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The Official Voice of Emergency Medicine

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PLUS



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 Manage Hard Times**

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 tary and opinion pieces, go to:
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KAT LANDA

On Aug. 28, 2021, Dr. Kat Landa (center) and her fellow officers of the Shock Trauma Platoon waited to fly out of the Hamid Karzai International Airport in Kabul. Read more from Dr. Landa below.

Reflections on Afghanistan

Reeling from 12 nonstop chaotic, heart wrenching days and one mass casualty event, our Shock Trauma Platoon Officers wait to fly out, grateful to be alive and leaving. Despite these smiles, sadness lingers with the knowledge of how many lives have been lost during the recent attack at Abbey Gate and the knowledge of how many Afghan families have been affected by the withdrawal. (See photo 5)

— Kat Landa, MD, FACEP

EXPERIENCE MORE STORIES on page 6

ACEP Chapter Roundup: Highlights, Updates, and More From 2021

In 2021, ACEP chapters were busy advocating for the specialty, hosting educational events, and continuing to support their members through the pandemic.

As we kick off 2022, the chapters were each invited to share their highlights from 2021 and what's planned for this year.

Learn more about ACEP chapters, including how you can join local advocacy efforts, at acep.org/acepchapters.



ALABAMA

The Alabama Chapter hosted the first in-person, post-COVID ACEP regional conference—the EMerald Coast Conference—in Destin, Florida, in June. Multiple hands-on workshops were provided as well as a special opportunity for advanced-level clinicians to participate in a procedural boot camp. Make plans to bring your family to Destin for this year's event June 6–9, 2022. Learn more at www.alacep.org/education-and-cme.

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FORENSIC FACTS

Does Size Matter?

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REFERENCES: 1. Korley FK et al. *J Head Trauma Rehabil.* 2016. 2. i-STAT TBI Plasma Cartridge. Instructions for use. Abbott Point of Care Inc. Abbott Park, IL; 2021.

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The Official Voice of Emergency Medicine

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NEWS FROM THE COLLEGE

UPDATES AND ALERTS FROM ACEP

ACEP Point-of-Care App Adds Five New Bedside Tools

Get the new and expanded version of the em-POC app, now with five more point-of-care tools. This app was created a couple years ago to help emergency physicians access these helpful tools easily, without needing a reliable internet connection. The new version has 12 tools covering the following clinical topics: atrial fibrillation, agitation in the elderly, autism spectrum disorder, hepatic encephalopathy, buprenorphine in the emergency department, bariatric assessment and management, sepsis, hyperkalemia, and caring for suicidal patients. Members can download the tool for free through the App Store or Google Play. View all ACEP point-of-care tools at www.acep.org/pointofcaretools.

Three Emergency Physicians Selected to National Academy of Medicine

ACEP congratulates Renee Yuen-Jan Hsia, MD, MSc; Jay Lemery, MD, FACEP, FAWM; and Renee N. Salas, MD, MPH, MS, on being elected to the National Academy of Medicine in 2021. Dr. Yuen-Jan Hsia is a professor of emergency medicine and health policy and associate chair of health services research, department of emergency medicine, University of California, San Francisco. She was recognized for her “expertise in health disparities of emergency care, integrating the disciplines of economics, health policy, and clinical investigation.” Dr. Lemery, professor of emergency medicine at the University of Colorado School of Medicine, was recognized for his efforts to educate and “advocate on the effects of climate change on human health, with special focus on the impacts on vulnerable populations.” Dr. Salas, affiliated faculty with Harvard Global Health Institute, Yerby Fellow at Harvard T.H. Chan School of Public Health, and attending physician in the department of emergency medicine at Harvard Medical School and Massachusetts General Hospital, was honored for “advancing the medical community’s understanding at the nexus of climate change, health, and health care through highly influential and transformative work.”

ACEP Joins Coalition Working to Support Well-Being of Health Care Workforce

ACEP is proud to be one of the inaugural member organizations of the ALL IN: WellBeing First for Healthcare campaign developed

by #FirstRespondersFirst and the Dr. Lorna Breen Heroes’ Foundation to advance efforts to create and cultivate workplace cultures that prioritize health worker well-being. On Dec. 1, the coalition debuted a new interactive online community of practice. The ALL IN website will serve as a hub of mental health and resiliency resources, providing tools for implementation and a platform to share and engage with other perspectives and commentary from frontline health care workers, institutional leaders, and the public. Learn more at www.emergencyphysicians.org/AllInMentalHealth.

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ACEP Now Editorial Team Seeks Next Resident Fellow

ACEP Now is looking for a resident to join our editorial team! The position is open to any emergency medicine resident physician in an ACGME-accredited program who will be PGY2–4 during the July 2022–July 2023 Resident Fellow term. The Resident Fellow oversees the Resident Voice column and participates in the print and digital editorial planning for the magazine, with potential for podcast and video contributions as well. The position includes a \$1,000 stipend. Applications are due Feb. 18 for a year-long term beginning July 1, 2022. Visit www.acepnow.com/article/resident-fellow/ for more information.

Seeking Comments on Acute Heart Failure Syndromes Clinical Policy Draft

ACEP’s Clinical Policy Committee is seeking comments for its draft “Clinical Policy: Critical Issues in the Evaluation and Management of Adult Patients Presenting to the Emergency Department with Acute Heart Failure Syndromes.” Review and submit your comments by Feb. 7, 2022, at www.acep.org/ACFS-comments.

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WHAT ARE YOU THINKING?



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AND FAXES TO 972-580-2816, ATTENTION ACEP NOW.





OPINIONS FROM EMERGENCY MEDICINE

A NEW SPIN

New Mindset Helps Manage Hard Times

When optimism feels out of reach, we can focus on staying effective in our roles

by SHIDEH SHAFIE, MD, FACEP

I recently had brunch with an emergency medicine colleague who told me she felt dread going into every shift. “I feel fine once I get there. I do my job well, but leading up to it, all I feel is dread,” she said.

Merriam-Webster defines the term dread as “to fear something that will or might happen.” This was a feeling that had become increasingly familiar for myself as the preamble to every shift and that I explored and understood well. My colleague was judging herself for having the same feelings of dread, so I pushed her on it a little by asking, “What if Mary [a mutual nonphysician friend] was signing up to spend eight hours witnessing and attempting to mitigate human suffering and pain—would you judge her for dreading it and still doing it?”

Mixed Messages

The current culture of our world asks us to be positive and excited except for in a very narrow window of circumstances that are largely related to personal grief. That feeling of dread my colleague was describing comes from our internal voice saying, “I should be able to be positive.” When we fail at that forced positivity, we feel dread. We can continue to judge ourselves for not being able to force a smile on our faces with our kept-up chins, or we can instead acknowledge the weight on our backs and honor ourselves for continuing to march uphill despite the many obstacles we face. In these challenging times when we are divided as a nation, confronting the consequences of failed social safety networks, sound education, and climate policy, what if we are not supposed to strive to stay positive?

Staying positive is the wrong goal; it feels burdensome and impossible. Can parents who are struggling with how and when to send their unvaccinated children back to school, while they're also working from home, be expected to stay positive? Is it actually human to be positive in the face of tragedy? Do we want to be waltzing around in a beam of sunshine as many lose their homes and lives of this pandemic?

Strive to Stay Effective

To stay positive in this current phase of the pandemic—as a mother to young unvaccinated kindergartener twins and an emergency physician in the wake of a fourth wave of a more contagious variant, along with a nursing shortage that is likely to be worsened with vaccine mandates—is to be delusional. Perhaps what's being alluded to when people ask for us to stay positive is that they want us to continue to be able to function and be kind, but they are making the wrong ask. We don't need to strive to stay positive, but rather we should strive to stay



effective.

Striving to stay effective is more realistic and empowering. When we frame our goal as staying effective, it allows us to reflect on what creates effectiveness in our lives. It is also important to realize when we ask ourselves to stay effective, just like positivity, we can only be responsible for our own effectiveness, not that of others or institutions. The question then becomes, what do I need to do to stay effective as a person? To show up to my shifts ready to face the challenges? To be kind to my patients and my ancillary staff? To be a parent? To be a partner?

The Practice of Effectiveness

The answers to those questions for me are simple: I need enough sleep, nourishing meals, time with my family and loved ones, time to exercise, help with childcare, and time to reflect. The priority then shifts to making sure those needs are met, not just for myself, but also for the greater good of our community that needs

effective doctors.

In practice what this looks like for me is having a bedtime for myself, making a lot of grilled chicken salads, playing tennis with a colleague at least once a week and hopping on the Peloton in between, declining evening events when I have worked too many evening shifts, allowing myself to hire and ask for help, and taking the time to journal and write.

It is vital that we, as emergency physicians leading through a pandemic, take the time to reflect on and clarify what we need to stay effective. Once we have those answers, we then need to prioritize those needs. When we know how to take care of ourselves so we can be effectively managing the myriad of other off-shift responsibilities we hold becomes doable.

When striving to stay effective, the goal becomes self-care and preservation as opposed to numbing ourselves into the next day so we can show up “positive.” Being effective means speaking to ourselves with kindness and compassion so we can show up for our com-

munities. It means understanding that our colleagues and partners need rest, community, and time to unwind, as do we. Being effective allows for our humanity and the heaviness of the situation while still showing up and serving our patients and communities.

Part of Our Humanity

It is true that my dear colleague and I might feel dread as we prepare to go into our shifts, knowing that we will witness the many holes in our society's infrastructure, the mistrust of science driven by politics and poor preventative health education, human suffering, and tragedy. But isn't that part of our humanity? Perhaps dread should be expected in such instances, and we can all applaud ourselves for showing up despite it while staying effective. 🙌



DR. SHAFIE is assistant professor of emergency medicine at Brown University's Warren Alpert Medical School of Brown University in Providence, Rhode Island.



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

RESIDENCY SPOTLIGHT

EASTERN VIRGINIA MEDICAL SCHOOL EMERGENCY MEDICINE

Instagram: @EVMS_EM

Year founded: 1981

Program length: 3 years

Location: Norfolk, Virginia

Number of residents: 30



EASTERN VIRGINIA MEDICAL SCHOOL EMERGENCY MEDICINE

Residents enjoying the outdoors before SIM lab.

What is one thing residents can experience in your program that they can't anywhere else?

Dr. Knapp: Residents begin their PGY-1 with an emergency vehicle operations course followed by completion of the MD-2 duty physician's requirements for Virginia Beach EMS. This allows them to independently operate an EMS response vehicle during PGY-2 and PGY-3 years.

Why did you choose this program?

