sup>5</sup> As a result of the continuing increase in demand for immediate psychiatric assessment and limited community psychiatric resources, the nation's EDs have become de facto referral centers.<sup>6</sup>

With limited ED staffing and resources to care for these conditions, children spend several hours to days boarding in the ED as they await definitive psychiatric care.<sup>7</sup> For these children and their families, as well as the ED staff, boarding in the ED causes significant stress and anxiety, further exacerbating the situation.

Although the problem of psychiatric boarding also affects adult patients, as was highlighted in a recent *ACEP Now* article, the unique challenge with pediatric mental health is the even greater shortage of services and the complexity of caring for this population and their families.<sup>8</sup>

A critical role of the ED is to provide initial screening and assessment of youth with mental-health concerns to determine which patients are at low risk and can be discharged from the ED with outpatient resources. Studies have shown that most children who present to the ED with a mental and behavioral health emergency can be safely discharged with an appropriate mental-health follow up.<sup>9</sup> To this end, use of reliable and proven screening tools, such as the Ask Suicide Screening Questions and Columbia Suicide Severity Rating Scale, can help ED and primary care clinicians with suicide risk assessment.<sup>10-12</sup>

Several factors contribute to the decision to discharge a child with a mental or behavioral complaint from the ED versus admission for inpatient psychiatric care. Key factors associated with difficulty in safe ED discharge as well as predictors of ED revisit include: impulse control issues; neurodevelopmental disorders; acute suicidality or psychomotor agitation; anxiety; mood disruption; and drug or alcohol intoxication.<sup>13,14</sup>

In addition to this, patients are more likely to make a return visit to the ED if they did not have a mental-health follow-up within 30 days of the initial ED visit, although less than 50 percent of children with mental-health concerns do not receive proper mental-health follow-up within 30 days.<sup>15</sup>

Discharge planning for low-risk children during the ED visit is critically important, as evidence suggests that children who were not given a specific follow-up appointment with a mental-health professional were more likely to have an ED revisit within three months.<sup>16</sup>

In addition to providing timely follow-up, access to therapeutic interventions such as the Stanley Brown Safety Plan, lethal-means counselling education, and in-



terventions help patients and families learn to identify triggers and coping skills so they can feel more knowledgeable, safe, and empowered to seek help when needed.<sup>17,18</sup> The Emergency Medical Services for Children Innovation and Improvement Center, funded by the Health Resources and Services Administration in collaboration with several professional societies including ACEP, has developed a series of resources for care of children with suicidality and agitation through its Pediatric Education and Advocacy Kits.<sup>19,20</sup>

For children who are *not* deemed to be at low risk and who require inpatient care, the ED often serves as the boarding site, as the number of available inpatient pediatric psychiatric beds are far fewer than the number of children needing them. This results in ED beds and staff being allocated to mental-health boarding, which affects ED staffing and throughput. These children sometimes spend days and weeks in the ED, and their treatment needs (medications and therapeutic engagement) and daily activity needs such as food, hygiene, and entertainment must be met.<sup>21</sup>

However, there are resources, including free online toolkits such as the New England Behavioral Health toolkit developed by the New England Emergency Services for Children collaborative, that include a daily schedule template, free activities patients can do in the ED, and a safe-toy purchasing guide for pediatric ED patients who are boarding for a mental and behavioral health crisis.<sup>22,23</sup>

As EDs continue to struggle to keep up with the great surge of pediatric mental-health emergencies, especially prolonged boarding, a new, joint, policy statement by ACEP, American Academy of Pediatrics, and Emergency Nurses Association on management of pediatric mental health in the ED was recently published online and appears in the September 2023 issues of the *Annals of Emergency Medicine*, the *Journal of Emergency Nursing*, and *Pediatrics*.<sup>24-26</sup> +



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# REAL-TIME INFORMATION SHARING WITH PATIENTS

## Ethical considerations and best practices

by KELLY BOOKMAN, MD; PAUL BISSMEYER, MD; BLAKE DENLEY, MD; HALEY SAUDER, MD; LARISA TRAILL, MD; AND NICK KLUESNER, MD

### Background

As Electronic Health Information (EHI) has increased in prominence, the U.S. federal government has set the standard for increasing transparency and transmission of such data. The 2015 Edition Cures Act sought to promote “transparency, modern standards, and enhanced health IT capabilities by fostering innovation in the health care technology ecosystem to deliver better information to patients, clinicians, and other users.”<sup>1</sup>

In 2016, the 21st Century Cures Act (Cures Act) took additional steps to authorize the Secretary of Health and Human Services to identify and define information blocking and associated exceptions.<sup>2</sup> Information blocking is any practice that is “likely to interfere with access, exchange, or use of [EHI].”<sup>3</sup> These regulations have led to widespread practices of EHI, such as test results and clinical documentation, being shared with patients in real time. In turn, concerns have arisen regarding when information blocking is appropriate and what ethical issues emergency department (ED) physicians must consider prior to information blocking.

The Cures Act’s information blocking rules identify five specific categories of exceptions in which real-time information sharing can be blocked: preventing harm, privacy, security, infeasibility, and health information technology (IT) performance. Additional institutional exceptions address procedures for fulfilling requests to access EHI, such as fees, licensing, and content and manner exceptions.

The most frequently invoked exception in the ED is preventing harm. Several conditions must be satisfied to justify blocking under this exception, including that the individual blocking the information must hold a “reasonable belief that the practice will substantially reduce a risk of harm, the practice must be no broader than necessary, the practice must be justified by the type of risk, type of harm, and implementation basis, and the practice must allow for a patient’s right to request review of an individualized determination of risk of harm.”<sup>4</sup>

### Ethical Considerations

The foundational principle applicable to real-time EHI sharing is autonomy. Patients’ medical information is fundamentally theirs, as it is about them, for them, considered their property, and entrusted to physicians to generate and use for their clinical care. As such, insofar as access to their information supports and facilitates patients’ understanding of their medical conditions and informs their medical decisions, immediate unrestricted access to their information should be the norm, not the exception.

Not only is this consistent with existing regulations, but to categorically restrict real-time patient access to their health care information,



even if undertaken “in their best interest,” can paternalistically limit access to information that is foundational to patient autonomy. And yet, increased, and especially real-time, access can have legitimate adverse effects on patients that must not be overlooked.

Many of the arguments for restricting patients’ real-time EHI access are based on anecdotal concerns. These include accounts of patients receiving abnormal but benign results and suffering unnecessary emotional distress (e.g., an elevated troponin level that is at a patient’s previously established baseline); a concern that access to results from triage protocols could cause a patient to leave before being evaluated and treated (e.g., receiving a normal troponin result while waiting and leaving before a physician is able to interpret the results, recommend further testing or stratify risk); or patients becoming frustrated with the pace of their care once knowing their results are available (e.g., knowing a troponin result, but not realizing they are awaiting a cardiology consultation or repeat troponin). Although these scenarios have likely been encountered by many emergency physicians, there is not robust empirical evidence that real-time EHI sharing is causing systemic harm—or more harm than good.

