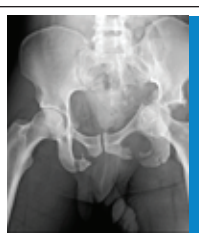
RESIDENT VOICE

EM Book Club

SEE PAGE 22



EM CASES

Geriatric Trauma Myths and Misperceptions

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MEDICOLEGAL MIND

Respiratory Arrest in Waiting Room

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PLUS

AWARDS

2021 ACEP Award Recipients

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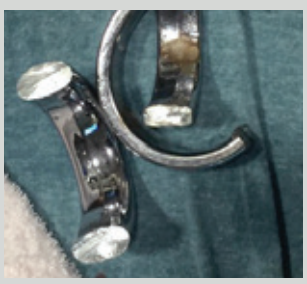

TRICKS OF THE TRADE

A Tricky Cut

SEE PAGE 29

FIND IT ONLINE

For more clinical stories and practice trends, plus commentary and opinion pieces, go to:

www.acepnow.com

SCENES *from* SURFSIDE

The medical leader of an urban rescue team at the Surfside condo collapse shares his experience

by BENJAMIN ABO, DO, PMD, FAWM

Shortly after 1:20 a.m. on June 24, 2021, a large section of Champlain Towers South, a 12-story condominium in Surfside, Florida, collapsed. It was one of the largest non-hurricane emergencies in the state's history, killing 98.

Search and rescue teams spent weeks scouring 18 million pounds of concrete to rescue survivors and recover victims. As the coordinating medical team manager for Miami-Dade Fire Rescue's Urban Search and Rescue team, I was one of the first (and last) physicians on the scene.

CONTINUED *on page 10*

Dr. Benjamin Abo holds up a photo slide, one of many mementos that his team recovered from the site.

BENJAMIN ABO

The Future of Work in Emergency Medicine

A roundtable on EM workforce projections

by CEDRIC DARK, MD, MPH, FACEP

I recently met with four emergency physicians—Jesse Pines, MD, MBA, FACEP, national director of clinical innovation at US Acute Care Solutions (USACS) and professor of emergency medicine at Drexel University; Viktoria Koskenoja, MD, chair-elect of the Rural Section of ACEP, who practices in the Upper Peninsula of Michigan; James "Jay" B. Mullen III, MD, FACEP, chair of the Democratic Group Practice Section of ACEP, a practicing emergency physician, and CEO of BlueWater Health, which staffs emergency departments and urgent cares throughout New England; and Sudave D. Mendiratta, MD, FACEP, chair and chief of emergency medicine at University of Tennessee/Erlanger, who also serves as the President of the Tennessee Chapter of ACEP—to discuss the recent emergency medicine workforce projections published in *Annals of Emergency Medicine*.[1] Our conversation spanned just under an hour and

CONTINUED *on page 14*

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The Emergency Medicine Job Market

PAGE 8

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NEWS FROM THE COLLEGE

UPDATES AND ALERTS FROM ACEP

ACEP Responds to Major Medicare Regulation Impacting Physician Payments

In early September, ACEP submitted a comprehensive response to the Centers for Medicare & Medicaid Services' (CMS') Calendar Year (CY) 2022 Physician Fee Schedule (PFS) and Quality Payment Program (QPP) proposed regulation. The PFS and QPP regulation is the major annual regulation that affects Medicare payments for physicians and other health care practitioners for the next calendar year. The rates included in the PFS often serve as the basis on which many private payers revise their reimbursement levels. The regulation also includes updates to the Merit-based Incentive Payment System, the quality performance program established by the Medicare Access and CHIP Reauthorization Act. Visit www.acep.org/pfs2021-response to read highlights from ACEP's response.

CMS must review all public comments (including ACEP's) and issue a final regulation implementing policies for CY 2022 by Nov. 1, 2021—60 days prior to the start of the calendar year.

SCD Managing Sickle Cell Disease in the ED

Sickle Cell Point-of-Care Tool Now Available

Sickle cell disease is the most common inherited blood disorder in the United States. The unpredictable severe pain leads to emergency department visits, and the lack of evidence and easy-to-use guidelines to manage pain leads to frustration for patients and physicians alike. The Emergency Department Sickle Cell Care Coalition, in partnership with the American Society of Hematology, has developed an easy-to-use point-of-care tool to help all emergency physicians care for acute vaso-occlusive episodes for patients with sickle cell disease. Get the tool at www.acep.org/patient-care/sickle-cell.

New Atrial Fibrillation Quality Initiative Available

Emergency departments, emergency groups, and individual clinicians are invited to join the BMS/Pfizer Atrial Fibrillation Initiative, a free quality program to measure and improve AFib patient outcomes. This five-month program provides ED-specific guidance and education, along with real-time benchmarking to see how your department is performing compared to other emergency departments. The time commitment is low—we estimate you'll need one hour per month for data collection and input. Apply by Oct. 29, 2021. Learn more at www.acep.org/afib-initiative.

PEERcert+ for MyEMCert: New Modules Added

If you're preparing for ABEM's new MyEMCert, you deserve the effective and efficient board prep that PEERcert+ provides. Each PEERcert+ module is built from the ground up to provide you with a study guide that is tailored for each MyEMCert exam. Earn CME hours with each module: abdominopelvic, abnormal vital signs and shock, head and neck (new), neurology (new), social and behavioral health, thoracorespiratory, and trauma and bleeding. Learn more at www.acep.org/peer.

EM Research Workshop Coming Up

If you're interested in honing your research skills, get your slot for the upcoming EM Basic Research Skills (EMBRS) workshops. This is a great course for early-career faculty, those interested in improving their skills as a researcher, and physicians who are involved in research as part of their duties. Participants are also eligible to receive an Emergency Medicine Foundation/EMBRS grant based on their research grant application. Learn more at www.acep.org/embrs.

Check Out the Latest On-Demand Courses

The end of the year is coming up quickly, so make sure to utilize your CME dollars. The following courses have recently been added to the ACEP Online Learning Collaborative at http://ecme.acep.org:

- COVID Variants: What EM Physicians Need to Know
- Dental 101 for Emergency Physicians
- The Full Spectrum: Caring for LGBTQ Patients in the ED
- Medical School Loans and the CARES Act: What You Need to Know
- Future of MIPS Reporting: Navigating Through Uncharted Waters

Catch Up on the *ACEP Nowcast*

Did you know *ACEP Now* has a podcast? Each print issue is accompanied by a quick 20- to 30-minute episode with a deeper dive into some of the most compelling articles, including discussions with authors or the emergency physicians featured in the print issue. Catch up on past episodes at www.acepnow.com/podcast.

WHAT ARE YOU THINKING?

SEND EMAIL TO ACEPNOW@ACEP.ORG; LETTERS TO *ACEP NOW*, P.O. BOX 619911, DALLAS, TX 75261-9911; AND FAXES TO 972-580-2816, ATTENTION *ACEP NOW*.

By the Numbers

Public Opinion of EM's Value

From a survey of 2,200 adults

78%
say they or a member of their household have received care in the ED

69%
are concerned insurance won't cover an ED visit

9 IN 10
think 24-7 ED access is essential or high priority

4 IN 5
feel their ED care has been excellent or good

WHO DO PATIENTS TRUST TO LEAD EMERGENCY CARE?