Dr. Kallevang: The variety of experience with each block consisting of shifts at Sentara Norfolk General Hospital (Level I trauma), Sentara Virginia Beach General Hospital (Level III community trauma center), Sentara Obici Hospital (rural hospital), and Children's Hospital of the King's Daughters (Level I trauma center). There are also monthly wellness events sponsored by the program including Topgolf, beach days, brewery outings, barbecues, and trips to destruction and escape rooms. Finally, not only are our attendings affiliated with the medical school, but all of our academic and community emergency medicine attendings are part of a local, independent, democratic group, Emergency Physicians of Tidewater. Five of the core faculty have received the ACEP National Faculty Teaching Award.

How do residents relax during their downtime?

Dr. Knapp: Beach days! Both the Atlantic Ocean and Chesapeake Bay are a short trip from our primary teaching site. In addition to that, we have Norfolk Tides Triple-A baseball and Norfolk Admirals professional ice hockey league games. There are also at least 10 local breweries within a five-minute drive from the hospital. The water-side district has free outdoor concerts, weekly festivals, and a mechanical bull. What else can you ask for?

—Barry Knapp, MD, program director, and Leslie Kallevang, MD, PGY-3, wellness chair

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PHOTO 1 (ABOVE): A view from the Hudson River in August 2001.

PHOTO 2 (RIGHT): The smoke emanating from the North Tower of the World Trade Center blurs with the debris cloud formed by the collapse of the South Tower.



CEDRIC DARK

Reflections on Afghanistan

Members of the Government Services Chapter of ACEP reflect on memories from their time serving overseas

Most of you probably remember exactly where you were and what you were doing on Sept. 11, 2001. A few weeks earlier, I had just arrived in New York to begin medical school. I took a photo from a ferry in the Hudson River on Aug. 25, 2001 (above). Weeks later, while sitting in the lecture hall at NYU School of Medicine, my friends and I heard about a small plane crashing into one of the Twin Towers, setting it ablaze. At the end of the lecture, we rushed to the rooftop of Rubin Hall and stood horrified as the dust blowing to the east of the North Tower cleared just enough to reveal that the South Tower had already collapsed. Soon, in response to the horrific terrorist attacks that killed thousands of Americans in New York, DC, and Pennsylvania, our country would be at war, one that lasted a generation and one

that emergency physicians from our Government Services Chapter have played an integral part. These reflections explore the memories of our service members and colleagues from 9/11, through the Global War on Terror, and to the final days of the withdrawal from Afghanistan. (See photos 1 and 2)

—Cedric Dark, MD, MPH, FACEP, MEIC

FIGHTING FOR WHAT'S RIGHT

BRET T. ACKERMANN, DO, FAAEM, FACEP, COLONEL, US ARMY (RETIRED)

I was a member of a medical team supporting multiple elements of U.S. Special Operations Command (USSOCOM) in Afghanistan 2004–2005. During this time, most of the public's attention was on the war in Iraq, although combat operations were continuously occurring throughout Afghanistan. When not supporting direct action elements of USSOCOM, my medical team provided medical and surgical care to the local population, who had long-term sequelae of injuries sustained during Afghanistan's war with the USSR or as a result of the unexploded ordinance leftover from that war. Thank you very much to the men and

women of the U.S. and coalition partners with whom I served, and a special thank you and respect to the Afghan men and women who have known nothing but war and terror for generations yet continue to fight for their people and ideals. (See photos 3 and 4)

"WE LEFT THINGS IN A BETTER STATE THAN WHEN WE GOT THERE"

MARK ANTONACCI, MD, FACEP

I deployed several times during my time on active duty, but my most memorable deployment was in 2010 as part of an Embedded Training Team based out of Forward Operating Base Lindsey in Kandahar Province. My team worked with the Afghan Army doctors, nurses, medics, and ancillary staff on a daily basis in their facility. It was (and likely still is) the Wild West of Afghanistan. Processing the events of the U.S. withdrawal over the last few months has been difficult. I just try to focus on the fact that we left things in a better state than when we got there. We were able to make life a little easier for many (especially the women and children) who otherwise would not have had

access to any medical care. The individuals we trained were able to provide a standard of care to the local population well above the existing civilian medical system. I can only hope some of that care we provided has persisted despite the current Taliban regime.

"WE SAVED THEM FOR A GOOD LIFE"

TORREE MCGOWAN, MD, FACEP

One of the most impactful things that happened to me when I was deployed in 2009 was having Operation Proper Exit come through my hospital. These men and women had been wounded in previous tours and were coming back through the country to see where they had been cared for. Most of them remembered getting hit and then would wake up at Brooke Army or Walter Reed and have a huge chunk of their life missing. Proper Exit let them come back and begin to process their trauma. Every one of them—most of whom were multiple amputees, had significant burns, and had survived other severe trauma—said we saved them for a good life. That kept me fighting to save them, no matter how badly they were injured.



PHOTO 3 (ABOVE): This child (left) and gentleman (right) sell DVDs at the local bazaar; after Dr. Ackermann's team repaired their injuries, they gave the team a pretty good discount on their sales.

PHOTO 4 (RIGHT): Dr. Ackermann on patrol in Afghanistan.



BRETT ACKERMANN

"I WAS WHERE I WAS NEEDED..."

LEO TANAKA, MD, FACEP

On Sept. 11, 2011, the 10-year anniversary of 9/11, I was flying throughout Afghanistan on missions to pick up critically injured patients from forward operating locations (sometimes from unsecured airfields) and take them to a Role 3 higher level of care. I was proud of my work but sad about the devastation I saw. As medical director of a U.S. Air Force Pararescue unit that deployed so "that others may live," I was where I was needed and where I could make the greatest impact. The mission remains, and there is still work to be done.

"I WAS USEFUL AND HELPING THE GOOD GUYS"

YANG WANG, MD

I was at Camp Bastion in 2012 from May to October as the Tactical Critical Care Evacuation Team (TCCET) physician. We flew more than 170 missions across Afghanistan, transporting patients from Role 2 to Role 3 hospitals.

Flying U.S. and coalition soldiers always felt good. I was useful and helping the good guys. But, more than half our patients were Afghan adults and children with amputations, open abdomens, burns, and devastating head injuries. Awake patients wore flat affects, no eye contact, and no acknowledgements. The rest were vented, swollen, broken. For every U.S. and coalition soldier I handed off, I knew they'd find world-class rehabilitative and psychological services at home. But what about my Afghan patients? Yes, we patched them up. But where would they find those same services?

Managing critical patients was thrilling and professionally rewarding. Mixing drips and push-dose pressors, setting up a-lines, IV pumps, and ventilators were skills I never learned in civilian residency, and it all made me a better physician today. I worked with the most diligent and grounded co-workers I've ever met.

Yet, remembering those Afghan patients, I'm relieved we have exited.

"YOU REALLY LEAN ON YOUR TRAINING"

RODERICK FONTENETTE, MD, FACEP

While deployed in 2014 in Afghanistan as part of the Tactical Critical Care Evacuation Team (TCCET) I was deployed far forward to care for members wounded at the point of injury and begin moving them toward a higher level of care. As an emergency physician deployed to resource-limited environments, you really lean on your training and focus on hemorrhage control and damage control resuscitation. On this deployment, we worked in the back of a UH-60 Black Hawk helicopter. The skills acquired in residency are instrumental when helping manage critically injured patients.

THE NATO EFFORT TO FIGHT COVID-19 IN AFGHANISTAN

RORY STUART, MD, FACEP

Midway through our Bagram deployment in early 2020, COVID-19 exploded across the globe. U.S./NATO physicians and war planners were tasked with developing a viral response plan.

We began with a series of mitigation strategies: quarantine requirement for all inbound

personnel, moving high-risk individuals out, social distancing, masking, closing gyms, and suspending nonessential travel. Critical care resources were collapsed into the Role 3s in Bagram and Kandahar.

Emergency physicians would decide which individuals would be tested, quarantined, admitted, or sent to isolation. In emergency medicine, we are trained to do more with less in the service of patients who often have few good options. Our deployed emergency medicine team took this ethos and tackled the biggest military medicine and logistical problem of the last century. In recognition of our contribution to the mission, Gen. Austin Miller personally awarded our team the Bronze Star prior to our departure.

THE CALL TO SERVE THEIR NATION

MAX LEE, MD, FACEP

Deployments are times of uncertainty: Will I be able to do what I was trained to do? Will I come home safe? How will my family fare while I am away?

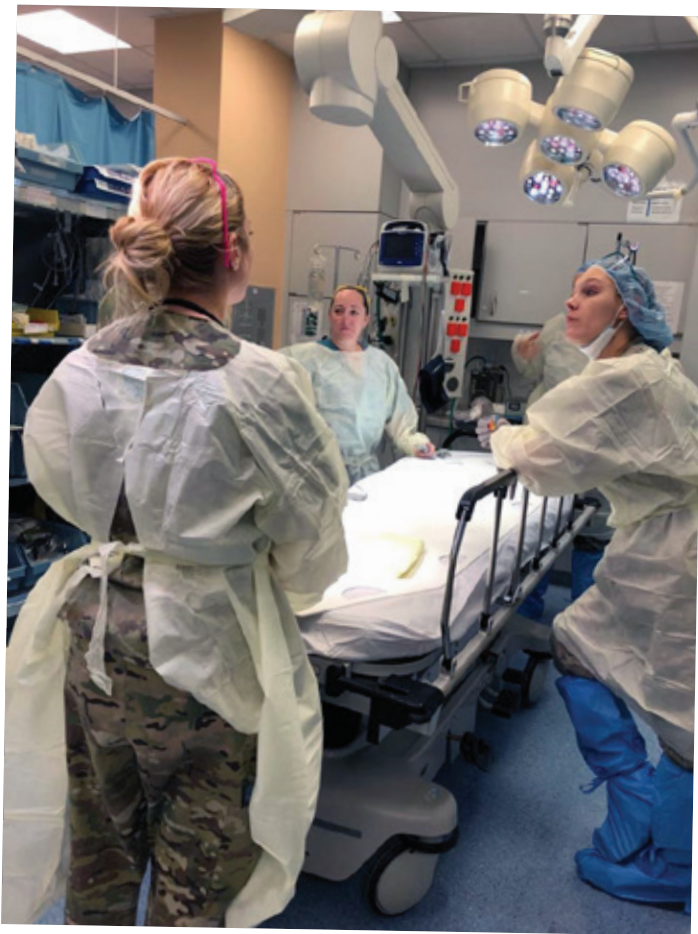
Deployments are also moments of serendipity where friends reconnect across the globe working along-side soldiers, Marines, airmen, and sailors who've answered the call to serve their nation. (See photo 6)

UNIQUE BONDS FORMED

SEAN STUART, LCDR, MC, USN, D.O., FAAEM, FACEP, FAWM

The war in Afghanistan, like any war, had no lack of trials, tribulations, and losses. Yet the experiences and pride that came from our work there became defining moments in my life. Never has there been a better setting than a combat zone to emphasize the importance of those around you. It is not cliché to say these people became like family. Years later there are still emails, text messages, wedding invitations, and even the occasional reunion. Like the experiences there, the bonds formed are truly unique. (See photo 7)

Check out this month's cover story online to see more photos from Afghanistan. ☪



KAT LANDA

PHOTO 5: At Kandahar Airfield in January 2019, Dr. Kat Landa and Trauma Team Charlie prepare for an incoming mass casualty of Afghan Special Forces from a Taliban attack in Kandahar Province.