The existing studies on the topic do not demonstrate any significant adverse patient effects. Outpatient studies have shown that approximately 20 percent of patients viewed their results expeditiously.<sup>5</sup> Additionally, when patients were provided access, patient complaints were infrequent.<sup>6</sup>

In one systematic review of literature, evidence overwhelmingly showed benefits of real-time sharing, including increased “reassurance, reduced anxiety, positive impact on consultations, better doctor–patient relationship, and increased awareness and adherence to medications.”<sup>7</sup> With most studies occurring in the outpatient setting, anecdotal concerns of adverse patient effects of real-time information sharing in the ED require focused investigation in the ED setting.

Two established areas of concern identified in the literature require ethical consideration: confidentiality and justice. With EHI available through online portals, some of which include real-time sharing with mobile notifications, security and confidentiality are of concern.<sup>7</sup> Domestic partners, parents, or other individ-

uals who have access to a patient’s electronic devices may gain access to EHI before a patient can restrict others’ access if desired. Ensuring safeguards for confidentiality will be critical to minimizing harms to patients and supporting their right to control the distribution of their health information.

There are also concerns around equitable access to EHI. Socioeconomically disadvantaged populations may disproportionately lack means to access their EHI.<sup>5</sup>

If the primacy of patient autonomy dictates extreme deference to real-time EHI sharing, to permit a system that systematically disadvantages certain sociodemographic groups undermines the principle of justice. Further work in real-time EHI sharing should ensure fair and equal access to uphold this principle.

### Recommendations, Best Practices

Once real-time information sharing is recognized as fundamentally good with limited exceptions, further efforts should maximize patient benefits.

First, information for patients about how to find their records must be developed and disseminated. Additionally, a disclaimer notice should be tied to uncounseled results being released. These practices seek to support patients’ autonomy to access the information while informing them of potential harms of doing so.

Both instructions on access and anticipatory guidance can be provided via multiple avenues, such as inclusion in discharge instructions, notification via email, provider discussion with patients prior to discharge, and notifications or alerts on the patient portal itself.

For patients who are elderly, disabled, or economically disadvantaged, who may have more difficulty accessing real-time information, it is important to identify a process by which they may register to receive such information if desired. These practices will reduce inequities in the current landscape of EHI sharing.

Training opportunities for documentation best practices should be employed. Recognizing that patients will read the record immediately should promote tactful wording by the physician in the medical note. Specifically, jargon and abbreviations should be avoided, especially ones that can be misinterpreted (e.g., SOB), and alternative value-neutral descriptors should be used (e.g., “substance use disorder” rather than “drug addict”).

Finally, in accordance with the paucity of empiric data demonstrating harms and the ethical considerations outlined, exceptions to real-time EHI sharing should be exceedingly rare. However, there should be a formalized process within the current documentation workflow for physicians to opt out of real-time release, which could be as simple as a toggle at the top of the notes/orders section. Defaulting to the automatic release of EHI should be maintained and exceptions should adhere to regulatory criteria. +



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# How Long Should EM Residency Be?

New studies shed light

by DHIMITRI A. NIKOLLA, DO, MS, FACEP; MICHAEL S. BEESON, MD, FACEP; AND JESSE M. PINES, MD, MBA, MSCE, FACEP

U.S. emergency medicine (EM) residency training length has been a decades-long dilemma: four versus three years. Two important questions befall educators and residents. First, is three years enough time to become an EM physician? Second, does an additional year add sufficient value to justify the time and expense? To date, the debate has been lively yet largely conceptual. Two recent studies have rekindled the discussion by adding more robust and objective results. The studies lend some evidence that three years of training may be the right number when considering knowledge and observed practice. But critical questions remain unanswered when it comes to specialization, career trajectory, and actual competence as an EM physician.

## How Did Current Program Lengths Come About?

Residency length has varied since the inception of the specialty of EM.<sup>1</sup> Approved lengths have included postgraduate years (PGY) 1-3, 2-3, 2-4, and 1-4 over the last 30 years.<sup>1</sup> Curricula with non-EM internships (i.e., PGY 2-3 and 2-4) receded, giving way to categorical EM residencies with interns training under EM faculty (PGY 1-3 and 1-4).<sup>2,3</sup> In the 2021-2022 academic year, categorical (non-combined) EM residency lengths included 221 (80 percent) PGY 1-3 and 55 (20 percent) PGY 1-4 programs.<sup>1</sup>

## So, What Does the Additional Year Offer?

A fourth year of EM training offers additional supervised clinical and academic experience. This additional experience includes opportunities for elective rotations, scholarship, and niche development.<sup>3,4</sup> These opportunities are often incorporated into scholarly tracks designed to provide structured, specialized training.<sup>5,6</sup> Furthermore, this specialized training may facilitate the pursuit of fellowship programs and academic positions after graduation.<sup>7,8</sup> However, the additional year of training has an opportunity cost to the trainee.<sup>3</sup> Furthermore, differences in clinical care between training lengths are mostly unknown. A study of 92 EM programs from 1999 observed similar counts for most procedures between training lengths.<sup>9</sup> Overall, studies evaluating differences between trainees and graduates from varying EM training lengths are very limited in size and scope.

## The Latest Research

One study was conducted by the American Board of Emergency Medicine (ABEM).<sup>10,11</sup> The ABEM study examined test scores in four- versus three-year programs and small differences in standardized test scores and pass rates were observed between trainees and graduates from three- and four-year curricula, including the qualifying and oral certifying examinations.<sup>10</sup> For example, the qualifying examination pass rate was slightly higher for three-year graduates than four-year (93.1 percent versus 90.8 percent;  $P < 0.001$ ).<sup>10</sup> However, these small differences are unlikely educationally meaningful. Another study conducted by US Acute Care Solutions examined 1,084,085 ED encounters by

70 new three-year graduates, 39 new four-year graduates, and 476 experienced new hires in their first year of practice within a large emergency medicine group. All three groups of physicians performed similarly across multiple measures of clinical care, including patients per hour, relative value units per hour, and 72-hour return visits with admission or transfer.<sup>11</sup>

## What Should We Take Away?


The lack of differences in the observed outcomes do not suggest one EM training length is superior. Yet, neither study really examined robust markers of care quality or strong measures of competence. There are many ways in which an additional year of training may benefit trainees (i.e., elective time, additional mentorship) that were not directly studied. The additional year may improve career trajectory or longevity, entrance into fellowship or academic practice, or other longer-term outcomes, including successful development of a niche in the specialty. Importantly, the opportunity cost of delaying an attending salary by one year was not addressed in either study.

Given there are no large differences in clinical care or test scores, four-year EM programs should work to demonstrate the value of the additional year of training by expanding goals beyond basic academic and clinical achievement. This justification is required by the Accreditation Council for Graduate Medical Education (ACGME). For example, four-year programs could offer formal research training or niche clinical experiences such as aeromedical or telemedicine, which a three-year curriculum cannot feasibly accommodate. Additionally, four-year programs should consider (and ideally study) the value of these experiences to the career path of their graduates, and how these educational opportunities supplement or compare to dedicated fellowships. For example, an emergency medical services scholarly track may not provide trainees with equal qualifications to a fellowship.

Furthermore, while the ACGME and ABEM directly govern EM training length, external pressures may drive programs toward one program length.