- PHYSICIAN: **78%**
- NURSE PRACTITIONER: **9%**
- PHYSICIAN ASSISTANT: **7%**
- NURSE: **5%**

PATIENTS PREFER TO BE TREATED BY A PHYSICIAN WHEN THEY HAVE:

- STROKE: **87%**
- CHEST PAIN/ HEART ATTACK: **86%**
- CAR ACCIDENT: **83%**
- SEIZURE: **78%**
- BROKEN LIMB: **67%**
- COVID-19-RELATED SYMPTOMS: **60%**

Let's Talk About Trust

by SUSAN SEDORY, MA, CAE

More than nine in 10 adults trust an emergency physician to provide medical care in the ED. And they most trust a physician to lead care there, especially for more severe injuries and illnesses.

Trust—it's often said to be an essential component to survival. Borrowing from Stephen M. R. Covey, trust allows us to move and think with speed.[1] It allows us to have fulfilling relationships. It allows us to offer inspiration. It allows our economies to be profitable. And its power to influence the course of events—for whole societies or individually, and especially for our health and well-being—rests in the trustworthiness of the source.

Some days it feels like the importance and challenges of trust have never been more on display than during these past 20 months.

Last May, several industry news outlets covered a study conducted by NORC at the University of Chicago and commissioned by the American Board of Internal Medicine Foundation as part of its new initiative to elevate trust to improve health care.[2,3] Those surveys, conducted from January through early February 2021, showed that the general public trusts doctors and nurses (84 and 85 percent, respectively) far more than hospitals (72 percent), the health care system as a whole (64 percent), or government agencies (56 percent); at the bottom of the list are pharmaceutical companies and health insurance companies (34 and 33 percent, respectively). They also showed that, while trust stayed the same or increased for most people, 32 percent said their trust in the health care system decreased during the pandemic.

This information comes as no surprise to emergency physicians. If anything, all signs point to even more erosion of trust since February. Through conversations with ACEP chapters where COVID-19 cases are again surging, it's apparent that physicians' feelings of physical fatigue are compounded by severe emotional fatigue. Each patient encounter has the potential to be derailed by a lack of trust in what the physician has recommended. Interpersonal support from friends and family may be challenged by opposing views on vaccines, masks, and mandates. Communities seem inspired more by the misinformation they believe rather than the motives of those they don't trust—including the Centers for Disease Control and Prevention, the Food and Drug Administration, and even physicians. It's so disheartening.

But here's something we know for a fact: Patients *do* trust emergency physicians. ACEP recently commissioned Morning Consult to conduct a similarly sized poll among American adults, fielded between June 23 and July 7, 2021. Some highlights from the poll are shown at left.

In a survey of 2,200 adults, we found that more than nine in 10 (93 percent) trust an emergency physician to provide medical care in the event they went to the emergency department. Those adults also consider 24-7 access to an emergency department to be just as essential to their communities as fire departments or water utility services. And they most trust a physician to lead care in the emergency department, especially for more severe injuries and illnesses.

In looking at ACEP's Code of Ethics for Emergency Physicians, I can see why trust between patients and emergency physicians is so integral. Trustworthiness is one of the essential virtues of an emergency physician identified in our code: "Sick and vulnerable emergency patients are in a dependent relationship; they must rely on emergency physicians to protect their interests through competence, informed consent, truthfulness, and the maintenance of confidentiality."

Scan the code to read the rest of this blog post and to link to the full poll results.

These are very difficult times. Lack of trust in health care systems is slowing your ability to act and think with speed. It is making it harder to offer inspiration and work as one. It is leaving many feeling that the systems designed to help are actually failing them.

But I don't believe it is leaving us so empty that we can't influence the course of events.

References

1. Covey SMR, Merrill RR. *The Speed of Trust: The One Thing that Changes Everything.* New York, NY: Simon & Schuster; 2006.
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3. Reynolds KA. Who do patients trust? Medical Economics website. Available at: https://www.medicaleconomics.com/view/who-do-patients-trust-. Accessed Sept. 16, 2021.

MS. SEDORY is executive director of ACEP.

RESIDENCY SPOTLIGHT

OREGON HEALTH & SCIENCE UNIVERSITY EMERGENCY MEDICINE RESIDENCY PROGRAM

Twitter: @ohsuemres

Location: Portland, Oregon

Year founded: 1977

Number of residents: 33

Program length: Three years

OHSU EM residents at Sellwood Park in Portland.

What kind of training can residents get from your program that they can't anywhere else?

- We have a unique mix of clinical practice environments spanning six diverse populations that allows residents to graduate prepared to work in any setting, from rural critical access hospitals to Level 1 trauma centers.
- Our faculty includes an outstanding depth and breadth of academic leaders, allowing unparalleled access and mentoring for career development.
- A culture of wellness is a top priority for our residency program and is integrated at every level, from positivity rounds at the start of each shift to our "First Tuesday" resident gatherings.
- A portion of our curriculum every year is devoted to diversity, equity, and inclusion in health care and beyond.
- Our institution's state-of-the-art simulation center helps our residents build confidence in performing procedures that are less frequently experienced on shifts.

Where do residents tend to work after they complete the program?

About two-thirds of our graduates stay in Oregon or the Pacific Northwest, either in community or academic positions or fellowships. The other third leave the region for fellowship training, academic positions, and competitive community jobs outside the Pacific Northwest.

What makes Portland a great place to live?

- Portland has tremendous access to the great outdoors: mountains, beaches, parks, waterfalls, and wine country. Our residents often get out for a hike before an evening shift, hit the slopes on a day off, or travel the waterways for some sunset paddling.
- Oregonians tend to be laid-back, friendly, and active, making it easy to find creative activities and unique community events and festivals.
- Portland is a wonderful city for families, with endless options for keeping kids entertained.
- A foodie's paradise, Portland has a diverse culinary scene, nationally recognized chefs and restaurants, and amazing farmer's markets.
- Home to the oldest public library on the West Coast, Portland has many museums and art galleries to peruse on our famous rainy days.
- The metro area is fanatical about its sports teams: NBA basketball team the Portland Trail Blazers; MLS soccer team the Portland Timbers; and NWSL soccer team the Portland Thorns. Minor league baseball and hockey also have a large presence in "Rip City."
- Each Portland neighborhood has its own unique character and charm, and they are interconnected by a world-class public transportation system. Miles of bikeways make the commute to work a breeze no matter how you travel.

—Kim Regner, senior education manager

The BioFire® Respiratory 2.1 (RP2.1) Panel has been granted FDA De Novo authorization!

It's the first COVID-19 diagnostic test to receive authorization outside the EUA pathway.