MAX LEE

PHOTO 6: Medical school classmates gather at the 14th Combat Support Hospital, Bagram Airfield, Afghanistan. From left: retired Col. Brian Delmonaco (EM), retired Col. Max Lee (EM), retired Col. Christopher Lettieri (Critical Care), and retired Col. Shawn Taylor (EM).



SEAN STUART

PHOTO 7: On April 20, 2012, Dr. Sean Stuart in front of Marine Corps Base Kaneohe Bay in Hawaii.

ARIZONA

Arizona Chapter's board member and state representative, Dr. Amish Shah, proposed legislation that was signed into state law and was also accepted as a Council resolution at ACEP21. It prohibits a third-party contractor from taking retaliatory action against a contracted health care clinician who reports an unlawful activity, policy, or practice to the contracting health care institution.

ARKANSAS

Arkansas Chapter leader testified against SB 289/Act 462: To Create the Medical Ethics and Diversity Act. This bill would allow clinicians and insurer's to deny care or coverage to a patient based on the clinician or insurer's personal moral, ethical, or religious beliefs. The Arkansas Chapter believe this bill was too broad and would open the gate for legalized discrimination in medicine with little to no recourse for patients. The legislature passed the measure in spite of broad concerns from the Arkansas medical community over the bill's language.

CALIFORNIA

Due to advocacy by the California Chapter, state law now prohibits stand-alone psychiatric facilities from refusing to accept the transfer of a patient from an emergency department based on insurance status. The state budget also appropriated \$40 million in grant funding for hospitals to hire behavioral health navigators in the emergency department, a follow-up to our successful campaign to secure \$20 million in grants for emergency department substance use navigators.

COLORADO

In 2020, Colorado ACEP created a COVID Task Force that involved associate and medical directors from across the state. The TF's goal was to share information and brainstorm ways to help each other through the pandemic. In 2021, legislators and journalists became aware of this group and were eager to participate in informing the public, ensuring legislative priorities, and addressing imminent struggles. The group continued to evolve and is planning a summit in 2022.

CONNECTICUT

The Connecticut Chapter worked with Gov. Ned Lamont to help protect physicians and frontline workers treating COVID-19 patients. As a result, Gov. Lamont's Executive Orders No. 7U and No. 7V provided immunity from civil liability during the pandemic for physicians and other health care professionals; were instrumental in protecting the lives of health care workers, patients, and their families; and allowed Connecticut to maintain appropriate staffing levels.

DELAWARE

The chapter is working to encourage advocacy in the next generation of emergency physicians. We have historically selected two to three residents in their senior year of training to serve as Delaware Chapter fellows and have also approved two annual scholarships to support URiM medical students rotating in emergency medicine at Delaware hospitals.

DISTRICT OF COLUMBIA

The chapter held several events: an EM workforce townhall with Dr. Aisha Terry and Mr. Edward Salsberg as panelists, a virtual program directors panel in collaboration with the DC EM Medical Student Council, and an EM MAT waiver training course in collaboration with national ACEP and Providers Clinical Support System.

FLORIDA

Celebrating our 50th anniversary in 2021, the Florida Chapter put together a three-part video project to commemorate the milestone. Titled *50 Years, 50 Voices*, each video shares insights from those present in the early years of the specialty, those who've made vital impacts in our chapter, and those who are our newest leaders serving FCEP today. View all three videos at <https://fcep.org/50years>.

GOVERNMENT SERVICES

The Government Services Chapter is rolling out a new bi-directional communication platform, similar in function to Facebook, through Tradewing, which will allow our members to use a secure location online to share ideas, concerns, stories, and articles. The platform will be open to members only, and members can join groups based on service branch, areas of interest, and location.

IDAHO

The emergency physicians of Idaho have continued to rise to the occasion and care for patients despite our state's low vaccination rates, high hospital admission, and being on crisis standards of care. Our hearts go out to all those who have lost loved ones to COVID. We look forward to when we can gather in-person again and are grateful for all the hard work our colleagues have put forth toward our state in the darkest of times during the pandemic.

ILLINOIS

In response to the murder of George Floyd and considering emergency medicine's vital role in striving for equity in health care, the Illinois Chapter's Social Emergency Medicine Committee presented a four-part we-

binar series titled "Structural Racism and Social Justice." Speakers included Illinois Congressman Bobby Rush, Dr. Karriem S. Watson, Dr. David Ansell, and Dr. Linda Rae Murray. The sessions are posted on the ICEP website at www.icep.org/advocacy-key-issues/structural-racism-and-social-justice-webinar-series/.

INDIANA

The chapter welcomed a new executive director, Cindy Kirchhofer, in May 2021 following the retirements of Nick Kestner, who had served as executive director since 1979, and Sue Barnhart, who was executive assistant for more than 25 years. Prior to joining INACEP, Kirchhofer was an Indiana House Representative for 10 years, and for six of those years, she served as the chair of the House Public Health Committee.

IOWA

The Iowa Chapter voted to solicit chapter members to donate to a fund that would sponsor medical student involvement with the chapter and use the funds accumulated to pay for membership dues. The chapter will match any donations given to the Medical Student Fund at www.iowaacep.org/medical-student-donation/.

KANSAS

The Kansas Chapter has created an opportunity for young physician leaders to build skills in advocating for emergency physicians, their patients, and the public. The chapter has developed an internship to provide an active learning experience in leadership and advocacy for young emergency physicians. This opportunity will provide exposure to the KsACEP Board and Council activities as well as the ACEP Leadership and Advocacy Conference and the ACEP national meeting.

KENTUCKY

The Kentucky Chapter was excited to host an in-person Annual Meeting on Nov. 18, 2021. The Schools of Medicine got together to have a Resident Simulation Battle of the Bluegrass event. We also had poster presentations from medical students across the state. Dr. Alicia Mikolaycik Gonzalez highlighted the success of the CA Bridge program, which was followed by a panel of statewide bridge clinic experiences. The day ended with a bourbon flight tasting and a tour of Castle & Key Distillery.

LOUISIANA

The chapter successfully defended the practice of medicine and emergency medicine against scope creep by physician assistants and nurse practitioners. We plan to proactively pursue physician and patient safety-directed legislation in the next session.

MARYLAND

Maryland ACEP hosted virtual meetings with key legislators focusing on issues such as behavioral health and personal protective equipment. We were also successful maintaining the state Medicaid program's E&M code payments at 93 percent of Medicare rates. In February 2021, our chapter president testified at the Judiciary Committee on a bill aimed at expanding existing liability protections for frontline workers during the pandemic.

MASSACHUSETTS

The Massachusetts Chapter held its Annual Meeting and Education Conference virtually on May 5, 2021. Member participation and attendance was double compared to our previous in-person event.

MICHIGAN

The Michigan Chapter completed its three-year strategic plan in 2020 but was waylaid by COVID before getting back on track for 2021. MCEP is keeping true to the plan's direction in reaching out to more members and prospective members with its virtual offerings and making all meetings and conferences hybrid to increase accessibility across the state.

MINNESOTA

A mirror was instantly held up to each of us, demanding that we examine our own hearts in the wake of George Floyd's murder in our state. The Minnesota Chapter held our first-ever health care equity virtual conference on April 19, 2021. We were impressed by the talented presentations from dedicated, erudite, and diverse emergency physicians who call Minnesota home.

MISSOURI

The Missouri Chapter held a hybrid Missouri Emergency Medicine Symposium in late May 2021. MOCEP also held the second annual Student Symposium on Emergency Medicine in early June 2021, also as a hybrid event. The Student Symposium included residency program round tables and a hands-on airway skills lab in addition to lectures on wellness, tips for students on rotations, and a highlight of several fellowship programs in our region.

MISSISSIPPI

Mississippi is grappling with critical issues at the intersection of scope of practice, task force, and training. The Mississippi Chapter has maintained a long partnership with our state medical association and the American Medical Association and defeated HB 1303 earlier this year, a bill that sought to let advanced practice professionals practice without any physician involvement.

NEW HAMPSHIRE

On Nov. 4, 2021, the New Hampshire Chapter held its annual LLSA training and testing virtually. On May 19, the chapter sponsored a dinner for faculty, residents, and medical students from Dartmouth-Hitchcock Medical Center, and more than 50 people attended the event. The outdoor dinner with a taco truck followed the annual Managing Medical Emergencies conference, which celebrated its 30th year.

NEW MEXICO

The New Mexico Chapter has worked to improve access to resources for medication-assisted treatment for patients with opioid use disorder, specifically connecting emergency departments statewide to educate community partners through promotion of the New Mexico Bridge Project (www.nmacep.org/nm-bridge/).

NEW JERSEY

The New Jersey Chapter used technology to its advantage during the pandemic through its ED Visit Program, Leadership Development Series and Residents Forum. The chapter was able to “visit” nine different departments during the pandemic and continues to add additional visits to the calendar.

NEW YORK

The annual New York Chapter Scientific Assembly returned, safely and in person, to beautiful Lake George. Chapter leaders planned meticulously for many months under the dark shadow of uncertainty cast by an unpredictable pandemic, with the primary objective of maintaining the safety of our members. Through a vaccine requirement and adjustments to the physical space and program, the 2021 Scientific Assembly was a resounding success.

NORTH CAROLINA

Normally our annual conference is not the “highlight” of the year, but considering the last 18 months, it was so good to meet in person and enjoy time with our colleagues at the Coastal Emergency Medical Conference at Kiawah. We loved seeing our North Carolina friends and meeting fellow physicians in our neighboring states.

NORTH DAKOTA

The North Dakota Chapter began collaborating with the University of North Dakota to host events that benefit medical students, encouraging involvement with emergency medicine and teaching them how to prepare for a long career in emergency medicine.

OHIO

The Ohio Chapter released the 10th edition of the *Dr. Carol Rivers' Preparing for the Written Board Exam*, a two-volume textbook written primarily for emergency physicians preparing for or taking a written board certification or recertification exam or in-training exams in emergency medicine. Initially created by Dr. Carol S. Rivers, a national leader in board review education, this book has long been the gold standard for a comprehensive yet concise review of emergency medicine in preparation for board exams.

OREGON

The Oregon Chapter is ready to bring some levity into 2022. In addition to a dynamic lineup of local and national speakers across the traditional CME gamut, we are excited to bring Dr. Will Flanary, aka Dr. Glaucomflecken, to the keynote stage this February. He is an Oregon ophthalmologist who also moonlights as a popular comedian on Twitter and TikTok, bringing attention to issues such as balance billing, COVID morale, and the plights of being a medical student through his hilarious videos. As we prepare to roll up our sleeves for another legislative session in 2022 that will be sure to bring disagreements on vaccines, reimbursements, and possibly liability issues, we feel a little laughter will be a good thing.