Applicant interest in a particular EM format may also incentivize programs toward one training length. Furthermore, graduate medical education is funded by Medicare, and additional goals for longer training programs may not align with the funding goals of the U.S. government.<sup>12</sup> On the contrary, hospitals may operationally and financially benefit from longer training lengths thus indirectly influencing curricula decisions. Therefore, applicant, funding, and operational factors may influence programs to offer a particular curriculum length.

Emergency medicine's body of knowledge as reflected by the Model of the Clinical Practice of EM is ever-expanding.<sup>13</sup> Some of these training opportunities previously considered unique (i.e., ultrasound and resuscitation procedures) may become a new standard for programs and require a longer training period.<sup>13</sup> Therefore, the results of this current research should be seen as a point-in-time evaluation and should be re-examined regularly to decide what is required to practice as an emergency physician. Arguably, the right answer lies with the

resident who chooses to train for a specific length of time or the residency programs that choose to offer specific curricula. 



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## 27 Degrees is No Accident

How working with prisoners changed some perspectives

by ANWAR OSBORNE, MD, MPM, FACEP; AND JAMIE KUCK, MD, PHD

A sociological term, “social death,” aligns with the surreptitious sentiment that all incarcerated persons have little to offer society and are not missed when removed from it. Sharing this led to some discussion in

medical circles about the plight of these persons, and these discussions led us further, to develop a patient-facing effort to let incarcerated persons know that they are, in fact, very much like any other patient. +



## Let's Talk: Emergency Physicians Can Convey Critical Prior Care PHI Immediately

For patient treatment, HIPAA allows PHI transmittal between hospitals without consent

by LOGAN D. GUNDERSON, BS, MS-4; ANDREW S. NUGENT, MD, MHA; AND DAVID A. TALAN, MD

You need to know what was done at Children's General, especially imaging, CSF, and urine results. You call to speak to their on-duty emergency physician but are told by the

clerk that to get protected health information, you need to fax a request to their medical-records department, specifying the information needed, and with a signed parental consent. +



# Upper Gastrointestinal Hemorrhage

## Best practices for treatment in the ED

by MATTHEW TURNER, MD, AND CATH-  
ERINE MARCO, MD

### Case

A 74-year-old man presents with vomiting of blood for two days. He has a history of daily alcohol and tobacco use. Vital signs are: blood pressure, 88/50; heart rate, 120; respiratory rate, 36. He is actively vomiting coffee ground emesis. His abdomen is soft with voluntary guarding. What is the best management of this condition?

Upper gastrointestinal bleeding (UGIB) is a significant problem in the U.S., with 350,000 hospitalizations annually and a mortality rate of five to 10 percent.<sup>1,2</sup> The three most common causes are peptic ulcer disease (often secondary to nonsteroidal anti-inflammatory drug use or *Helicobacter pylori* infection), esophagogastric varices (often due to cirrhosis with portal hypertension), and erosive esophagitis (often secondary to severe GERD or alcohol use).<sup>1</sup> UGIB will typically manifest as melena, hematemesis, or hematochezia.<sup>1</sup>

Rapid assessment of vital signs and degree of bleeding should determine whether a patient is stable or unstable. There are several scoring systems available, such as the Glasgow-Blatchford system, but none of these are superior to physician assessment. Tachycardia, hypotension, tachypnea, mental status, and degree of bleeding are important indicators of stability.

Initial stabilization should be done for all patients. Patients should be assessed for evidence of hypovolemia or active exsanguination. Whatever the underlying cause, the patient should have two large-bore intravenous (IV) lines placed and be put on pulse oximetry and cardiac monitoring. Fluid resuscitation should be initiated. Initial laboratory studies should include CBC, complete metabolic profile, blood type and screening, and coagulation studies. Hemoglobin takes several hours to reflect blood loss and should not be used as the sole indicator of bleeding severity. Repeat measurements of hemoglobin may be helpful in assessing stability.

### Unstable Patients

The unstable patient with UGIB should be stabilized initially with airway, breathing, and circulatory support. Active UGIB may lead to altered mental status or airway compromise via aspiration. Intubation may be challenging because of both rapid desaturation and extensive hemorrhage. Pre-oxygenation with nasal cannula or face mask should be provided. Nasal cannula oxygen delivery should be maintained during intubation. Suction should be available. Maintain the head of the bed at 45 degrees and ensure that a bag-valve mask is available if initial attempts at intubation fail. Lower doses of sedatives may be used to minimize hypotension. Video laryngoscopy may be attempted, although visualization may be obscured by active bleeding and direct laryngoscopy may be appropriate. Suction-assisted laryngoscopy and airway decontamination, or SALAD, can also be used—in this technique, a rigid suction catheter can simultaneously act as a tongue lifter or depressor while providing

### KEY POINTS

1. Stabilize with airway, breathing, and circulatory support
2. High-dose proton pump inhibitor IV (i.e., pantoprazole)
3. Octreotide IV in the setting of esophageal varices
4. Ceftriaxone IV
5. EGD within 24 hours

continuous suction.

Circulatory collapse should be treated with packed red blood cells, with a transfusion goal for hemoglobin at 7 g/dL. Over-transfusion should be avoided, particularly in cirrhotic patients, due to the risk of increasing portal venous pressure. Fresh frozen plasma, or FFP, should only be given to cirrhotic patients as part of the massive transfusion protocol in cases of profound hypotension, as “patients with cirrhosis rarely have true enzymatic hypocoagulability, and FFP may worsen bleeding due to over-resuscitation and dilution of coagulation factors.”<sup>3</sup> Platelets should be transfused with a goal of 50,000/ $\mu$ L.<sup>1</sup> Anticoagulants may be stopped and reversed, but this decision should weigh the risks of thromboembolism against ongoing bleeding.<sup>1</sup> There is no proven benefit of tranexamic acid in the setting of UGIB.<sup>4,5</sup>

Nasogastric tubes have little prognostic or therapeutic value in the setting of UGIB.<sup>6</sup> Balloon tamponade (i.e., a Sengstaken-Blakemore tube) may be used as a temporizing measure for unstable UGIB but should not delay emergent esophagogastroduodenoscopy (EGD). There are few data on the outcomes of UGIB when balloon tamponade is used as a temporizing measure. However, a 2017 study of 34 patients suggests that balloon tamponade, when used as a bridge to EGD, improves patient mortality, with 59 percent of patients surviving to hospital discharge.<sup>7</sup>

The gold standard for both diagnosis and hemostasis of UGIB is esophagogastroduodenoscopy (EGD). Any delay in this procedure past 24 hours is associated with significantly increased mortality.<sup>8</sup>


Following initial stabilization, unstable patients should be admitted to the intensive care unit for definitive management.