BioFire® Respiratory 2.1 Panel

1 Test. 22 Targets. ~45 Minutes.

VIRUSES

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Coronavirus HKU1
Coronavirus NL63
Coronavirus OC43
Severe Acute Respiratory Syndrome Coronavirus 2 (SARS-CoV-2)
Human Metapneumovirus
Human Rhinovirus/Enterovirus
Influenza A
Influenza A/H1
Influenza A/H3
Influenza A/H1-2009
Influenza B
Parainfluenza Virus 1
Parainfluenza Virus 2
Parainfluenza Virus 3
Parainfluenza Virus 4
Respiratory Syncytial Virus

BACTERIA

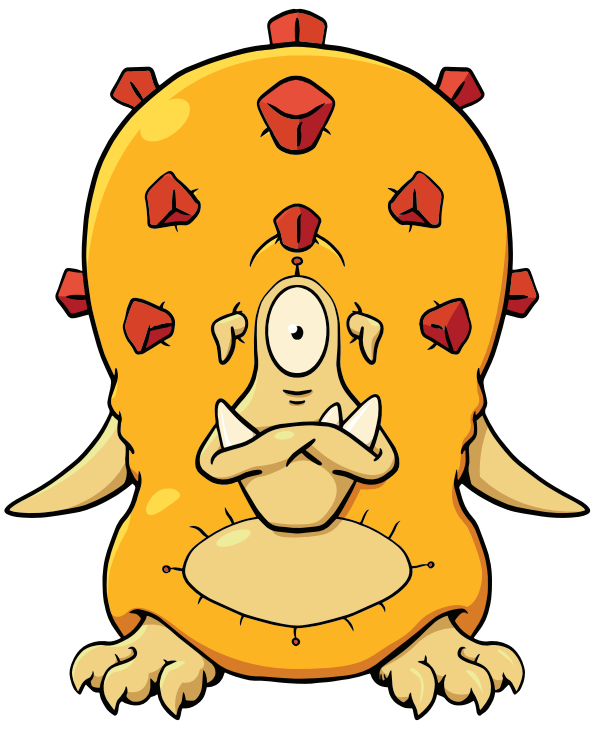
Bordetella pertussis
Bordetella parapertussis
Chlamydia pneumoniae
Mycoplasma pneumoniae

Sample Type: Nasopharyngeal swab in transport media or saline

Target 22 common respiratory pathogens, including SARS-CoV-2, all in one test.

Overall: 97.1% Sensitivity | 99.3% Specificity[1]
SARS-CoV-2: 98.4% PPA | 98.9% NPA[2]

About 45 minutes to results and just 2 minutes of hands-on time.



Avoid missing other important contributors to respiratory tract infections, like adenovirus and RSV, with a comprehensive panel of the most common pathogen causes.

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BioFire® FilmArray®
Respiratory Panel

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BioFire® FilmArray®
Gastrointestinal Panel

84% reduction in average time to results.[5]

BioFire® FilmArray®
Meningitis/Encephalitis Panel

Up to 4-day reduction in average time to results.[6]

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1. Overall performance based on prospective clinical study for the BioFire® FilmArray® Respiratory 2 Panel.
2. Overall performance based on prospective SARS-CoV-2 clinical study for the BioFire® Respiratory 2.1 Panel in comparison to 3 EUA tests.
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BFR0001-5035-01

The Emergency Medicine Job Market

WHERE DOES THE SPECIALTY STAND PRE- AND POST-PANDEMIC?

by BARB KATZ

When I was a young recruiter in New York City, I spent many a summer weekend in the Hamptons, a string of small towns and hamlets along the eastern tip of Long Island. On any given Friday afternoon, as trains from Penn Station crammed with vacationers and packed like sardines with day-trippers in standing-room-only accommodations, the cacophony of voices and metal wheels shrieking against the rails was deafening. On one particular trip, there was a lull in the conversation, and I distinctly heard a lone voice exclaim, "Do you think there will be jobs when we get to America?" Of course, laughter exploded.

For the first time in the 32 years that I've worked in the emergency medicine arena, residents are asking, "Do you think there will be jobs when we get to graduation?" But this time, no one is laughing. The COVID-19 pandemic wreaked havoc on the specialty, with emergency department census levels dipping 42 percent overall early in the pandemic[1]—and as much as 70 percent in some places. Physicians saw clinical hours cut back and salaries reduced; some were even laid off. The number of job opportunities for physicians dove well under 50 percent of 2019 levels, and some 2021 graduates left residency without a job. More than 75 percent of jobs were open to primary care boarded physicians, and there are reports of some employers replacing physicians with physician assistants and nurse practitioners to keep costs down.

So where is this pandemic train taking us?

In May 2021, I surveyed employers representing approximately 32 percent of the 8,600 emergency departments in the country and received about a 70 percent response rate. Employers ranged from small democratic groups to large national groups and included a strong percentage of teams employed directly by hospitals. The survey focused on both the past 2020–2021 and the upcoming 2021–2022 hiring seasons. Below are some highlights from these employers.

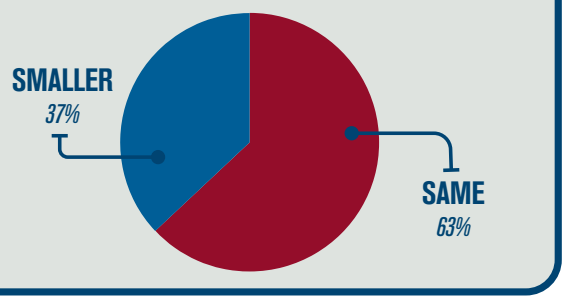
Current Workforce

Part one of the survey addressed current workforce status: 63 percent of respondents stated that their workforce numbers were the same as pre-COVID levels, and 37 percent reported their workforce was smaller. Staff reduction percentages ranged from 8 to 40 percent, with an average of 16 percent. Slightly more than 69 percent of employers have cut back on physician clinical hours, ranging from 5 to 30 percent, with an average of 15 percent.

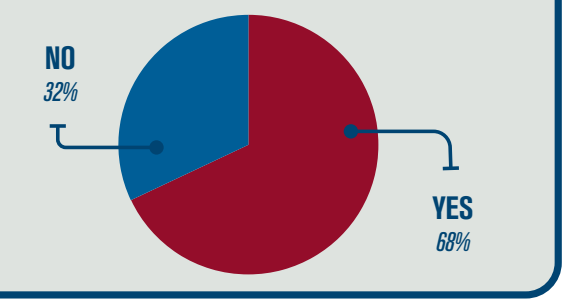
On the compensation front, only 21 percent of respondents reported salary cuts for physicians, ranging from 5 to 20 percent, with an average of 12.5 percent. Some employers took steps to prevent cuts, including one large national group that had its leadership team take cuts so its physicians wouldn't have to bear the brunt of the financial burden. The survey also asked about cuts to advances for new hires. Responses showed 68 percent experiencing no change and 32 percent cutting as much as half of the value of signing bonuses, loan forgiveness, relocation packages, and resident early sign-on stipends.

Next, the survey asked employers the percentage of primary care trained physicians on their workforce. Responses indicated higher levels than the pre-COVID period, with 58 percent having primary care boarded physicians, ranging from 5 to 100 percent of their staff, with an average of 32 percent of their workforce. Finally, the survey asked if employers had replaced any physicians with physician assistants and nurse practitioner—not a single employer who responded to the survey had done so.

How does the size of your workforce compare to pre-COVID levels?



Are you hiring in the next year?



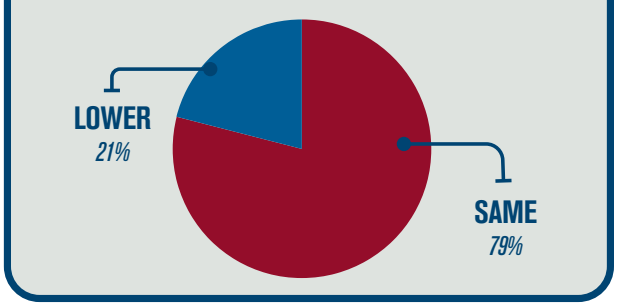
Hiring Plans

Part two of the survey focused on the then-upcoming 2021–2022 hiring season, which is now under way. In pre-COVID days, the specialty's primary web-based job search site, EDPhysician.com, averaged 1,700 jobs on any given day. During COVID and as recent as July 2021, that number dipped dramatically to about 500 listings.