PENNSYLVANIA


The Pennsylvania Chapter helped influence the COVID-19 response in our state, which included successfully advocating for personal protective equipment for all health care clinicians, successfully advocating for limited liability protections during COVID-19, and a social media campaign focused on COVID-19 vaccination education.

PUERTO RICO

As a Puerto Rico Chapter initiative, the Emergency Medicine Chapter was reactivated at the College of Physicians and Surgeons of Puerto Rico (Colegio de Médicos y Cirujanos). As part of this initiative, chapter leaders participated in a Senate meeting where discussions took place regarding the work, lives, and well-being of fellow physicians throughout the island. One of the resolutions approved included a list of regulations that went into effect in June 2020. Through this resolution, the chapter requested that all hospital-based specialties have a say in the development of the regulations that will define the operation of hospitals in the island and the lives and working conditions for physicians.

RHODE ISLAND

Emergency physicians from the Rhode Island Chapter were instrumental in helping to pass




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a pilot program that directs the Rhode Island Department of Health to establish harm reduction centers (HRCs). These centers, also known as safe injection sites, are licensed, community-based resources for health screening, disease prevention, and recovery assistance for all people who use drugs. HRCs allow people to safely consume, under medical supervision, controlled substances that they bring with them.

 **SOUTH CAROLINA**

After a long year, the South Carolina Chapter was excited to see the return of the annual Coastal Emergency Medicine Conference at Kiawah Island. We were so excited to welcome everyone after the 2020 conference was canceled. Highlights of the conference included an ACEP update from current ACEP President Dr. Gillian Schmitz, the annual Tri-State Jeopardy Tournament, and the annual barbecue and oyster roast party.

 **TENNESSEE**

The Tennessee Chapter hosted the EMerald Coast Conference Chapters' candidate forum virtually on Aug. 25, 2021. Leaders from eight of the 10 EMerald Coast Conference chapters par-

ticipated: Alabama, Kansas, Kentucky, Louisiana, Mississippi, Missouri, Montana, and Tennessee. All candidates for national ACEP office and Council leadership participated. A follow-up survey to the forum indicated that the participating chapter leaders believed the forum offered equitable access to the candidates, was unbiased, and was an important factor in their candidate selection during the 2021 Council meeting.

 **TEXAS**

A key highlight was the distribution of 300,000 N95 masks. These masks were given free to Texas Chapter members (some were asked to pay for shipping costs) due to our close relationship with the Texas Medical Association. These masks were hard to get during the start of the pandemic and were especially appreciated by members in rural areas. Dr. David Pinto, a Texas Chapter member who commuted each week from Austin to the Panhandle, took it upon himself to deliver hundreds of the masks during his travels.

 **UTAH**

The Utah Chapter held its annual Utah Emergency Physician Summit, which featured Dr.

Amal Mattu, Dr. Megan Ranney, and Dr. Jacob Avila as keynote speakers. We developed a task force focused on addressing protocolization of emergency department medical screening exams of arrested persons prior to being taken to correctional facilities (previously referred to as emergency department jail clearance) in Utah. We also held a statewide town hall meeting for emergency physicians regarding COVID best practices, featuring officials from the Utah Department of Health and one of our Utah congressmen.

 **VIRGINIA**

The Virginia Chapter relaunched our podcast (Safety.Net). The podcast provides a detailed understanding of the issues through interviews with key experts in our state. The podcast format can easily fit into your busy schedule and long commute. Recently, we've uploaded podcasts on human trafficking, out-of-network billing, and the substitute decision-making algorithm we created for our chapter. Download our podcasts at www.bit.ly/vacepsafetynet.

 **WISCONSIN**

After years of grassroots advocacy efforts, the

Wisconsin Chapter was finally able to receive its first increase in Medicaid reimbursement for emergency services approved in the biennial state budget. Wisconsin pays less than any other state for emergency medicine evaluation and management. This is the first increase in more than two decades for emergency physicians. Wisconsin Chapter members are currently working with the Wisconsin Department of Health Services to provide input on how the additional \$4.4 million increase in funding will be allocated among emergency department codes.

 **WYOMING**

The Wyoming Chapter is the smallest chapter with just under 50 members. Our state medical school is a member of WWAMI (Washington, Wyoming, Alaska, Montana, and Idaho) through the University of Washington School of Medicine. Wyoming medical students have a contract to come back and work in the state upon completing training elsewhere, or they owe the school \$250,000. Unfortunately, we are short for emergency medicine positions and many WWAMI graduates will be completing their emergency medicine training soon. As a chapter, we met with various agencies to troubleshoot this employment crisis. 📍



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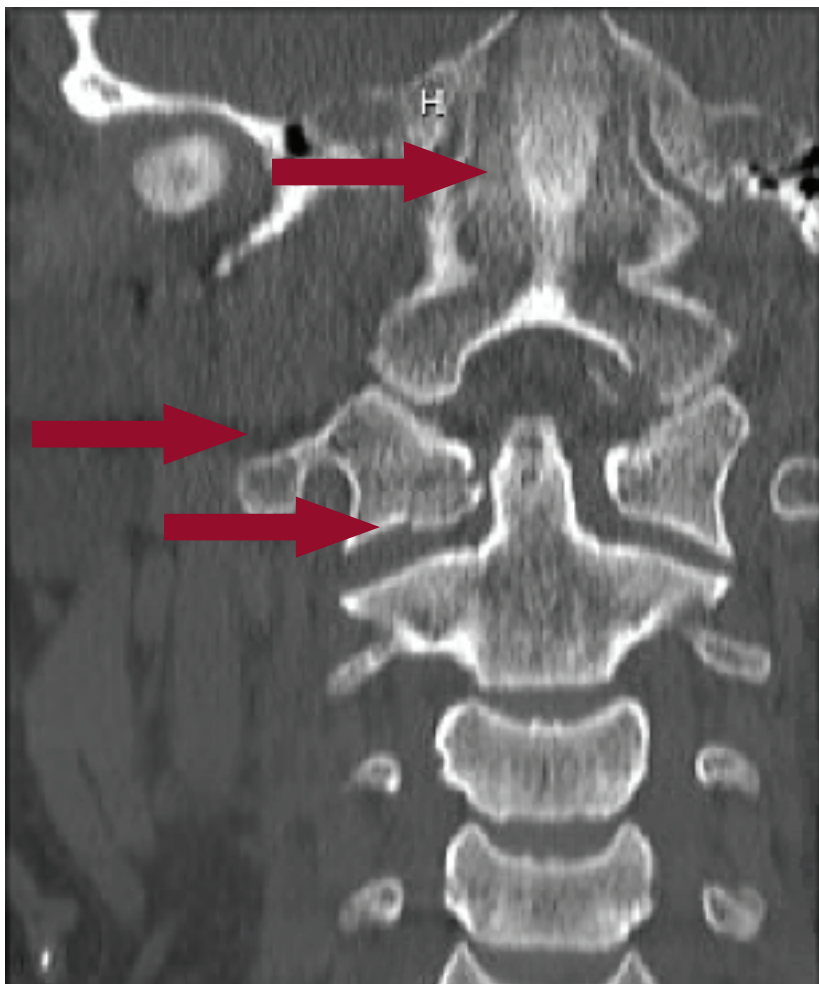


Figure 1: CT showing a C1 fracture with evidence of retroclival hemorrhage extending through foramen magnum. Facets at C1–C2 are no longer aligned.

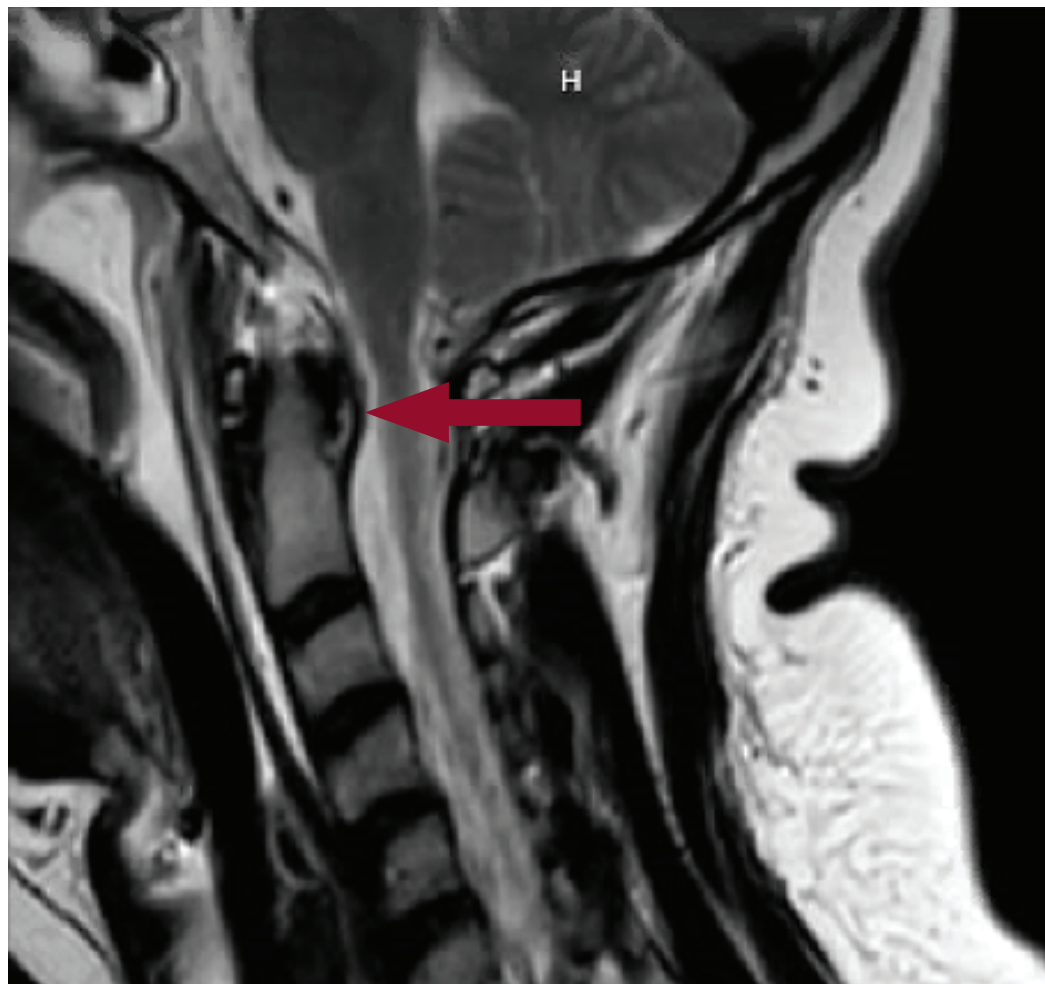


Figure 2: MRI showing a subdural hematoma at the cervical medullary junction causing stenosis to the spinal canal just inferior to the foramen magnum.