### Stable Patients

For both stable and resuscitated patients, high-dose IV proton pump inhibitor therapy (i.e., pantoprazole 80 mg IV bolus and drip) should be initiated.<sup>9</sup> A loading dose of octreotide 50 mcg IV, followed by 50 mcg/hour, decreases variceal bleeds.<sup>3</sup> Although the American Gastroenterological Association (AGA) does not recommend octreotide for the use of non-variceal UGIB, the AGA states that “there should be a low threshold for its use if there is concern for underlying portal hypertension.”<sup>10</sup> Given the difficulty of obtaining history from these patients, we recommend the empiric use of octreotide in the ED for

UGIB, consistent with earlier studies.<sup>11,12</sup> Antibiotics, such as ceftriaxone 1 g or cefotaxime 2 g IV is associated with improved survival in UGIB patients with cirrhosis.<sup>13</sup> Erythromycin as a prokinetic agent should be considered to improve endoscopic visualization.

For patients with acute variceal bleeds, the vasoactive agent terlipressin is a potential first-line choice of therapy, because of both its safety and its efficacy in reducing mortality.<sup>13</sup> A 2018 meta-analysis found that terlipressin is comparable with somatostatin, octreotide, and vasopressin in the control of bleeding. Terlipressin should still be used in combination with endoscopic therapy.<sup>14</sup>

In clinically stable patients who do not require resuscitation, EGD is less urgent and may be performed within six to 24 hours.<sup>5</sup> These patients may be admitted for further assessment and work-up. 



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# Seven-Step Approach to Massive Hemoptysis

An organized approach to maximize your patient's chance of survival

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

One of the most hair-raising presentations to the emergency department (ED) can be massive hemoptysis with respiratory failure. While life-threatening hemoptysis represents a minority of hemoptysis cases seen in the ED, it is imperative we have an efficient and organized approach to management, as respiratory failure and death can occur rapidly. The definition of massive hemoptysis



is variable across publications with expectorated blood volumes ranging from 100 to 1,000 mL per 24 hours, as these volumes are difficult to estimate for any given patient. A more practical definition of massive or life-threatening hemoptysis is that which causes signs of worsening respiratory distress,

hemodynamic instability, abnormal gas exchange, or airway obstruction.<sup>1</sup> However, it is important to understand that death from hemoptysis is almost always due to hypoxia or asphyxiation (blood impedes gas exchange in the lungs, typically because of bleeding from high-pressure bronchial arteries into the lungs) as opposed to hemodynamic instability.<sup>2</sup> Death from hemoptysis is akin to drowning, so airway considerations usually take precedence over hemodynamic considerations. A common clinical pitfall is assuming that a patient who is coughing up a small amount of blood is not at risk for respiratory failure. Some patients accumulate blood in the lungs without voluminous expectoration, as reflected by hypoxemia and respiratory distress. These patients are at imminent risk of respiratory failure.

## 1. Differentiate hemoptysis from upper respiratory tract and GI sources

Hemoptysis has a different management algorithm from upper respiratory tract bleeding and gastrointestinal bleeding, underlying the importance of this first step. Patients with a chief complaint of hemoptysis are often incorrect with regards to the source of bleeding, so relying on the patient's history of hemoptysis alone is a pitfall. Coffee-ground appearance, nausea, vomiting, melena, abdominal pain and known gastric and/or liver disease suggest a gastrointestinal source. Concomitant epistaxis, blood in the nares, or sensation of blood dripping in the posterior pharynx suggests an upper respiratory tract source. A thorough nasopharyngeal and oral exam is recommended; nasopharyngoscopy may be necessary to rule out an upper respiratory source of bleeding. True hemoptysis is usually bright red and/or foamy blood, and is associated with respiratory symptoms as well as a sensation of warmth in the chest.<sup>3</sup> Individuals at risk for massive hemoptysis include those with a history of lung cancer, bronchiectasis, and tuberculosis.<sup>4</sup>

## 2. Maintain adequate oxygenation and ventilation

The decision to intubate is often a difficult one, as securing the airway removes the cough reflex and may increase the rate of blood pooling in the lungs leading to even worse gas exchange. The majority of patients with massive hemoptysis can effectively clear the blood out of the lungs with vigorous coughing. In fact, patients' ability to clear the airway is often more effective than endotracheal intubation and suctioning.<sup>5</sup> If a patient with massive hemoptysis is able to maintain adequate oxygenation with coughing, intubation is not recommended. Indications for endotracheal intubation in patients with massive hemoptysis

include impending or worsening respiratory failure with hypoxemia and dyspnea, hemodynamic instability, low Glasgow coma score with poor airway protection, ineffective cough with inability to clear adequate volume of blood from the lungs, and expected worsening clinical course if patient needs to be sent outside of the ED for a CT scan or definitive procedure.<sup>6</sup> Position the patient with the head of the bed at 30 to 45 degrees during intubation whenever possible, and use an 8.5 or 9 size endotracheal tube to allow for bronchoscopy and/or endobronchial blocker placement whenever necessary.<sup>7</sup> Rapid sequence intubation with video laryngoscopy or ketamine-assisted awake intubation are this author's recommended first-attempt airway strategies in patients with massive hemoptysis who require airway control.

Adequate suctioning of blood from the airway is necessary to provide clear visualization during endotracheal intubation. A single standard suction catheter such as a Yankauer catheter can easily be overwhelmed, becoming ineffective in some patients with massive hemoptysis. Suggestions for adequate suctioning to ensure visualization during endotracheal intubation in this setting include employing a meconium aspirator attached to the endotracheal tube, or the suction assisted laryngoscopy and airway decontamination, or SALAD, technique with a DuCanto aspirator.<sup>8,9</sup> If blood overwhelms the ability of the catheter to clear the blood enough to allow visualization to facilitate endotracheal intubation, do not hesitate to move quickly to performing a cricothyrotomy.

If it is determined that the bleeding originates from one lung it is recommended to position the patient in lateral decubitus with the bleeding lung down to avoid contamination of the contralateral lung. Portable chest X-ray may help determine



from which lung the bleeding originates.

### 3. Early consultation with ICU, interventional radiology, interventional pulmonology, thoracic surgery, and/or anesthesia (depending on local practice and underlying cause)

The definitive management of life-threatening hemoptysis involves source control, which usually requires a procedure, most commonly bronchial artery embolization performed by interventional radiology, bronchoscopy with local instillation of tranexamic acid (TXA), or epinephrine by interventional pulmonology or surgical resection by thoracics.<sup>10–12</sup>

### 4. Administer nebulized tranexamic acid

Inhaled nebulized TXA has been shown in one small, randomized control trial (RCT) and one retrospective study to hasten resolution of non-massive hemoptysis.<sup>13,14</sup> The typical regimen is 500 mg three times daily. Larger doses of 1 to 2 g for massive hemoptysis have shown promise based on several case reports.<sup>15–17</sup> One RCT compared nebulized TXA with intravenous TXA and showed that resolution occurred in 30 minutes in 72 percent of patients in the nebulized group compared to 51 percent in the intravenous group, with a lower admission rate and lower volume of hemoptysis in the nebulized group.<sup>18</sup> Larger RCTs are required before recommending TXA for patients with massive hemoptysis, however this author recommends its use in this setting, as the potential benefit likely outweighs the rare harms of nebulized tranexamic acid.