Who is hiring? Of all respondents, 68 percent will be hiring, while 32 percent, composed primarily of small emergency medicine groups or single hospital employers, will not. Large national groups anticipated hiring just over 1,000 physicians, while the smaller employers hoped to add a collective 150 new physicians. Of those who are hiring, 31 percent will see an increase from the pre-COVID workforce, while 47 percent will stay the same.

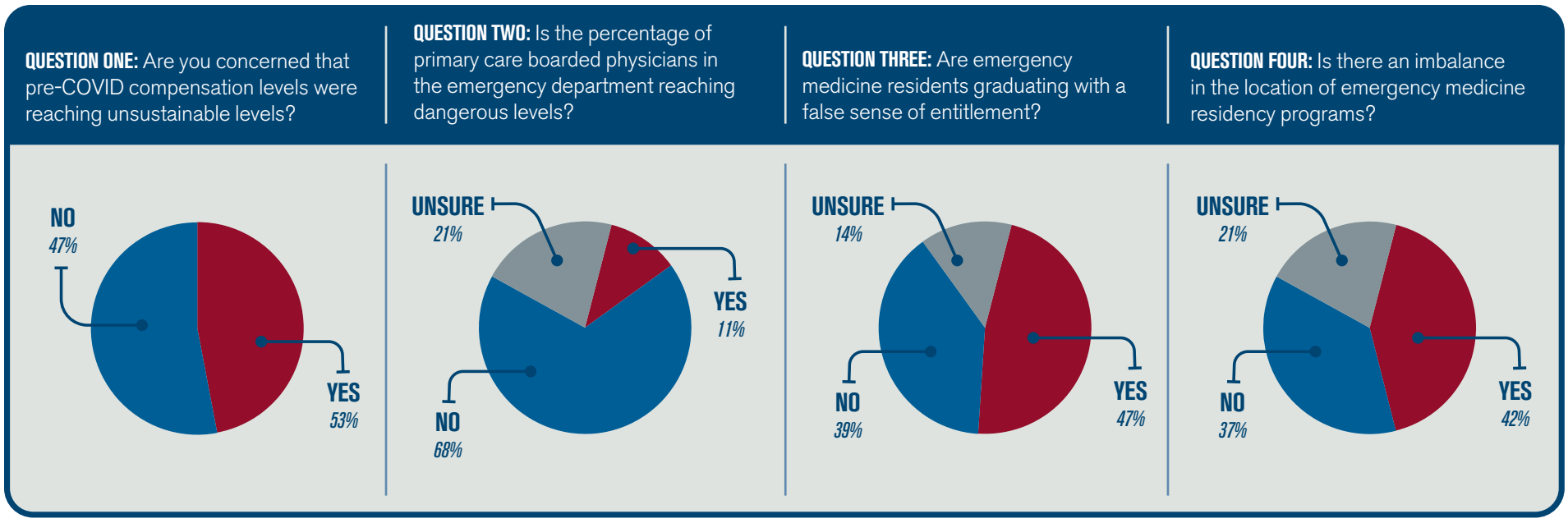
Finally, the survey asked when employers anticipated beginning the recruitment process. Just over half of employers (52 percent) planned to open for applications in July, 10 percent planned to initiate hiring in September, and 6 percent will start interviewing in January 2022. Of those who will be hiring, 62 percent will not consider primary care boarded candidates.

How do your salaries compare to pre-COVID amounts?



Compensation

Part three of the survey focused on compensation levels for this season's new hires. Of employers that are hiring, 79 percent will retain pre-COVID compensation levels, while 21 percent will experience a compensation level as much as 20 percent lower. As for up-front incentives, 50 percent of employers will offer the same bonuses as pre-COVID levels; the other half will lower the perks they offer. Most of the cuts will be from sign-on bonuses, with employers either reducing the amount or eliminating these deal sweeteners altogether.



Market Outlook

Finally, the survey inquired about employers' other concerns for the emergency medicine job outlook. A representative from a large national physician owned group replied, "Rural, less desirable locations will always be in shortage. Hospitals will have to incentivize providers to live and work in those locations in the form of money. If they do entice with dollars, unfortunately, turnover in those areas will be an ongoing problem."

The emergency department chief of a multisite Midwestern group stated, "I am concerned with cost cutting by hospitals by reduction of board-certified emergency physicians overall and movement toward mid-level providers."

The representative of another large national group mentioned factors that excite him: "It's about the value of the training we get. We really have the skills to care for a broad scope of patients from critical care to jail medicine. There continues to be lots of opportunity in emergency medicine."

And the chief of a large medical center emergency department opined that he was concerned about multiple factors: "The increase of private-equity ownership of EM practices, the increase in emergency medicine programs that are started for the purposed of creating cheap labor, and the replacement of physicians with APPs as it relates to private equity."

Conclusion

The specialty of emergency medicine is in recovery mode, and the future appears a lot less bleak than it did at this point one year ago. But there remains a great deal of unrest and uncertainty. What does it mean for job searchers in the 2021–2022 market? The key to a successful job search will be flexibility. Open your minds, your requirements, and your maps. The market is still depressed, and the best jobs will fill quickly. Savvy employers will look for candidates selecting jobs for the long term and for the right reasons. There will be concern among many employers that graduating residents are using those jobs as stepping stones until becoming ABEM-certified, so they then risk losing that talent to another employer. New graduates may need to dial back a bit on their location and lifestyle demands and focus more on choosing real opportunities that will be the building blocks of a successful career in emergency medicine.

Reference

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BARB KATZ is president of The Katz Company EMC, a member of ACEP's Workforce and Career sections, and a frequent speaker and faculty at conferences and residency programs. She can be reached at katzco@cox.net.

First Impressions

The front of the building looked fine, but then we walked around the building. It was just a giant rubble pile. You could hear screaming and crying. Everyone was just trying to figure out what was going on. We were going up through a collapsed part of the floor in the parking garage, trying to rescue anyone we could reach. We were sloshing through water past our knees. I remember looking over and seeing a Tesla parked nearby, hardly visible because it was under water. Thoughts were running through my mind as we assessed the scene: Are we going to get electrocuted? Is the rest of this building going to come down on us? How do we secure the scene? What hazardous materials are we dealing with?

We could hear a teenage girl crying out for help from within the rubble, trapped behind a mass of rebar, dumpster, and concrete slabs. We spent hours trying to locate her, but eventually we stopped hearing her calls. A fire broke out, forcing us to pull back until we could control the flames. After that, we knew she had passed.

BENJAMIN ABO

During the first several hours on-site, rescue specialists were utilizing specialized cameras and microphones to gather information about patient status and location.

BENJAMIN ABO

After being on-site for two and a half weeks, Dr. Abo glanced down and spotted this photo from 1968 right next to his boot.