Walking Away from Atlanto-Occipital Dissociation

Serious C-spine injuries are becoming more common—and survivable

by JORDAN STAV, MD; THOMAS KOPP, MD; MARSON MA III, MD; AND FADI DAOUK, MD

Atlanto-occipital dissociation (AOD) is often the result of high-velocity trauma injuries.¹ It is believed that AOD may have a higher incidence than previously estimated due to the number of cervical spine (C-spine) injuries that resulted in death with AOD having been found on postmortem examinations.

The Case

A 30-year-old woman initially presented to a small community emergency department following a motor vehicle crash. The patient was a restrained driver in a sedan that was T-boned by a pickup truck in an intersection at high speed. The patient had a prolonged extraction, with initial Glasgow Coma Score (GCS) of 5. EMS was unable to intubate with direct laryngoscopy in the field but was able to use a bag valve mask effectively until arrival at the emergency department. C-spine precautions were maintained throughout the prehospital and hospital settings.

During the prompt primary survey, the patient was intubated due to having a GCS of 3. The patient subsequently had a one-view chest X-ray to confirm placement and was quickly transferred to the Level 1 trauma center. Upon arrival at our emergency department, the patient was assessed by an emergency medicine resident, the emergency medicine attending, and the trauma team. The patient was arousable, with a GCS of 10T. She was moving all extremities and demonstrated minimal external signs of trauma; however, she may have had mildly decreased sensation on the right side. The patient was quickly sent to CT following the primary survey, focused assessment with sonography in trauma (FAST), X-rays, and secondary survey. Despite the patient's well appearance, her C-collar remained on and C-spine precautions were kept.

Following CT, we received an urgent call from the radiologist that the CT demonstrated a retroclival hemorrhage extending through the foramen magnum with mass effect on the medulla and upper cervical spinal cord, as well as a displaced type 3

KEY POINTS

- Maintain C-spine precautions through all movements, transfers, and procedures with trauma patients, regardless of the patient's appearance or presentation at any given point through the case, until the C-spine is cleared.
- Due to better education and management of C-spine injuries from the prehospital setting through the emergency department, be prepared to see an increased incidence of serious injuries, such as AOD, in your department.
- Quick recognition of traumatic C-spine injury, diagnosis, and involvement of trauma team and neurosurgery decreases morbidity and mortality.

left occipital condylar fracture and mildly displaced fracture through right anterior C1 arch (See Figure 1). The neurosurgery consult note read, "Atlanto-occipital dissociation injury—extremely unstable, skull is detached from C-spine. Typically, this injury is immediately fatal in about 80% of cases."

Discussion

Despite AOD having extremely high mortality and morbidity, there have been increasing reports of AOD survivors.¹ The decrease in morbidity and mortality may be due to the advents of prehospital care as well as the early recognition and treatment in the emergency department, which has been associated with the establishment and development of emergency medicine as a specialty.¹⁻³

The earlier the patient is put in C-spine stabilization and advanced imaging is performed—often with CT, then MRI—the greater the probability of improved morbidity and mortality.⁴ Following external stabilization and diagnosis, early and aggressive surgical stabilization is associated with improved outcomes.⁵

Due to the decrease in mortality, AOD may become a more frequent diagnosis in the emergency department. It is important that we keep C-spine injuries at the forefront of our minds while evaluating trauma patients. This entails maintaining C-spine precautions during procedures and transport of these patients.

Case Resolution

This patient was taken to the operating room for emergent neurosurgical intervention following her MRI findings (See Figure 2). Her occiput was fused to C2. The patient was subsequently successfully extubated and discharged home six days after her surgery. She was able to walk out of the hospital under her own strength and has had an uneventful recovery to date. 🍀

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THE OVERDOSE CRISIS

Emergency departments are a crucial front door for patients who abuse drugs, and use, is one way you can help

by ALICIA MIKOLAYCIK GONZALEZ, MD;
AND CAROLINE MCGUIRE

Let's be clear: Drug addiction is a chronic disease.¹ Sure, it's a consequence of unfortunate life choices, as are many diseases we treat daily. Nevertheless, patients turning to the emergency department in crisis should expect to receive evidence-based treatment.

People in the United States are more likely to die from accidental opioid overdose than a motor vehicle crash.² Yet, despite its efficacy, most emergency physicians do not provide medication-assisted treatment (MAT) for patients with opioid use disorder (OUD). This is mainly due to stigma, lack of familiarity, and competing priorities. However, choosing *not* to prescribe MAT in the emergency department is a missed opportunity. The emergency department is uniquely positioned to provide access 24 hours a day, seven days a week and wrap-around services, providing a true "front door" to the greater continuum of care. What's more, patients with substance use disorders arrive in the emergency department ready and willing to accept help.³

We can literally save lives by offering MAT



in the emergency department—and we *should*. It's time to make MAT the standard of care for OUD in our emergency departments.

What's Not Working

Imagine a patient with a history of heroin use arrives at your emergency department in ob-

vious withdrawal. You give ondansetron for vomiting, perhaps clonidine. The social worker brings the patient a "resource packet" with eight grainy, overcopied pages of outdated information. The emergency department staff comments about the "junkie" in room nine, and you promise to "get 'em outta here" to turn

over that bed for a *real* patient. The patient is discharged, and that's that.

Sound familiar? While this experience has been our standard emergency department approach to OUD for *years*, it leaves patients undertreated and dissatisfied—not to mention the lack of clinician satisfaction.

Good News: There Is a Better, Easier, Evidence-Based Way

CA Bridge is a method developed by the Public Health Institute in Oakland, California, launched in 2018 with grant funding from the California Department of Health Care Services MAT Expansion Project. In this method, any clinician at any hospital can implement its model using three core elements:

1. Provide low-barrier MAT.
2. Connect patients to ongoing care.
3. Encourage a culture of harm reduction.

1. Provide Low-Barrier MAT

Buprenorphine is a partial mu-agonist that activates the opioid receptor enough to curb cravings and help the patient exit withdrawal but not enough in standard doses to cause respiratory depression or a "high." You can read more about it in the June 2018 *ACEP Now* ar-

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ticle “Buprenorphine Explained, and Opioid Addiction Treatment Tips.”⁴

Buprenorphine is safe and easy to give in the emergency department.

- If a patient is in at least moderate opioid withdrawal, start with 8 mg sublingual or buccal buprenorphine.
- Allow it to dissolve fully.
- Wait one hour.
- Check on your patient. Are they feeling better? If so, repeat the dose Q1 hour until their withdrawal symptoms have resolved. If they're already resolved, give an additional 8 mg to complete a loading dose.
- The patient can then go home with a prescription for 8 mg buprenorphine twice daily, until they can be seen by an outpatient clinician. (Note: No special certification is needed to do this in the hospital, but you'll need an X-waiver to prescribe buprenorphine at discharge.)

Some words of caution: If your patient is not better after the first dose of buprenorphine, broaden your differential diagnosis. If it's simple opioid withdrawal, the patient will get better with buprenorphine.

Make sure your patient is in at least moderate withdrawal. Use the Clinical Opioid Withdrawal Score if needed.⁵ Buprenorphine binds more tightly to the mu-receptor than full-agonist opioids, kicking off any full-agonist opioid in the patient's system leading to precipitated withdrawal. For this reason, you should also ensure they're 72 hours post any methadone use.

Be sure you ask about other respiratory suppressants that may be in the patient's system. It's not a contraindication to give buprenor-

MEDICATION-ASSISTED TREATMENT 101

- MAT lowers the effects of opioid withdrawal symptoms and cravings. It is safe and easy for both clinicians and patients.
- Follow the Buprenorphine Hospital Quick Start protocol to start patients on buprenorphine in the emergency department.¹²
- Review protocols for patient Gentle Self-Starts, Rapid Self-Starts, and how to initiate Buprenorphine After Opioid Overdose Reversal.⁷⁻⁹
- The U.S. Department of Health and Human Services has exempted prescribers from training requirements to make it even easier to prescribe this lifesaving medication. Learn about How to Apply to Get Your X Waiver to get started.¹³

phine in the setting of benzodiazepines or alcohol; it's best to proceed with caution since the additive effects have potential for concern.

Access the full treatment protocol easily, whenever you need it at www.cabridge.org/tools/on-shift.⁶

Patient not yet in withdrawal? It's safe for patients to self-start buprenorphine. Check out those protocols with the Rapid vs. Gentle algorithms.^{7,8} Resuscitated on naloxone and now in withdrawal in the emergency department? Also safe to start treatment.⁹ Now *that's* a save.

2. Connect Patients to Ongoing Care:

Using the CA Bridge model, patients who arrive at the emergency department in an opioid-related crisis can expect to work with a substance use navigator, who helps the patient access insurance, pharmacies, and

community services. The navigator provides support and connection to services in addition to helping the patient feel seen.

3. Encourage a Culture of Harm Reduction

Regardless of their crisis, all patients deserve dignity and respect. We must teach our teams to treat OUD like any other disease, with evidence-based MAT as the standard of care.

This three-pronged strategy incorporates the most effective treatments for substance use disorder into a model that is feasible for every hospital.³ This Blueprint for Hospital Opioid Use Disorder Treatment provides step-by-step guidance on how to set up a MAT program in the acute care setting.¹⁰

We're involved in the overdose crisis, like it or not. Now is the time for us to step up and be a proactive part of the solution.¹¹ +

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A Long-Acting IV Antibiotic for Skin Infections

Using long-acting IV antibiotics as a way to reduce hospitalizations

by KEN MILNE, MD

The Case

A 49-year-old female with a history of diet-controlled diabetes presents to the emergency department with erythema and warmth to her lower left leg measuring 8 cm by 12 cm for the past three days. The patient is neurovascularly intact, and there is no evidence of deep vein thrombosis (DVT) on ultrasound. She is not febrile, and her white blood cell count is 11,700.

Clinical Question

Does the use of a long-acting IV antibiotic as part of a clinical pathway in the emergency department for patients with skin and soft tissue infections reduce hospitalizations?

Background

Patients commonly present to the emergency department with skin and soft tissue infections (SSTIs), and the incidence is increasing.^{1,2} These types of SSTI include cellulitis and abscesses.

Most patients with SSTIs can be managed as outpatients. However, the average length of stay for inpatient care is one week, and associated care costs are close to \$5 billion a year in the United States.³ The mortality rate for hospitalized patients with SSTI is <0.05 percent.^{4,5}

The only reason for in-patient management in 40 percent of patients was to provide parenteral antibiotics.⁶ This has led to greater interest in long-acting parenteral antibiotics as a possible alternative to admission.