### 5. Reverse coagulopathies, if present

If patients with massive hemoptysis have recently taken an oral anticoagulant, they should receive specific reversal agents or prothrombin complex concentrates with or without Vitamin K, depending on the specific agent.<sup>19</sup> If the patient has severe thrombocytopenia, consideration should be given to platelet transfusions, to target a platelet count greater than  $50 \times 10^9/L$ .<sup>20</sup> (If the fibrinogen is less than 150 mg/dL, consider giving fibrinogen concentrate.<sup>5</sup>

### 6. Search for underlying cause or source of bleeding with imaging

Chest x-ray can localize the side of bleeding in patients with massive hemoptysis in approximately 50 percent of patients and suggest an etiology in about 33 percent. However, the sensitivity is poor with up to 50 percent of patients with normal chest x-ray having positive findings on CT.<sup>21</sup> CT should be obtained in high-risk patients even with mild hemoptysis, and all patients with moderate to severe bleeding, even if the chest x-ray is unremarkable. The diagnostic yield of CT is superior to that of bronchoscopy while the yield in localizing the lesion is comparable at 75 percent.<sup>7</sup> CT is generally recommended prior to bronchoscopy for this reason. The mnemonic BATTLECAMP may be used to recall the important causes of hemoptysis: Bronchiectasis, Aspergilloma/AV malformation, Tuberculosis, Tracheo-innominate fistula, Lung cancer or abscess, Pulmonary embolism, Cocaine/Coagulopathy/Catamenial/Cystic Fibrosis, Autoimmune (vasculitis, systemic lupus erythematosus), Alveolar hemorrhage, Mitral stenosis, Pneumonia.

### 7. Arrange for definitive management


Depending on the underlying cause, definitive management may include bronchial artery embolization, a bronchial blocker, surgical resection, or even heparinization or embolectomy in the case of pulmonary embolism. So next time you are faced with a patient with massive hemoptysis heading for respiratory failure in your ED, take an organized approach such as this seven-step one to maximize your patient's chance of survival with good neurologic outcome.

*A special thanks to Drs. Bourke Tillmann and Scott Weingart for their expertise on the EM Cases podcast that inspired this column. +*

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# What is the Best Defibrillation Strategy to Treat Refractory Ventricular Fibrillation?

Should a single published article change my practice?

by CATHERINE A. MARCO, MD, FACEP

**A** 67-year-old man presents to the emergency department (ED) in cardiac arrest. He was found by bystanders after he collapsed and 911 was called. EMS physicians report he was found in ventricular fibrillation. Multiple attempts at defibrillation, epinephrine, and amiodarone have been unsuccessful. On ED presentation, he is unresponsive and the monitor shows ventricular fibrillation.

## Problem

What is the best defibrillation strategy to treat refractory ventricular fibrillation?

Out-of-hospital cardiac arrest unfortunately occurs relatively commonly and emergency physicians must be equipped to diagnose and treat this rapidly. It is estimated that approximately 100,000 patients present with ventricular fibrillation or pulseless ventricular tachycardia annually.<sup>1</sup> Overall, survival is poor following cardiac arrest, and is affected by factors including age, comorbidities, witnessed arrest, early CPR, early defibrillation, and return of spontaneous circulation (ROSC).<sup>2,3</sup> Multiple published studies have addressed treatment of ventricular fibrillation with defibrillation and medications such as amiodarone and lidocaine.<sup>4,5,6</sup> Extracorporeal membrane oxygenation (ECMO) has been studied and found to improve survival after ventricular fibrillation.<sup>7</sup>

In attempts to improve survival of this devastating condition, investigators have reported alternative defibrillation techniques. Double sequential external defibrillation (DSED) is a technique in which rapid sequential shocks are placed from two defibrillators, with defibrillation pads in two planes, such as anterior-lateral and anterior-posterior.

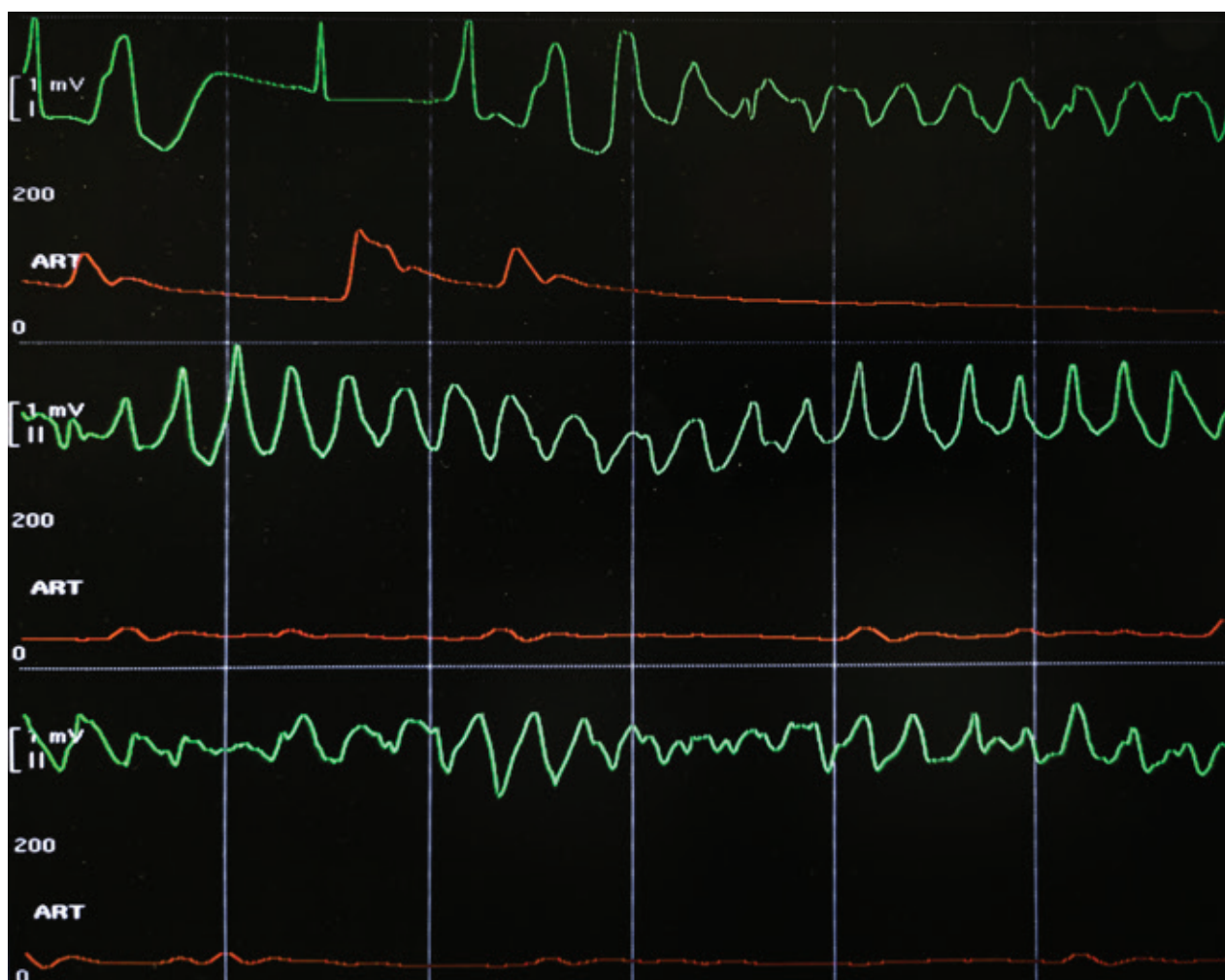
Another alternative defibrillation technique is vector-change defibrillation (VC). In this technique, defibrillation pads are changed from the anterior-lateral position to the anterior-posterior position.