The Floating Photo

I walked out from the garage rubble and was standing on a pool deck that had collapsed down a little bit. Floating in the pool water was a black-and-white wedding photo, probably from the late '70s, taken inside a synagogue. I thought about the people in the photo: Is this someone who survived, or is the only remaining person from the family now lost in the rubble? I set it aside, eventually taking a photo of it with my phone and sending it to a local Jewish community leader to see if he knew any of the people in the photo. As we found more items, we started collecting and cataloging them. I think we're probably up to nearly 15 huge bins of items we've brought out from the rubble. We knew these people didn't have time to get to their belongings when the building collapsed, but these are memories. We thought they might bring some comfort and closure to the families.

A Place to Recover

We noticed a small memorial had started on the chain-link fence next to our tents. Someone had hung a photo and some flowers upside down so they would dry. I added a stuffed alligator we found inside the collapse. Within days, the entire fence was covered in objects to memorialize the victims. Now it takes up the whole block. The problem was that our rescue team's tents, each with 16 beds inside, were set up on the tennis courts right inside that fence. We were working all night and trying to sleep in those tents during the day, but all we could hear were people visiting the memorial, sobbing, grieving. There was no place for us to get away from it, no quiet place to recover both physically and emotionally between our shifts. After two weeks, we moved our tents to a park a few blocks away.

RICK STEPHENS OF MIAMI-DADE FIRE RESCUE

Visitors spend time at the memorial that grew on the fence next to the site.

RICK STEPHENS OF MIAMI-DADE FIRE RESCUE

The Urban Search and Rescue team worked 24-7 in 12-hour shifts in and atop the debris, searching, geolocating information, and assuring safety.

Preparation Versus Reality

I started volunteering with EMS when I was 16 years old in New Jersey and then in Pittsburgh during college. My Pittsburgh mentors taught me that we are not paid for what we do but for what we are prepared to do.

I've been working in disaster medicine a long time—Katrina, Haiti, Dorian, plus a lot of local responses to homicides, accidents, and various things. I've always identified with Miami-Dade Fire Rescue's motto, "Always ready, proud to serve." But this was different. This was my community. These were people I knew.

I will never forget where I was standing when we found the daughter of one of our firefighters. I will always remember seeing his face in that moment and the way we all lined up for a procession to gently take her out of the rubble. Our teams are as ready as we can be, but there is no way to prepare for moments like that.

BENJAMIN ABO

Members of the Urban Search and Rescue team assessed the site during a night shift.

Peer Support

We are all dealing with so many emotions. I think it helps to talk about it, so I encourage that for our team members. I think it's important that we don't hold it in. I remember seeing a physician colleague of mine. As we hugged hello, we both cried. (And that's OK—I felt better after and went back to work.) It's not helpful when outside people ask for gritty details about what we are witnessing, but it can be cathartic when we get to talk about our feelings and what we are processing. For me, seeing and knowing that everyone is looking out for one another, that helps. But I also think this is going to hit harder once we aren't so busy and we have more time to think about it.

The Feelings Factor

In our line of work, we become adept at compartmentalizing our feelings and pushing through. For me, that fine line of staying strong and calm while also acknowledging I need to prioritize my own mental health—that is a consistent balancing act, an internal conflict we all face. I've worked in EMS for 25 years. I'm trained in critical incident stress management, and I've been on a number of "once-in-a-lifetime" calls. I've lost co-workers, partners, and mentors to suicide or substance abuse. When we feel the need to constantly be strong and we don't have that outlet to talk through it with someone, that's often when we see the mental health struggles. Even the strongest substances can break. But I know firsthand that the balancing act is hard; it's a constant effort.

RICK STEPHENS OF MIAMI-DADE FIRE RESCUE

Members of the Urban Search and Rescue team comfort each other during a memorial service after spending several weeks working at the scene.

RICK STEPHENS OF MIAMI-DADE FIRE RESCUE

K9 specialist John Long with FEMA-certified search and rescue dogs Stone and Cable. One dog focuses on finding living people, while the other searches for human remains.

Man's Best Friend

Our search and rescue team includes a father and son dog duo, Stone and Cable. They're not here as peer-support animals—they are well-trained working dogs, a big part of our search and rescue team. It's my job to look out for their physical well-being, too, even though I'm not a vet. Keeping them active and checking on them is cathartic though. We can step away from the scene and let our teammates know, "Hey, I'm hanging with the dogs." The dogs know we're stressed; they know how to read our cues. They'll come over and put their heads on our laps, looking up at us like, "What's up—you good? You wanna give us a scratch?" They're amazing.

RICK STEPHENS OF MIAMI-DADE FIRE RESCUE

Dr. Benjamin Abo surveys the Surfside scene as part of his role to oversee recovery operations and assure the safety and welfare of the rescue teams.

Affirmation

I hope to never have to go through this again. However, I know that I'm ready if it happens. For me specifically, it reaffirms that I am absolutely in the right field. This is my passion. I know this experience isn't going to have the same effect on everyone, but for me, it has further solidified that emergency medicine is what I'm supposed to be doing, and these paramedics, firefighters, and emergency physicians are my family.

Acknowledgment: *Dr. Abo wrote this in collaboration with ACEP Communications Manager Jordan Grantham.*

DR. ABO is an EMS and emergency physician and medical director for multiple fire departments in Florida. He is medical team manager for Miami-Dade Fire Rescue's Urban Search and Rescue team (FLTF1) and is faculty for the upcoming EMS Fellowship with Florida State University.

ACEP4U: Quality Data

MAXIMIZING YOUR REIMBURSEMENT, PUSHING BACK ON SEPSIS BUNDLE

by JORDAN GRANTHAM

In 2020, more than 20,500 emergency department clinicians (70 percent of whom are emergency physicians) utilized ACEP's Clinical Emergency Data Registry (CEDR) to report on their quality performance. When the Centers for Medicare & Medicaid Services (CMS) recently released its analysis of the Merit-based Incentive Payment System (MIPS) for 2020, there was a great deal of pride in how CEDR participants performed:

- 100 percent of emergency physician CEDR participants achieved a MIPS bonus payment.
- 92 percent met the exceptional performance threshold (significant bonus increase).
- 22 percent earned a perfect MIPS score (estimated $1,683 bonus per physician).

CEDR (www.acep.org/CEDR) provides an advantage for its participants by providing EM-specific measures that are not accessible through non-EM quality registries. For example, while CMS offers sinusitis, upper respiratory infections, and bronchitis measures of little importance to emergency care and in which comparisons to non-emergency physicians may be inadequate, CEDR offers measures specific to EM and emergency care on conditions such as sepsis, pulmonary embolism, and chest pain. The custom measures that come with CEDR maximize the potential for positive payment adjustments; groups reporting on EM-specific measured performed on average 19 percent better than those reporting on public domain measures offered by CMS.

These bonus payments based on 2020 performance will be applied to 2022 Medicare reimbursements. Due to the overwhelming disruption of operations due to the COVID-19 pandemic in 2020, CMS only offered a (very modest) maximum bonus of 1.87 percent. **This is very important to all emergency physicians because the current proposed final rule indicates that the maximum bonus for 2022 may be as high as 12 percent.**

Looking ahead, **CMS has already announced that it anticipates applying penalties to half the physicians in the United States next year. CEDR is here to help emergency physicians avoid that fate (no emergency physicians enrolled in CEDR were penalized by CMS in 2020)** by providing support and resources that help ACEP members thrive in quality reporting. Remaining on the bonus side of the MIPS program is essential as ACEP continues fighting against cuts in reimbursement in other domains, such as evaluation and management codes.