Reference: Talan DA, Mower WR, Lovecchio FA, et al. Pathway with single-dose long-acting intravenous antibiotic reduces emergency department hospitalizations of patients with skin infections. *Acad Emerg Med.* 2021;28(10):1108-1117.

- **Population:** Adults ≥18 years old with abscess, cellulitis, or wound infection believed or confirmed to be due to gram-positive bacteria and an area of infection of at least 75 cm²
 - » **Excluded:** Multiple exclusions, refer to research paper.
- **Intervention:** Single dose of IV dalbavancin (1,500 mg if creatinine clearance ≥30 mL/min or 1,125 mg for creatinine clearance <30 mL/min not on dialysis) as part of a clinical pathway; intervention also included a follow-up telephone call 24 hours after the visit and a follow-up appointment 48–72 hours after discharge
- **Comparison:** Usual care before new clinical pathway
- **Outcome:**
 - » **Primary Outcome:** Rate of hospitalization
 - » **Secondary Outcomes:** Hospitaliza-



Table 1: Secondary Outcomes

	USUAL CARE	NEW PATHWAY	DIFFERENCE (95%CI)
Hospitalization Up to 44 Days	44.9%	28.8%	16.1% (4.9–27.4)
Length of Stay	3.0 days	2.0 days	
Infection-Related Surgery	0.6%	3.3%	
ICU Admission	1.9%	0.7%	

tions through 44 days, health resource utilization (length of stay, level of care, major surgical interventions, ICU admissions), adverse events, and patient-related outcomes (satisfaction, work productivity, and quality-of-life surveys at 14 days)

Authors' Conclusions

“Implementation of an ED SSTI clinical pathway for patient selection and follow-up that included use of a single-dose, long-acting IV antibiotic was associated with a significant reduction in hospitalization rate for stable patients with moderately severe infections.”

Results

More than 3,000 patients were screened during the before-and-after study for inclusion, with only 5 percent deemed eligible. The median age of participants was in the late 40s, two-thirds were male, and more than 80 percent had cellulitis.

Key Result: The rate of hospitalization was lower after the implementation of the new clinical pathway that included a single-dose long-acting IV antibiotic.

- **Primary Outcome:** Rate of hospitalization rate at the time of initial care
 - » 38.5 percent usual care versus 17.6 percent new pathway, absolute difference 20.8 percent (95% CI; 10.4–31.2%)
- **Secondary Outcome:** Mild, moderate,

and severe adverse events were all more common in the new pathway group. No deaths were reported in the study. Details of the patient-related outcomes are available in the supplemental material (see Table 1).

Evidence-Based Medicine Commentary

1. **Before/After Study Design:** One drawback to this type of study design is the possible contamination of treatment effect by confounders such as other system or local factors. For example, it's not clear how much the protocol to ensure close outpatient follow-up or education contributed to the lower hospitalization rates.
2. **Hawthorne Effect:** It is possible that some portion of the treatment effect was the result of the clinicians being aware that their management of SSTI was being evaluated and that discharge was encouraged. This could have introduced a Hawthorne effect, which is when people change their normal behavior in response to knowing they are being observed.
3. **Magnitude of Impact:** There was a large absolute decrease in hospitalizations after the pathway was introduced (21 percent). However, only 5 percent of patients screened for eligibility were enrolled. That means the data do not directly apply to most patients who present with SSTI, which limits impact of this intervention.

4. **Cost and Creep:** This medication costs approximately \$5,000 for 1,500 mg. It is unclear if this would be a cost-effective strategy compared to admitting patients. It would depend on in which country the pathway was implemented. There could also be a concern with indication creep, which could lead to overuse and potentially increased antibiotic resistance.

5. **Conflict of Interest:** This was an industry-funded study with multiple authors declaring conflicts of interest. While this does not make the data or interpretation wrong, it should make us more skeptical.

Bottom Line

A clinical pathway that provides a long-acting IV and the ability to establish expedited telephone and in-person follow-up is associated with a decrease in hospitalizations for patients with moderately severe cellulitis.

Case Resolution

You engage in shared decision making with the woman and offer her admission to the hospital for IV antibiotic inpatient management or a single-dose long-acting IV antibiotic and outpatient management. She chooses not to be admitted and is discharged home with follow-up instructions.

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

Thank you to Dr. Lauren Westafer, an assistant professor in the department of emergency medicine at the University of Massachusetts Medical School–Baystate, for her help with this review. 🙌

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waiting for
answers



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The Essay as a Literary Model for the Trials of EM

How the practice of emergency medicine and the practice of writing form a closer bond than previously explored

by ADAM LALLEY, MD

In spring 2020, near the end of my intern year, I spoke with the mother of a 24-year-old man who had been brought in unresponsive to our resuscitation bay. “He was trying,” his mother told me. Hearing her own words out loud, she was struggling to believe what happened. “He had just finished rehab and promised he would stop,” she explained.

Medics wheeled him into our emergency department while performing chest compressions. Earlier that evening, after saying

good night to his parents, the young man had climbed the stairs to his bedroom and closed the door. Twenty minutes later, his mother found him lying on the floor without a heartbeat. She tried using naloxone, once in each nostril, but he never woke up. Twenty more minutes passed before he arrived at our emergency department, still pulseless.

As an intern, I had some experience informing patients of serious new diagnoses, including the news of metastatic cancer, but this was the first time I was going to tell a mother her son had died.

I did not know what to expect.

How the Essay and Emergency Medicine Are Related

In the 1570s, at the age of 38, the French aristocrat Michel de Montaigne set out to write a series of trials, or *essais* in French, on an encyclopedic range of topics to figure out, through writing, how he felt and how those feelings made him who he was. In his trials, he experimented with ideas of friendship, cruelty, fashion, death, and even cannibalism. In doing so, he invented a new literary form: the essay.

His essays often deviated from their point, improvised, and evolved into an articulation of an opinion that was not always obvious at the outset of his writing. But that was part of the exercise. His aim was to challenge himself with a variety of experiences and situations, to test himself in real time by putting pen to paper in order to discover his true feelings.

Like the field of emergency medicine, the essay arrived late as a literary form, long after the poem, the play, or the earliest forms of prose. Like the essay, emergency medicine



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is a series of trials where we must sometimes treat diseases before making the final diagnosis. We improvise until the outcome is known.

The Combined Roles of Improvisation and Practice

Now in the second year of my residency program, I am placed in a new role at the center of the resuscitation bay, taking care of the sickest patients in Brooklyn for brief moments in time. And I’ve found that despite all my studying and pre-reading, I never feel

completely prepared. There is no shortcut around improvisation. As in our simulation center, I grow and learn by working through cases in real time.

Despite all the algorithms and mnemonics, the unique details of each trauma, cardiac arrest, or intubation are different. Slowly but surely (and perhaps more slowly than I’d like), the experience has become easier, mostly through *practicing* the practice of medicine. As Montaigne wrote, “When we consider through what mists and how gropingly we are led to our knowledge of most of

the things within our grasp, we shall assuredly conclude that it is familiarity rather than knowledge that takes away their strangeness.”¹

“Essayons,” or “Let’s Try” in French, is the motto of the United States Army Corps of Engineers, and it does not refer to a lukewarm, half-hearted “try.” The motto recognizes that when failure lurks around every corner and when resignation would be easier, trying can be the greatest act of courage.

It seems strange to advance in my training before feeling that I’ve mastered my first year. From what I’ve heard from senior physicians, I may feel this way for a while, even as a third-year resident, a fellow, or a new attending. However, as the form of the essay teaches us, it’s the trial itself that helps us to grow.

All We Can Do Is Try

As I spoke with the mother about her 24-year-old son, her grief took the form of a series of questions. I was not entirely sure I could answer them. She said that she had checked on her son 20 minutes after he had said good night. What if she had checked on him sooner? How much time would she have had to save his life? If he had been unconscious for five or 10 minutes, would the naloxone have been enough? Was there any way to tell from signs on his body how late she had been to rescuing him?

I thought of all the cardiac arrests I had seen in my short time in training. Each time I wondered whether their lives could have been saved by someone more qualified than me or if my team could have done anything differently, if we had placed the central line faster or drawn the blood tests sooner or called anesthesia instead of attempting the intubation ourselves. I thought, on the other hand, what if I hadn’t tried at all? How would I ever become independent enough to take care of patients on my own? How would I ever get used to the feeling of possibly falling short?

No doubt, this mother had been dealing with her son’s opioid addiction for years. She had the naloxone ready. No doubt, she had rehearsed the scenario in her mind—first one nostril, then the other. However, nothing could have prepared her for the reality of what unfolded that evening. I told her that in administering the naloxone and calling 911, she had done all that she could do. *She had tried.* With that, she had done the best that any of us can ever do. 🙏

Reference

1. Montaigne M. *Essays*. Ringwood, Victoria, Australia: Penguin Books; 1966:87.



an incomplete
picture



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Chest Pain Caution

This case reminds us of the importance of clinical decision tools

by ERIC FUNK, MD

In this month's case, we cover a classic high-risk medicolegal topic: chest pain. There has been extensive research on this topic in pursuit of identifying low-risk patients who can be discharged safely. This case occurred in 2011, so bear in mind that we have made significant strides over the past 10 years.

The Case

A 58-year-old woman presented to a small emergency department with chest pain. The patient and her husband lived in a different state and were visiting his parents. They were helping with some tasks around their house; she had been outside washing a Jeep. She had developed a slight sunburn on her back prior to noticing chest pain.

When she presented to the emergency department, the chest pain had been present for two to three hours. She described it at one point as a burning pain and at another point as a "raw" sensation. She had taken a Lortab with no improvement and also had vomited once.

In the emergency department, her vitals showed a blood pressure of 116/57, pulse of 94 bpm, respiratory rate of 24 per minute, temperature of 97.0 °F, and an oxygen saturation of 90 percent on room air.

The physician did not have access to any previous medical records as this was her first time visiting this health system. However, he did note that she smoked a pack of cigarettes each day and had hypercholesterolemia, Crohn's disease, hypothyroidism, and anxiety. The physical exam did not reveal any abnormalities.

The physician ordered an ECG, complete blood count, comprehensive metabolic panel, magnesium test, creatine kinase-MB, and troponin.

The patient was given nitroglycerin 0.4 mg sublingual, with no change in her pain. A 500-mL bolus of normal saline was given. After 30 mg of Toradol IV, she stated she felt "maybe a little better."

The results of her tests showed a mild leukocytosis (14.4), slight hyperglycemia (118), and slight hypokalemia (3.3). The troponin was 0.06, within the normal limits of 0.0–0.10. The creatine kinase-MB was also normal. Her ECG was read as "normal sinus rhythm" by the physician.

The court documents had a poor copy of the ECG that would not appear well in print but is available for review at www.medmalreviewer.com/ekg.

The physician reasoned that the patient had a negative troponin, no ST-segment elevation myocardial infarction on ECG, and no relief of pain with nitroglycerin. The patient was discharged home.