Published reports have demonstrated variable success rates for DSED and VC.<sup>8-12</sup> A recent scoping review published in *The American Journal of Emergency Medicine* reviewed articles between 2016 and 2019, and found 18 observational studies, which failed to demonstrate sufficient evidence for widespread implementation of DSED.<sup>13</sup>

A recent article published in the *New England Journal of Medicine* addressed defibrillation strategies for refractory ventricular fibrillation.<sup>14</sup> This study was a randomized trial with crossover, conducted in Canada, to study DSED and VC defibrillation compared to standard defibrillation among patients with refractory ventricular fibrillation. The primary outcome was survival to hospital discharge. The investigators studied 405 patients who were randomized to standard defibrillation, VC defibrillation, or DSED. The study found that survival to hospital discharge was more common in the DSED and VC groups compared to the standard defibrillation group.

## Should Practice Change on the Basis of a Single Published Study?

Medical practice rarely changes as a result of a single published study. The scientific method ensures that reliable data are reproducible, and other related studies should verify scientifically accurate facts. The results of this study verify findings of



several published studies. A recently published study found higher rates of VF termination and ROSC using DSED and VS defibrillation.<sup>15</sup> Other studies have demonstrated or suggested benefit of double sequential external defibrillation.<sup>16</sup>

In conclusion, this recent study adds to the body of knowledge that DSED and VC defibrillation can be important techniques to treat refractory ventricular fibrillation. Utilization of these techniques can be expected to improve survival for patients with refractory ventricular fibrillation.

## Disclaimer

*This article is not intended to be a thorough review of the topic, but rather a discussion of a recently published article and its impact on the practice of emergency medicine.* ➔

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# Medically Neglected Children

## How to identify and work with neglected children in the ED

by RALPH J. RIVIELLO, MD, MS, FACEP;  
AND HEATHER V. ROZZI, MD, FACEP

A 9-year-old male is brought via EMS for diabetic ketoacidosis (DKA). The EMS technician expresses frustration because this is the third time in four months that she has transported the child for DKA.

### Discussion

In 2021, 588,229 children were the victims of child abuse and neglect.<sup>1</sup> Neglect is the most common form of child abuse, comprising 76 percent of cases. Neglect can be classified as follows:<sup>2</sup>

- **Physical neglect:** Failure to provide adequate food, clothing, or shelter, and inadequate supervision
- **Emotional neglect:** Failure to provide love, attention, and security
- **Educational neglect:** Failure to enroll the child in school, and truancy without a medical cause
- **Medical neglect:** Failure to seek medical care or nonadherence with health care recommendations, resulting in actual or potential harm to the child

In the U.S., medical neglect accounts for approximately 2 percent of child-abuse cases. In these cases, either the caregivers fail to obtain medical care when the child has obvious signs of serious injury or illness, or they fail to follow through with recommended medical care once care has been sought. Emergency physicians have a unique opportunity to recognize these cases and to intervene, as medically neglected children may be brought to the ED once illness becomes severe.

Medical neglect should be considered when a child presents later in the course of a serious illness or injury than a “reasonable person” would have sought care. It should also be considered when a child presents with illness that would not have occurred had caregivers followed through with previously recommended care. The child’s condition must pose a risk of significant harm, and the recommended treatment’s benefit must outweigh its risks and side effects for medical neglect to be diagnosed. In the case above, the child is known to have insulin dependent diabetes, which poses a significant risk of harm if left untreated.

Caregivers may neglect the medical care of children for varied reasons. When medical neglect is suspected or diagnosed, emergency physicians should seek to determine the reason for medical neglect, as targeted interventions are most likely to be effective. Families under financial stress may find it difficult to afford appointments and medications. Caregivers may not be able to provide transportation to appointments. Caregivers may not be able to take time off work for appointments, or appointments may not be readily available. Language barriers may make ob-



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### KEY POINTS

- Approximately 2 percent of abused children experience medical neglect.
- Caregivers may neglect the medical care of a child for various reasons; an approach targeting the specific reason for neglect is most likely to be successful.
- Involving a team including social work and Child Protective Services is crucial.
- Emergency physicians must evaluate the child for other forms of abuse.

taining medical care difficult. Families may lack medical knowledge, not understanding the severity of illness or how to treat a sick child. Children with caregivers impaired by addiction or mental illness may be at higher risk for medical neglect. The recent pandemic demonstrated a significant lack of trust in the health care system which may make parents hesitant to seek medical care for their children.

Caregivers may cite religious beliefs as the reason for not seeking care for an ill child. While adults may decline lifesaving care for themselves, they may not do so for minor children. As noted in *Prince v Mas-*

*sachusetts*, “The right to practice religion freely does not include the liberty to expose the community or child to communicable disease, or the latter to ill health or death.”<sup>3</sup> In cases such as this, the courts may require a caregiver to permit medical treatment for their child, regardless of their religious beliefs.

Physicians are mandatory reporters of child abuse and neglect. In most jurisdictions, physicians or child protective service agencies are able to work with law enforcement and the judicial system to take custody of a child who requires emergent medical care if the caregivers cannot or will not permit that care. Because

various types of child abuse may co-exist, emergency physicians need to do a thorough evaluation of the child to rule out concomitant injuries. Additional laboratory and radiographic evaluations (skeletal survey) may be required.

### Case Conclusion

The patient’s mother is tearful and states, “I lost my job a few months ago and just can’t afford his insulin.” Following appropriate medical treatment in the ED, the patient is hospitalized. The hospital social-work team works with the county Children, Youth, and Families office to obtain insulin for the child and to ensure that the family has transportation to medical appointments. +

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**CARMEN LEE** is a second-year resident in emergency medicine at Highland Hospital in Oakland, Calif.

# Behavioral Emergency Response Teams

A safety solution for staff and patients

by LORENZO SANTAMARIA MS; HENRY ASHWORTH, MD, MPH; ELAINE DELLINGER, MD; MEGAN HEENEY, MD; AND CARMEN LEE, MD, MAS

Physicians, nurses, and staff in emergency departments (EDs) across the country have encountered workplace violence for years. According to federal labor statistics, the prevalence of workplace violence in health care is increasing (see Figure 1). While staff exposure to this violence varies, literature shows nurses are most frequently exposed, with up to 90 percent having experienced workplace violence in their ED careers.<sup>1,2</sup> In a 2018 study by ACEP, nearly half of emergency physicians polled reported a physical assault while at work.<sup>3</sup> Solutions focused on security or law enforcement responses have not improved these statistics because they fail to address the root causes of workplace violence. For the safety of staff as well as patients, interventions that interrupt escalations before they blossom into violence deserve further study.