Learn more about CEDR and become part of the ACEP drive for high-quality care at www.acep.org/cedr. To do a deeper dive into MIPS, check out the *ACEP Frontline* podcast on this topic (Sept. 13) or watch the free on-demand webinar "Future of MIPS Reporting – Navigating Through Uncharted Waters" in the Online Learning Center at http://ecme.acep.org.

CEDR is just one example of how ACEP data and quality improvement efforts help guide EM practice. CEDR data work in concert with ACEP's Emergency Quality Network (E-QUAL) to provide insights on best practices and outcomes. Where CEDR is focused on discrete data and alignment with quality measures, E-QUAL strives for higher-level focus on quality improvement, education/toolkit dissemination, and alignment with CMS improvement activities.

For example, in 2017, the E-QUAL Sepsis Initiative surveyed 50 emergency departments to assess compliance with the Severe Sepsis and Septic Shock: Early Management Bundle (SEP-1). Those data showed the bundle didn't fit current EM practice and helped form the evidence for ACEP's decision to use its quality data to push back on SEP-1. (See "ACEP Calls for Revisions to SEP-1 Bundle" at right for details.)

MS. GRANTHAM is ACEP communications manager.

CEDR
CLINICAL EMERGENCY DATA REGISTRY

BY THE NUMBERS

100% of emergency physician CEDR participants achieved a MIPS bonus payment.

92% met the exceptional performance threshold (significant bonus increase).

22% earned a perfect MIPS score–estimated $1,683 bonus per physician.

ACEP Calls for Revisions to SEP-1 Bundle

In early September, ACEP signed a letter to the National Quality Forum calling for the Severe Sepsis and Septic Shock: Early Management Bundle (SEP-1) not to be re-endorsed unless it is revised. ACEP is joined in this statement by the Infectious Diseases Society of America, American Hospital Association, Pediatric Infectious Diseases Society, Society for Healthcare Epidemiology of America, Society of Hospital Medicine, and Society of Infectious Diseases Pharmacists.

The comment letter suggests revisions that would accomplish the following goals:

- Focus the bundle on the subset of patients most likely to benefit from rapid and aggressive interventions, ie, those with septic shock, not those without shock.
- Minimize antibiotic overuse and adverse effects by eliminating patients with sepsis but without shock from the bundle and redefining the goals for time to antibiotic delivery.
- Eliminate bundle elements that do not contribute to improved patient outcomes, such as measuring serial lactate levels.
- Streamline the reporting process to focus on clinical outcomes.
- Make reporting electronic with data that are easily extractable from the electronic health record.
- Get input and support for intended changes from all the professional organizations most affected by the measure.

View the full letter that goes into greater detail about these goals at www.acep.org/sepsis.

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1. Vespa, P. et al. Critical Care Medicine. 2020. doi: 10.1097/CCM.0000000000004428
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pondered the implications of the authors' estimates for the future emergency medicine workforce and what it means for emergency physicians.

After recently sitting with a medical student mentee over coffee, I know concerns about the future of the EM workforce invade the minds of not just the leadership of ACEP but also practicing physicians, residents, and the brilliant young men and women who want to follow in our footsteps.

In this article, I have limited space to summarize a few of the important themes. The full conversation can be viewed by scanning the code at the end of this article. What will the emergency medicine workforce look like at the end of the decade? According to the report, experts anticipate more then 67,000 total emergency medicine practitioners, of which emergency physicians would make up 70 percent. Physician assistants (PAs) and nurse practitioners (NPs) would assume 23 percent of the workforce, while other non-emergency-trained physicians would comprise the remainder. In 10 years, this workforce would slightly exceed the demand for emergency services, creating a surplus that threatens the future of the specialty. One of the first questions I posed to the members of roundtable was, what should the future of emergency medicine look like?

Advanced Practice Professionals

"If we're going to define the perfect world, we're going to want high-value medicine," started Dr. Mullen, referencing that board-certified emergency physicians represent the pinnacle of training and experience in emergency care, but for low-acuity care, advanced practice professionals (APPs) such as NPs and PAs would remain valuable to the clinical team.

Dr. Koskenoja pushed back a little on this notion, saying that "it's kind of like the wild wild West out there," referring to her practice in rural Michigan. Recalling anecdotes of patient harms from inexperienced NPs and PAs, she reported that "patients are being hurt in

these scenarios when there's someone ... just basically taking care of someone alone and that's not a safe environment."

The team approach is better, both agreed, with the emergency physician in the lead. So did Dr. Mendiratta, who stated that "the appropriate use of APPs should not be determined by economic factors. It should be determined by the needs of our patients." Thus, the leadership skills of emergency physicians become critical. Whether that leadership occurs in real time at busier emergency departments or is available to consultation in lower-volume sites, Dr. Mendiratta affirmed that "an emergency physician should be the leader of a collaborative care team."

Unfortunately, in some places, such as rural Maine, that is not always the case. "Financially strapped rural hospitals that are having trouble staffing their emergency department, they may reach out and start having an independent PA or nurse practitioner work there," said Dr. Mullen. "And that's just so wrong for the patients but also so wrong for that practitioner because they're going to be faced with challenges they are not up to, and that can sometimes be career-ending."

> **The appropriate use of APPs should not be determined by economic factors. It should be determined by the needs of our patients.**
>
> *—Sudave D. Mendiratta, MD, FACEP*

At my urban, academic hospital, we do not hire new graduates, instead requiring two years of higher-level experience in emergency departments before bringing non-physicians on board. We do, however, have a yearlong training program where NPs and PAs work side by side with the rest of our academic team, functioning similar to PGY-1 residents as they gain knowledge and experience with emergency medicine.

The inexperience of new graduates of NP and PA programs is one reason ours and other physician groups, such as USACS, offer training programs for APPs. Dr. Pines explained the USACS model during the roundtable: "We do have a standardized program for APPs where they get onboarding, local mentorship, chart reviews." Dr. Pines described the curious situation where the utilization of clinical management tools was actually followed with greater devotion by APPs than physicians. "The doctors will know the rule and see the rule and then come up with a reason why they're going to deviate from the rule," he said. But physicians are well-equipped for deviation from protocols, with medical decision-making skills honed by a minimum of two to three years of additional training before they can enter independent practice.

Residency Training

Our panel then moved the discussion from APPs to the plight of emergency medicine residents, who have seen, over the past two years, contracts offered and revoked and a job landscape that has gone from feast to famine (see page 8 for more on the current job market). "They compete for a spot, they get a spot, and then they come out, and if we're having an oversupply and they can't find a job anywhere close to where they want to be, that is problematic," said Dr. Mullen of the current hiring crisis facing emergency medicine residents graduating in the middle of a pandemic.

However, the consensus from the group was that the market for emergency medicine residency programs would sort itself out over time, either by fewer medical students entering a profession that has been rapidly becoming more competitive or by additional residency programs coming online. Those projections did not seem reassuring to my mentee when I informed her of the potential situation in the next two years when she would be submitting applications to the Electronic Residency Application Service.

The conversation of the roundtable quickly focused on a more pressing concern: the pipeline of emergency physicians available to practice in rural environments.