The following morning, the patient was in the kitchen with her in-laws, making coffee. She suddenly collapsed and became unresponsive. They called 911. When EMS arrived, she was in ventricular fibrillation. She was defibrillated six times and finally had return of spontaneous circulation.

She was taken back to the same emergency department, arriving at 7:08 a.m. During the next 50 minutes, she lost pulses several times, and the physician caring for her placed her on a dopamine drip.

The process to transfer her to another facility started around 7:49 a.m. An EMS helicopter landed at 8:29 a.m. to whisk her to the receiving facility. During the flight, she

Conclusions

Coronary Arteriography :

- LM: normal.
- LAD: mild luminal irregularities.
- LCX: mild luminal irregularities.
- RCA: dominant vessel; acute proximal occlusion with thrombus.

Intervention :

- Aspiration thrombectomy and intervention to RCA with overlapping 2.5 x 28mm and 2.5 x 18mm Promus drug-eluting stents.
- Placement of intra-aortic balloon pump.

Figure 1: Conclusions of the university catheterization lab.

22 Q. You did order for her in addition to the
23 labs nitroglycerin; did you not?
24 A. I did.
25 Q. How many administrations of nitroglycerin

Page 54

1 did you order, Dr. [REDACTED]?
2 A. One.
3 Q. And how did you choose the number one as
4 opposed to two, three, or four?
5 A. Well, she presented with multiple
6 complaints. And -- and I looked at it. I want to
7 give her nitroglycerin what we call as a
8 diagnostic and therapeutic test. I wasn't sure it
9 was cardiac. Since I had no relief from
10 nitroglycerin, so probably is not.
11 Q. To have a trial of nitroglycerin to help
12 rule in or rule out a heart cause, would you agree
13 that you need repeated administrations of the
14 nitroglycerin?
15 A. If you -- if you suspect heart attack,
16 yes, you do.
17 Q. At the time that you ordered the
18 nitroglycerin, there had to be a suspicion, then,
19 of a heart attack.
20 Am I wrong?
21 A. I won't say -- that was the concern, for
22 heart attack, yes.

Figure 2: Excerpt from the physician defendant's deposition.

briefly lost pulses, but return of spontaneous circulation was achieved again. By 9:04 a.m., she was in the catheterization lab at a university medical center. She was found to have a 100 percent occlusion of her right coronary artery, and a stent was placed (see Figure 1).

Over the next day, she had increasing pressor requirements and additionally was determined to have a severe anoxic brain injury. Her hemodynamic condition continued to worsen, and as the family felt that continuing futile medical care was not in accordance with her wishes, she died within several minutes of switching to comfort-focused care.

The Lawsuit

The patient's husband filed a lawsuit against the physician who discharged her. He sued the EMS service, alleging that dispatch took six minutes (as opposed to the policy of dispatch within two minutes). He sued both the EMT and para-

medic who responded, claiming that they did not start CPR fast enough after arriving.

The allegations against the physician hinged on the fact that the patient had multiple risk factors for acute coronary syndrome and active chest pain and that only one troponin was obtained.

The physician countered that her pain was burning, not heavy or pressure-like. He claimed that because it had been two to three hours since the pain started, only one troponin was necessary.

During the deposition, the plaintiff's attorney focused on the patient's response to receiving nitroglycerin. The doctor felt that since the patient did not have improvement of her pain, she was unlikely to have acute coronary syndrome (see Figure 2).

Ultimately, both sides agreed on a confidential settlement, and the lawsuit was withdrawn before it went to trial.

Discussion

This case illustrates why chest pain is such a high-risk area in emergency medicine. For many other complaints, a patient who is inappropriately discharged will have worsening symptoms over hours or days and have plenty of time to return to the emergency department and avoid catastrophe. Not so for chest pain. Sudden cardiac death leaves almost no opportunity for a second chance.

The development of the HEART Pathway decision aid and high-sensitivity troponins have significantly improved the care of chest pain patients since this case happened in 2011. This patient had a HEART score of 4 at a minimum (even with only giving her one point each for the history and ECG). This patient was not low-risk. Obtaining high-sensitivity troponins at arrival and two hours later likely would have revealed abnormalities that would have changed her care, although this is admittedly conjecture.

Ultimately, this case is a good reminder for emergency physicians to use the highly effective prognostic tools we have at our disposal. Not all major adverse cardiac events are avoidable, but appropriate application of these tools makes catastrophic outcomes very rare and provides an excellent defense when the unforeseeable happens.

Note: We do not yet have high-sensitivity troponins at my hospital. For a similar patient who presents with less than three hours of symptoms, we would perform three conventional troponins three hours apart (0h, 3h, 6h) prior to clearance for discharge from the emergency department.

To read the full medical record from this case, visit www.medmalreviewer.com/case-11-chest-pain. ☺

IN AN ONGOING STUDY, KOSMOS HAS BEEN SHOWN TO PRODUCE EQUIVALENT RESULTS TO LARGE CART-BASED SYSTEMS IN A MAJOR EUROPEAN HOSPITAL—INCLUDING A REDUCED NEED FOR ORDERING MORE ECHOS.



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DR. SMOCK is the full-time police surgeon for the Louisville Metro Police Department and a clinical professor of emergency medicine at the University of Louisville School of Medicine in Kentucky.

Does Size Matter?

The clinical forensic evaluation of gunshot wounds in the ED

by BILL SMOCK, MD

The Case

The trauma radio alert advises EMS is five minutes out with a patient with gunshot wounds to the head. The patient was reportedly shot in the head after he attacked a state trooper during a traffic stop on the interstate. The paramedic reports that the patient has two head wounds, is orally intubated, is tachycardic at 120, has a blood pressure of 136/92, and has a Glasgow Coma Score (GCS) of 7T.

Prior to the patient's arrival, you notice multiple police officers arriving and standing outside of the resuscitation room door. One of the commanding officers walks up to you and says, "Doc, we think the suspect tackled the trooper, strangled her, and tried to take her gun when he was shot. Can you please take a close look at the wounds and let us know which wound is the entrance, which wound is the exit, and how far away the gun was from the suspect's head when he was shot by our female trooper?" When the patient arrives in the resuscitation room, you observe a large wound on the right temple (see Photo 1) and a smaller wound on the left parietal area (see Photo 2). After your initial and secondary assessments, you consult trauma and neurosurgery and send the stable patient to radiology for a CT scan of his head and cervical spine. As you leave the resuscitation room, the commanding officer again approaches you and says, "Doc, given the current political environment of officer-involved shootings in the country, it is critical that we know which wound is the entrance, which is the exit, and how far away the trooper's gun was from the suspect when he was shot. Doc, what did you document in the chart, and what do you think about the wounds?"

Based on your visual assessment of the wounds, how will you answer the following questions that will be asked of you by a local prosecutor when this case of an officer-involved shooting is presented to a grand jury? The patient survived his transcranial wounds and is now a GCS 6T in a long-term care facility.

The Questions:

- What were the physical characteristics of each of the wounds you observed on the suspect's scalp?
- Which wound was the entrance wound?
- How did you determine which wound was the entrance wound?
- Which wound was the exit wound?
- How far was the trooper's gun from the suspect's head when he was shot by the trooper?
- If the trooper said she placed her gun against the suspect's scalp as she was about to go unconscious from being strangled by the suspect, are the injuries consistent with her statements?

Clinical Forensic Medicine and



PHOTO 1: Large wound on the patient's right temple.



PHOTO 2: Wound on the patient's left parietal scalp.



PHOTO 3: Distant wound with an abrasion collar.

Gunshot Wounds

Patients who are victims of gun violence present to the emergency department with both medical needs and forensic issues. The patient is part of the crime scene, all evidence of which is only seconds away from being inevitably and irretrievably washed or debrided away. In these fleeting moments, both health and justice are held in the physician's hands. Unless you have had advanced forensic training, you are not the forensic expert. What you document is for others to interpret. To prevent a miscarriage of justice and preserve the evidence, all you must do is describe what you find.

TABLE 1: THE SIX COMMON PHYSICAL CHARACTERISTICS OF ENTRANCE WOUNDS AND THEIR CAUSES

1. Abrasion Collar caused by friction with the bullet
2. Tattooing caused by unburned gunpowder
3. Soot caused by the residue of burned gunpowder
4. Seared Skin caused by the flame and hot gases
5. Triangular Tears caused by skin expansion from injected gas
6. Muzzle Contusion caused from injected gases pushing expanding skin against barrel



PHOTO 4: Comet-tailed abrasion collar (12 to 6 o'clock position) from a bullet's angled entry.

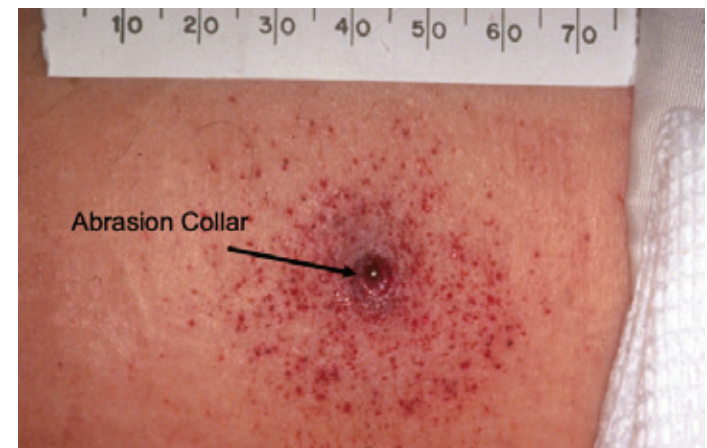


PHOTO 5: Intermediate-range wound with an abrasion collar and more than 100 punctate abrasions, or tattooing, from unburned pieces of gunpowder impacting the skin.

Since a picture is worth a thousand words, the easiest way to "describe" and document the injuries and the evidence is with a camera. Make sure that your department has one and that it is capable of close-up photographs. Some electronic medical record systems permit you to take HIPAA-compliant photographs with your own cellphone and import these into the patient's chart.

The purpose of this article is to give emergency physicians a simple list of gunshot wound characteristics to photograph or, in the absence of photographic documentation, to describe. Table 1 lists these physical characteristics and contains recognized terms utilized by

forensic physicians around the world.