## The Story in Data

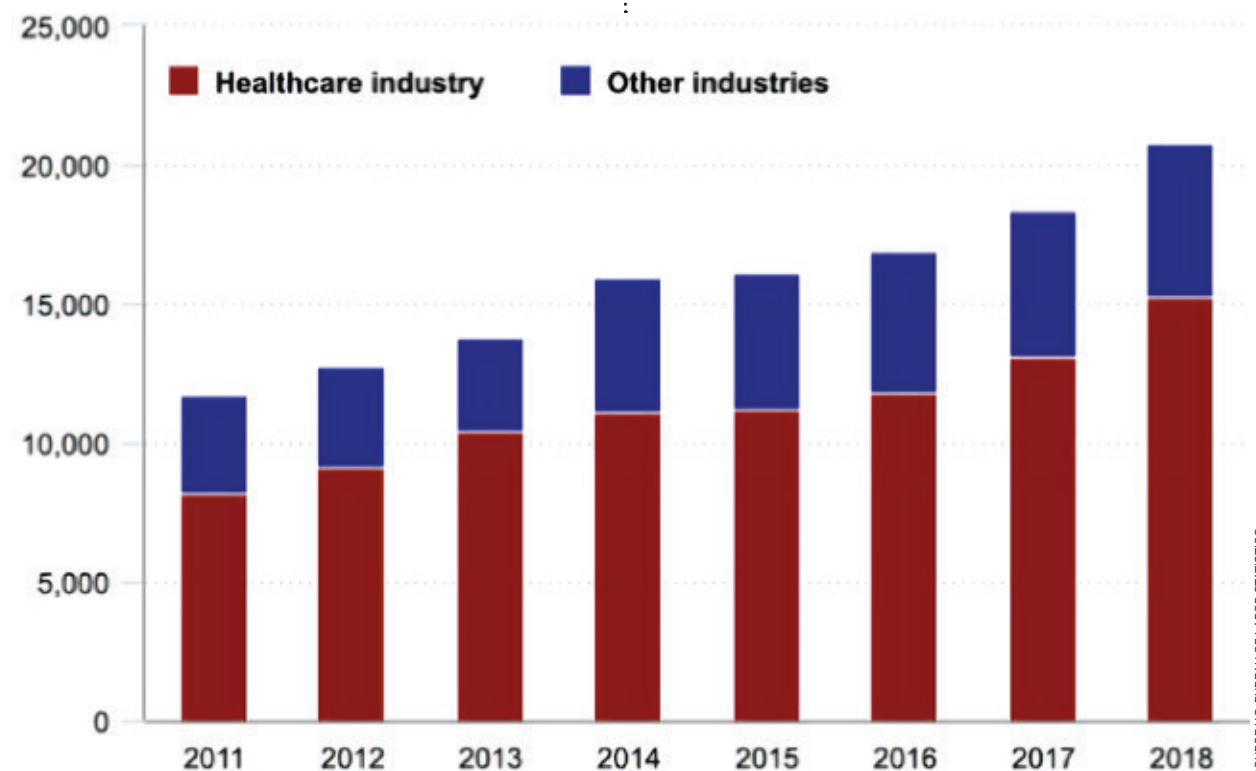
Violence experienced in the ED is often due to agitated, confused, or delirious patients. A study done at the University of Kansas found that approximately 10 percent of the ED volume at a local county hospital was attributed to some type of behavioral emergency and that approximately one in eight ED visits in the U.S are caused by a behavioral crisis.<sup>4</sup> As with other daily challenges in the practice of emergency medicine, EDs deserve a range of nuanced, effective tools that can be tailored to particular patients and scenarios. Unfortunately, the science has thus far lagged behind the ballooning behavioral need.

Managing and caring for aggressive patients may involve calling for security or physical and chemical restraints, but these interventions are temporary and have potential to further harm patients physically and mentally.<sup>5</sup> Hospitals commonly activate a “code” in response to agitated patients, alerting security personnel to the location of that patient. The difficulty with this approach is that these officers often lack the skills and context needed to de-escalate complex behavioral crises. A study from Australia sought to understand security personnel’s experiences responding to agitated patients in the ED: they frequently felt that they lacked information, coordination, and communication when responding with urgent assistance.<sup>6</sup> While the presence of officers can be comforting to staff, it can also be triggering to patients. Security and law enforcement officers can further amplify a patient’s stress response. As additional stress reactions are activated, the window of tolerance for a patient experiencing a traumatic response narrows, increasing the likelihood of escalation.<sup>7</sup>

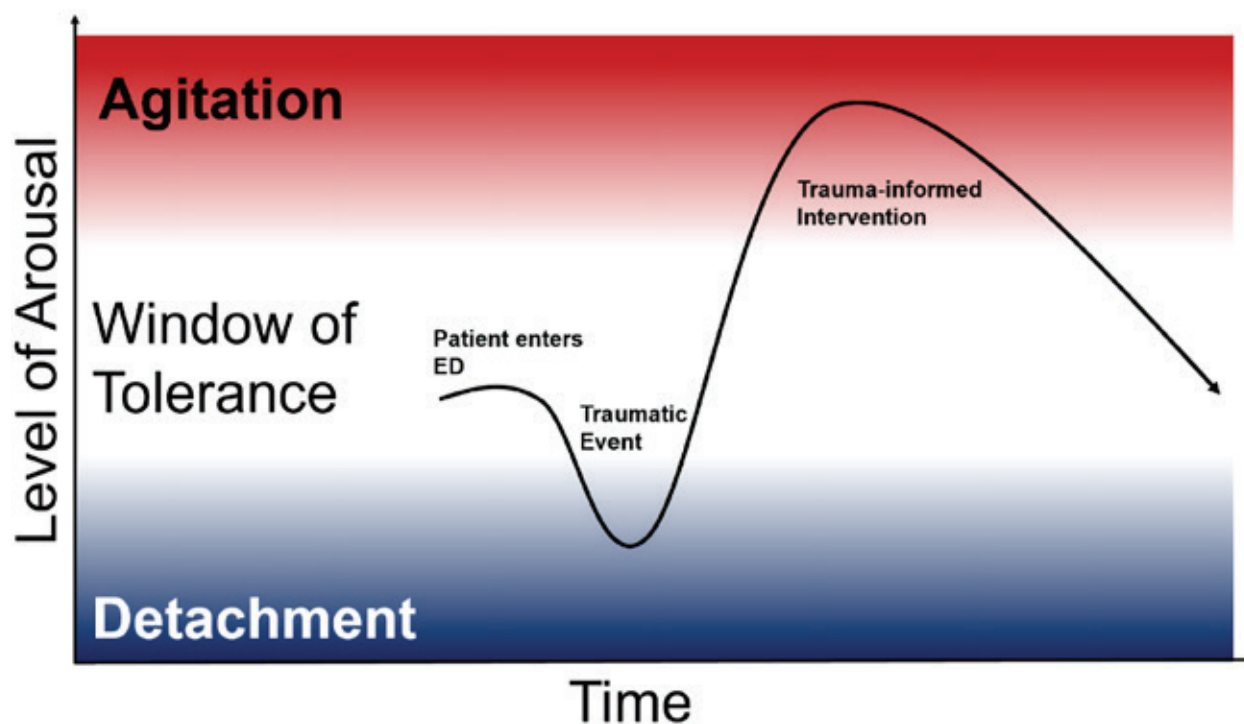
This decontextualized response is also challenging for responders. In one ED in the San Francisco area, a law enforcement officer staffed there said they would appreciate additional support for de-escalating patients. From the law enforcement perspective, hospital policies regarding behavioral codes were “vague” and the same patients are often seen multiple times with similar behavioral crises, he noted in an interview. Both security and health care teams assisting during these crises may benefit from a re-framing of the response to mentally vulnerable patients during times of aggression.