> **We talk a lot about diversity in medicine, but we don't talk about diversity of where people come from.**
>
> *—Viktoria Koskenoja, MD*

Rural Medicine

"We really have to directly address the rural issue. I think that's not a 2030 issue," interjected Dr. Pines. "That's a today issue." One idea to begin dealing with this crisis is to offer rotations in rural emergency medicine for today's current crop of emergency medicine residents.

"One of the main hurdles, honestly, is that to be considered an appropriate elective in a residency training program, there needs to be a board-certified emergency medicine physician there in the ER," Dr. Koskenoja reminded the group. The Resident Review Committee for Emergency Medicine requires that for emergency medicine blocks, residents' cases are staffed by a board-certified/board-eligible emergency physician. Thus, we are left with a chicken-and-egg paradox. How do we get more physicians to experience the rural environment if we can't get

CONTINUED *on page 16*

experienced emergency physicians to work in rural departments?

The panel brainstormed a possible solution: going even further back into the medical school pipeline to more strongly recruit and support college students from rural areas who might, after graduating medical school and residency, be more inclined to subsequently practice in rural areas. "We talk a lot about diversity in medicine, but we don't talk about diversity of where people come from," said Dr. Koskenoja, referring to a lack of medical school and residency candidates from rural backgrounds.

For practicing physicians, competitive salaries and loan forgiveness could serve as other incentives to draw physicians from geographically oversupplied regions to undersupplied regions. The concept of geographic maldistribution for emergency physicians, as well as other key specialists such as obstetrician-gynecologists and surgical subspecialties, was more believable to the roundtable participants than a situation where emergency physicians were oversupplied in every region of the nation.

Rural medicine offers a welcome and different challenge to urban medical centers or traditional community hospitals in the suburbs. According to Dr. Mullen, "once we actually stabilize the staffing [in rural departments], we find that some people really enjoy the challenge of rural medicine." Dr. Mendiratta, reminiscing about days of old, felt that practicing in a critical access hospital in an extremely small town was "truly a magical experience."

Understanding reality, Dr. Koskenoja quipped, "Nobody expects to get a liver transplant when they live in a town of 22,000 people where they live, but you should be able to get good primary care and good emergency care anywhere in the country."

> The role of emergency medicine is not necessarily to be in a brick-and-mortar emergency department 24-7. ... That's part of our future. That's certainly not all of our future.
>
> *–Jesse Pines, MD, MBA, FACEP*

Beyond Brick and Mortar

Dr. Pines, ever the futurist, explained that "the role of emergency medicine is not necessarily to be in a brick-and-mortar emergency department 24-7. ... That's part of our future. That's certainly not all of our future." Other opportunities such as telemedicine, fueled by the need to adapt to COVID-19's restrictions on in-person contact between physicians and patients, and freestanding emergency medicine, recently pioneered by waves of emergency physician entrepreneurs, promise new practice models for emergency physicians. However, not all are enthusiastic about these approaches. Emergency physician RJ Sontag, MD, during the recent ACEP Leadership & Advocacy Conference, expressed his displeasure as a new graduate to be forced to practice virtual medicine.

> We want to be a place where the best minds, the brightest minds, the most energetic medical students are choosing to be in our profession.
>
> *–Jay Mullen III, MD, FACEP*

Our roundtable experts echoed this sentiment. "Sitting in front of a computer screen isn't something I enjoy doing all day," said Dr. Koskenoja. Alluding to the sounds, sights, and smells of the emergency department, she presented a contrasting explanation. "We didn't become radiologists for a reason." Not every emergency physician will want to do telemedicine; however, some—people at high risk for COVID or with other personal reasons—enjoyed the flexibility that it offered. Dr. Mullen thinks telemedicine offers an excellent opportunity for emergency departments to expand their footprints while keeping patients—for example, nursing home patients—out of the emergency department and in a place that is best suited to treat them. "This could be an opportunity for emergency physicians to help bring the care to the bedside, at least in a virtual way, to keep the patients where they're going to be the healthiest," he said.

Our Future

According to Dr. Mullen, "we want to be a place where the best minds, the brightest minds, the most energetic medical students are choosing to be in our profession." Regardless of whether the projections from the workforce report pan out a decade from now, provided that we maintain the rigorous nature of our training programs, I am confident that emergency medicine will continue to draw the best and brightest.

Scan the code to watch the complete workforce roundtable discussion.

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DR. DARK is assistant professor of emergency medicine at Baylor College of Medicine in Houston, on the Board of Directors of Doctors for America, and Medical Editor in Chief of *ACEP Now*.

TIPS FOR BETTER PERFORMANCE

SPECIAL OPs

DR. WELCH is a practicing emergency physician with Utah Emergency Physicians and a research fellow at the Intermountain Institute for Health Care Delivery Research. She has written numerous articles and three books on ED quality, safety, and efficiency. She is a consultant with Quality Matters Consulting, and her expertise is in ED operations.

The Fully Flexible ED

These strategies can help your department adapt to variable volumes and patient needs

by SHARI WELCH, MD, FACEP

One of the unforeseen changes to emergency medicine in the peri-pandemic era is the extreme variation in volume and acuity. Prior to the COVID-19 pandemic, it was not unusual to observe up to 15 percent variation in volume between the busiest and slowest days of the week. For instance, an emergency department might see 98 patients on Saturday and 113 patients on Monday. Acuity as measured by admission rate and Emergency Severity Index (ESI) distribution showed a similar degree of variation. Innovative department leaders understood these data and used them to optimize operations. By knowing the arrivals by day of the week and by hour of the day, stratified by the acuity of the patients presenting, medical directors can craft good baseline operational strategies. In particular, these data should inform the opening and closing of specific zones within an emergency department and optimize staffing patterns. For instance, many departments staff down on weekends and up on Mondays. Zone opening and closing times may vary by day of the week. Some emergency departments close the fast track on weekends for lack of patients to populate it. Communities with seasonal variation in population, such as emergency departments near vacation destinations, should also look at data by month.

Since the pandemic, this variation has become extreme for many emergency departments. Some now report variation in daily volume of more than 40 percent, and the weekly patterns are now more difficult to identify. An emergency department such as the example mentioned above might now see 88 on the slowest day of the week and 127 on the busiest day. Even more confounding, the old weekend-to-Monday pattern may no longer apply. Many departments are seeing swings in the ESI distribution, such as steep drop-offs in volumes of low-acuity patients and upticks in high-acuity patient volume when COVID surges are prevalent in the community.

Factoring in the escalating phenomenon of staff callouts, this daily variability becomes even more problematic. Staff nurses have higher rates of callouts (absenteeism) than many other types of workers.[1] Particularly in unionized workforces (where the "sick day" is viewed as a right and is protected), callouts are common. But COVID had impacted absenteeism even more, and now physicians and advanced practice professionals (APPs) are affected as well.[2] Hospital leaders and managers are struggling to find remedies for an entire workforce that is burnt out, sick, or anxious about getting sick and so chooses to call out for a shift. Even physician groups are having to plan for doctors who call out. Nurse leaders and managers may spend the first part of a workday addressing callouts and trying to fill holes in the schedule.

What are some of the options for ED leaders trying to function with so much daily variation?

Flexible Geography

Since your peri-pandemic emergency department will need to be a different emergency department on any given day, with volume and acuity swings that are extreme, you need to think about how to accommodate the variation within the physical space.