The Physical Characteristics of Entrance Wounds from Handguns

The physical characteristics of an entrance wound depend primarily on two factors: 1) the range of fire (the distance from the muzzle to the skin) and 2) the presence of any intermediate objects (eg, clothing, glass). Range of fire is divided into four general categories: distant (or indeterminate), intermediate, close, and contact (see Table 2). Each range of fire is associated with specific wound characteristics:

- Distant- or indeterminate-range wounds have only an abrasion collar (see Photos

ILLUSTRATIONS: YESENA ACEVES

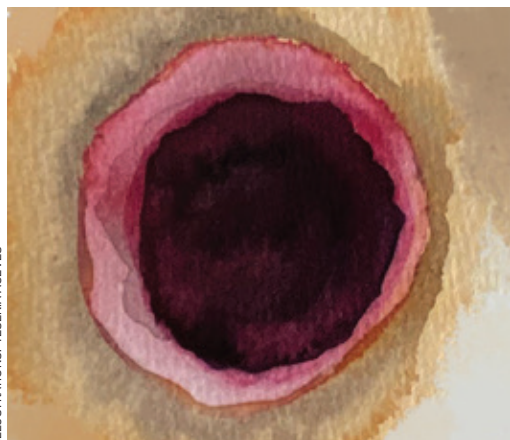


FIGURE 1: An abrasion collar is created from friction between the bullet and the skin (see Photo 3).



FIGURE 2: An angled, or comet-tailed, abrasion collar from an angled entry (see Photo 4).

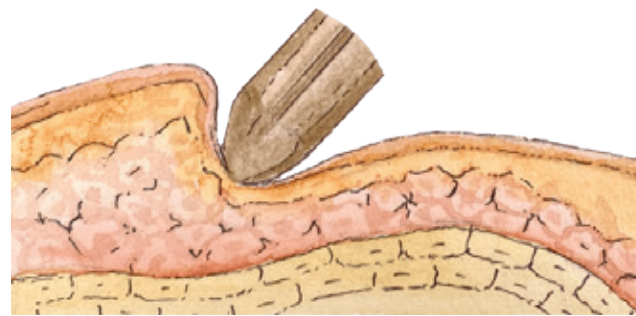


FIGURE 3: An angled, or comet-tailed, abrasion collar from an angled entry (see Photo 4).

PHOTOS: BILL SMOCK

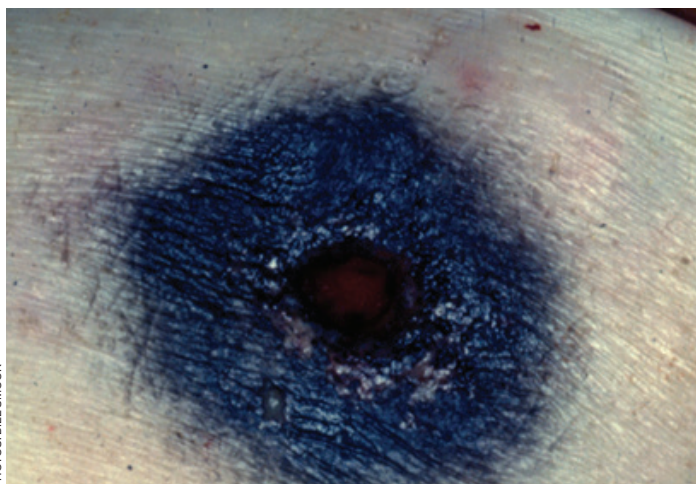


PHOTO 6: Close-range wound with soot.



PHOTO 8: Contact wound with soot, seared skin, and small triangular-shaped tears from a .22-caliber pistol.



PHOTO 7: Contact wound with soot, seared skin, and triangular-shaped tears.

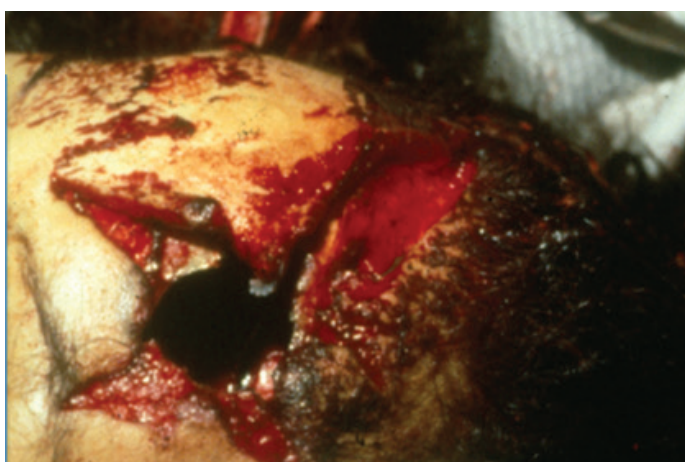


PHOTO 9: Contact wound with soot, seared skin, and triangular-shaped tears from a .357 Magnum pistol.

KEY POINTS

- Living victims of gun violence have forensic needs that should be addressed by the emergency department.
- Gunshot wounds should be photographed or accurately documented in the medical records prior to the destruction of evidence or surgical intervention.
- Gunshot wounds should be accurately described based on their physical characteristics.
- Gunshot wounds should never be interpreted as “entrance” or “exit” based on the size of the wounds. Size does not matter in gunshot wounds.
- Gunshot wound interpretation should only be undertaken by clinicians with sufficient advanced forensic training.
- The use of forensic nurse examiners in the emergency department provides benefits to the patient, the hospital, the emergency physician, and the criminal justice system.

Table 2: Range of fire as determined by wound characteristics.

Distance	Appearance
Contact: Tight or loose	Seared skin, triangle-shaped tears, soot
Close: 0–6”	Soot, tattooing and abrasion collar
Intermediate: up to 48”	“tattooing” and abrasion collar
Distant or indeterminate	Abrasion collar

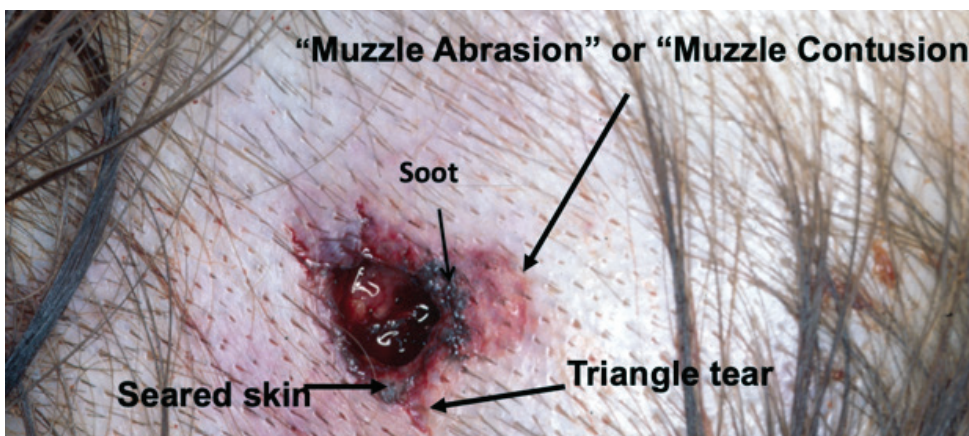


PHOTO 10: Contact wound with soot, seared skin, triangular-shaped tears, and a muzzle contusion from a .32-caliber pistol.

3 and 4).
 • Intermediate-range wounds have an abrasion collar and tattooing or stippling (see Photo 5).
 • Close-range wounds have an abrasion collar, soot, and tattooing (see Photo 6).
 • Contact wounds have soot, seared skin, and triangular-shaped tears (see Photo 7).
Distant-Range Wounds: Only the bullet contacts the skin in a distant- or indeterminate-range wound. When a bullet penetrates skin, there is friction between the projectile and the epithelial tissue, which creates an abrasion collar (see Photo 3 and Figure 1). Abrasion collars will vary in appearance de-

pending on the angle of penetration (see Photo 4 and Figure 2). All entrance wounds will have some degree of an abrasion collar, with the exception of those wounds to the palms of the hands and soles of the feet, where the epithelium is highly keratinized. Abrasion collars may also be referred to as an abrasion margin, abrasion rim, or abrasion ring.
Intermediate-Range Wounds: These are characterized by the presence of an abrasion collar plus the presence of punctate abrasions referred to as tattooing or stippling (see Photo 5). The punctate abrasions occur when unburned or partially burned pieces of gunpowder impact the skin. Tattooing on the skin

may be visualized from distances as close as 0.5 inches or as far away as 48 inches. The density and pattern of the punctate abrasions will vary depending on the muzzle-to-skin distance, the length of the gun barrel, the presence of intermediate objects, and the amount of gunpowder within a particular cartridge.
Close-Range Wounds: Close-range wounds are defined as the range at which the carbonaceous residue of combustion, or soot, is visible surrounding the wound or on clothing (see Photo 6). The presence of soot may cover and obscure the abrasion collar. Soot is short-lived evidence and can easily be washed away during emergency care and treatment.

Contact Wounds: A contact wound is one in which the barrel is in contact with the victim’s clothing or skin. Because contact entrance wounds can vary in appearance from small to very large depending on the elasticity of the skin and the volume of gas injected, they are frequently misinterpreted as exit wounds (see Photos 1 and 7). A contact wound to the temple from a .22-caliber short cartridge will appear as a small hole with seared blackened edges and only tiny triangle-shaped tears (see Photo 8), while a contact wound to the forehead from a .357-caliber Magnum load will create a large defect (see Photo 9). The large volume of gas injected into scalp tissue from

a Magnum load will expand the tissue, resulting in a large, gaping wound. Note the characteristic stellate pattern caused by the ripping and tearing of the skin. Because these wounds are so large and are frequently misinterpreted as exit wounds, remember that the size of the wound is *not* used to determine entrance or exit. Close examination of the wound margins of all contact wounds will reveal the presence of soot. Also, there will be seared skin from the discharge of hot gases and an actual flame that extends from the gun barrel.

The injection of gases into tissue can cause the skin to expand against the barrel or muzzle of the handgun with sufficient force to impart a contusion that mirrors the pattern of the barrel. This imprint is called a muzzle contusion or muzzle abrasion and may provide forensic investigators with critical information on the characteristics of the weapon's barrel: revolver versus semiautomatic handgun (see Photo 10).

Conclusion

Emergency physicians are in an ideal position to evaluate and document the state of a gunshot wound because they see and explore it before it is disturbed, distorted, or destroyed by treatment or surgical intervention. Documentation of gunshot wounds should always include the anatomical loca-

tion, size, shape, and distinguishing forensic characteristics (see Table 1). Emergency clinicians, unless they have specialized forensic training, should never describe wounds as "entrance" or "exit." Exit wounds are not always larger than their associated entrance wound. Wound size does not even consistently correspond to bullet caliber. Wounds can expand or contract depending on tissue elasticity and the presence or absence of hemorrhage.

Some emergency departments use forensic nurse examiners to address the forensic needs of their living patients. Forensic nurse examiners can photograph and diagram a patient's wounds and, with sufficient forensic training, can determine whether the injuries observed are consistent with the history reported. Such forensic nursing services clearly benefit the forensic needs of emergency departments and their patients. They also free doctors to focus on practicing medicine and help keep emergency physicians from uncompensated trips to court.

Note: The grand jury questions and the evaluation of exit wounds will be answered in a future issue.

Acknowledgements: Thank you to Yesenia Aceves for the beautiful watercolor illustrations. ☺

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