When a patient first enters the ED, they may be within their window of tolerance of stimuli and interventions, (see Figure 2) but a triggering event may cause an initial detached state (numb, quiet, dissociated) to a hyperaroused agitated

**FIGURE 1: Number of nonfatal workplace violence injuries and illnesses with days away from work, 2011-18.**



**FIGURE 2: Patient tolerance of stimuli and interventions.**



state (yelling, getting out of bed, throwing objects). Trauma-informed interventions deployed by BERTs use de-escalation techniques to move the patient from the hyperaroused state back into the window of tolerance so that they can effectively engage in their care.

## A Call for Change: BERTs

Just as rapid response teams have been created to attend urgently to medically decompensating patients in the hospital, Behavioral Emergency Response Teams (BERTs) have been created to rapidly identify and tend to a patient whose behavior is escalating. Evidence from inpatient wards, outpatient

facilities, and addiction treatment centers has demonstrated that BERTs are an effective de-escalation solution in a variety of care contexts.

A 2019 literature review summarized seven studies describing the creation and implementation of BERT teams. Led by psychiatric-trained nurses, teams responding to behavioral codes used a variety of de-escalation methods including non-confrontational communication, moving the patient to a less stimulating environment, and adjusting medications as necessary. Across clinical contexts, BERT teams reduced the activity of security personnel, restraint and seclusion use, and staff injuries.<sup>8</sup> A University of Kansas study found that their



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## Conclusion



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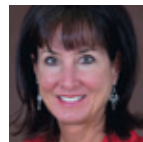


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# UVA Health is “Excellence Driven”

## Re-engineering flow in an academic ED

by SHARI WELCH, MD, FACEP

The University of Virginia (UVA) School of Medicine was founded in 1819 by Thomas Jefferson and is one of the oldest medical schools in the United States. In 1901, UVA opened its first hospital with 25 beds and three operating rooms. The medical center and undergraduate campus in Charlottesville still maintain the appearance of the original quaint colonial campus. But inside these charming historic walls is a research-driven, quaternary-care, academic, medical center.

The emergency department (ED) at UVA was rebuilt in 2019 and the department had not fully optimized its operations when COVID-19 hit. Following the pandemic, the ED saw a surge in its volume as it raced through 60,000 to 80,000 visits per year. (The ED went from daily volumes of 180 patients per day [PPD] to over 210 PPD.) In addition, daily variation increased. In one recent week the variation in daily census ranged from 160 PPD to 230 PPD. This volume and variation presented challenges when attempting to staff the ED appropriately.

The ED team was increasingly concerned about long waits, delays in care, and increasing numbers of walkaways, those who LWBS, or leave without being seen, and leave before treatment is complete, or LBTC. Though they were managing the boarding of admitted ED patients better than many academic medical centers, the increasing boarding burden on top of the surge in daily volume created an urgent need to restructure the ED flow. The hospital leadership, medical-school leadership, and ED faculty and staff partnered to engage in a radical re-engineering project they aptly named Excellence Driven.

They adopted a completely new flow model that allowed for acuity-based patient segmentation. While most academic EDs have lost pediatric volume, the UVA ED continues to see almost 20 percent pediatric patients. In addition, approximately 70 percent of the volume seen consists of middle- or lower-acuity patients. The ED team designed an elegant flow model that separates out the high-acuity patients and sends them to Major Care, while the middle and lower acuity patients go to the Minor Care area called the Rapid Medical Evaluation (RME), which is a combined fast track and mid track. Patients are treated in a vertical model in the RME.

Pediatric patients go to their own zone. Lastly, when patients are admitted, there is a functioning Admission Holding Unit that pulls those patients out of the acute-care areas to make room for newer acute patients. The ED leadership team also used this project to standardize how patients moved through the department to eliminate variation. They developed inclusion and exclusion criteria, time and volume targets for each zone, and swim lanes articulating the work of each role in every area. They also developed standard

work documents for each role. This made it easier for everyone to know what was expected of them at work.

The important finishing touch for UVA Health’s Excellence Driven ED project was the development of real-time patient-flow

leaders. The patient flow coordinator monitored flow into the department while the new charge nurse role monitored flow out of the

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UVA Health's Excellence Driven ED program demonstrates the power of a multidisciplinary effort combined with creative problem solving and data-driven decision making.



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“To me, being a group led by physicians and advanced practice providers means our clinicians are making the decisions, that **we’re giving them the tools they need.** As leaders, we’re there to make sure nothing gets between the patient-clinician relationship.”

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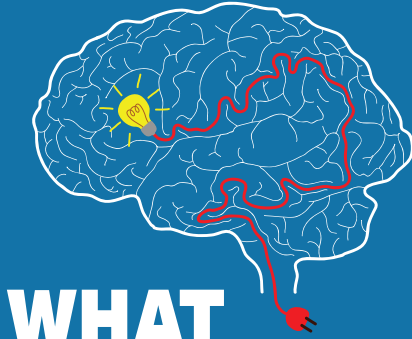
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department. These nurse leaders are tasked with overseeing everything related to patient flow. In particular, these nurse-leader roles include identifying early signs (triggers) that a zone is falling behind. This is particularly a risk in the front end of an ED. They identified strategic responses to each scenario. For instance, the physician-in-triage area can be overwhelmed by surges in arrivals. When the physician needs additional resources, another physician moves forward to help with physician-in-triage intake to get caught up. It is a short-term proposition, and such tactics around the country are often referred to as “high-flow” tactics. The overarching theme in high-flow strategies is to have standardized and articulated trigger-and-response strategies mapped out in advance, to be turned on in real time. The tactics typically involve the temporary deployment of personnel to an area to help when it is falling behind. High-flow strategies will depend on physical layout, staffing, and culture, and will be idiosyncratic to a particular ED. These real-time strategies being employed at UVA Health are cutting-edge operations and not yet embedded into many emergency department operations.

The before-and-after results of this sophisticated ED flow model are remarkable. Door-to-doctor time was reduced, but more importantly patients no longer flowed back into the waiting room, which had a profound impact on walkaways. Despite increases in year-over-year volume, all indicators show improvement in patient flow.

The operations team continues to optimize the new flow model, and multiple task forces focus on refining processes and staffing. Excellence Driven demonstrates the power of a multidisciplinary effort combined with creative problem solving and data-driven decision making. +



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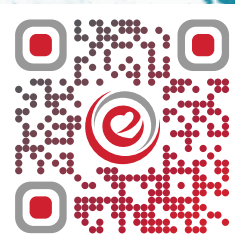
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