- **Flex Unit:** A combined unit that can flex with the acuity distribution is an idea whose time has come. Here are a few examples of flex units:
  1. Perhaps the most common example is the rapid treatment unit idea. The Tennity Emergency Department at Eisenhower Health in Rancho Mirage, California, designed a space that combines the fast track and the mid track (see Figure 1). Middle- and lower-acuity volumes showed the most variation in the peri-pandemic months, so this space was ideal for them, and patients were treated predominantly in recliners in this area. APPs saw the low-acuity patients and helped with

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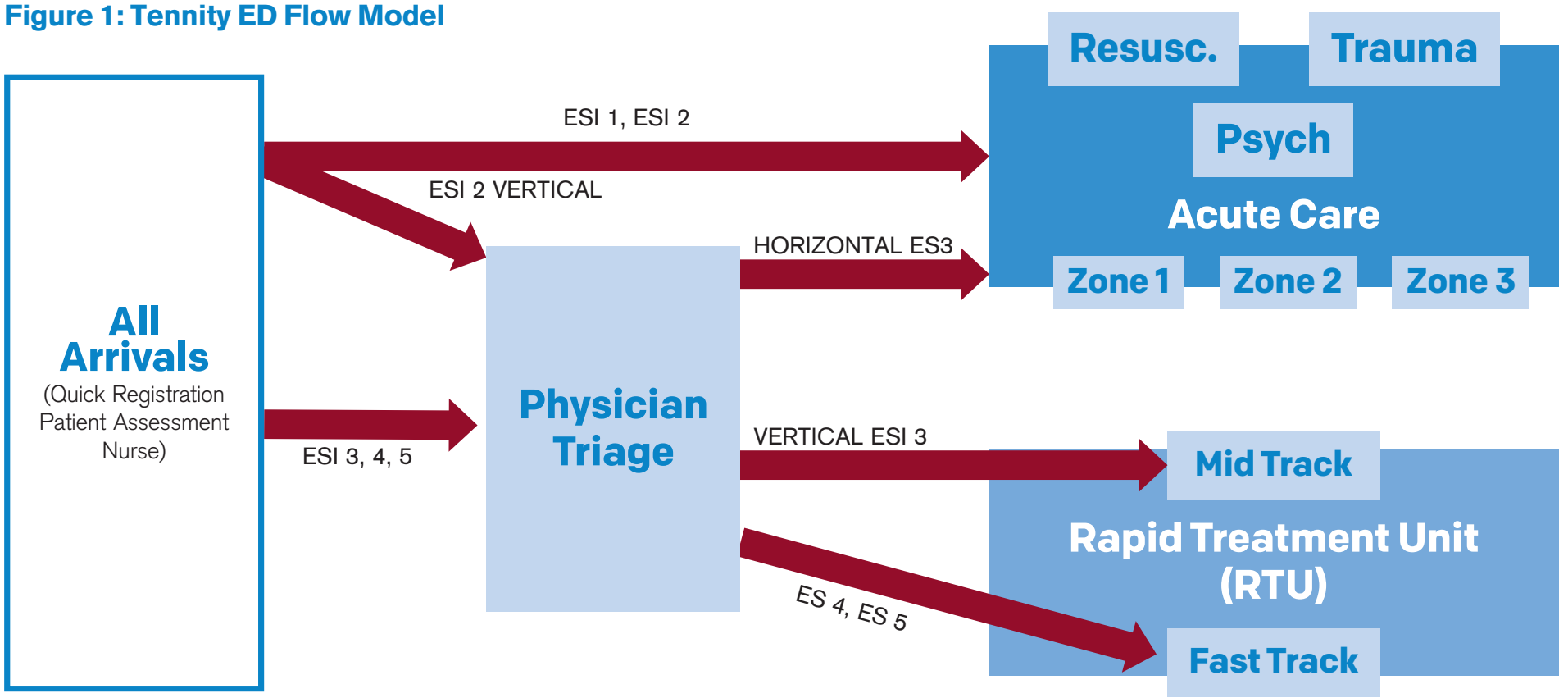
Figure 1: Tennity ED Flow Model



SPECIAL OPS | CONTINUED FROM PAGE 17

some easier mid-track patients, who were predominantly managed by physicians. (See the February 2021 issue of *ACEP Now* for more on Tennity's flexible ED design.)

2. Conversely, an ED patient care area can be flexed into a boarding unit. At the Christiana Care emergency department in Wilmington, Delaware, a dual-purpose 11-bed "core" was identified as a flex zone. This area could be a lower-acuity zone, boarding unit, or hybrid unit based on the conditions of the day. An APP managed both groups of patients, and staffing was flexed accordingly. If this pod was used primarily for boarding and no new patients could be processed there, physician hours were saved by sending the clinician home.
3. At Hasbro Children's Hospital in Providence, Rhode Island, variation in both orthopedic surges and behavioral health surges were noted. Orthopedic cases peak in the summer, while behavioral health cases peak when school starts through the winter. The hospital has a zone that functions alternatively as an orthopedic suite or behavioral health holding suite based on the patient numbers each day. (See the March 2018 issue of *ACEP Now* for more on Hasbro Children's Hospital's efforts to improve metrics.)

- **Flex Beds:** A variation of the flexible geography concept is to identify flex beds or treatment spaces with proximity to a zone. This patient-centered approach was used at Washington Hospital Healthcare System in Fremont, California, in its new emergency department. It also helps when two clinicians have vastly different productivity and efficiency levels. This model allows each to work at their own pace by giving the clinicians more rooms to see patients when they can and fewer rooms when they can't see the next new patient quickly. Figure 2 depicts two zones and a group of shared beds that can be part of either zone. (See the March 2019 issue of *ACEP Now* for more on Washington Hospital's approach to moving to a larger ED space.)

Figure 2: With the flex-bed concept, two zones share a group of flexible beds that can be part of either zone.

Flexible Shifts

Volume swings of 40 percent will always need adjustments in staffing. Helen DeVos Children's Hospital in Grand Rapids, Michigan, created a model of flexibility in scheduling. Its shifts match the patient arrivals, not physician or nursing preference. The physicians have flexible shifts called "at-risk shifts." These flex shifts may be four, eight, or 12 hours, depending upon departmental conditions. A real-time huddle of physician and nurse leaders is held to decide the strategy for opening and closing of zones in real time. Predetermined rules decide if and when the clinician goes home. They have well-articulated processes for most contingencies. (See the July 2019 issue of *ACEP Now* for more on Helen DeVos's data-driven ED flow.)

On-Call Strategies

While most emergency physicians were attracted to the specialty because of the carefully delineated work hours, we may start needing an on-call arrangement. This will likely be a result of surges and the new extremes of volume variation. This may contribute to the need for on-call backup. Hospital leadership should articulate triggers for both calling in and sending home physicians and APPs. Real-time data should inform these triggers, which will be location specific. A few examples of triggers are listed below:

- Calling in a physician or nurse
  1. More than six people waiting in the waiting room
  2. More than 30-minute waits to see the clinician
  3. A sick clinician
- Sending a physician or nurse home
  1. Fewer than two arrivals per hour for a zone
  2. No nurse or tech to support the clinician
  3. Zone closure

The most progressive emergency departments are learning to build flex into their operations. Ideally, emergency departments should have these flex options mapped out beforehand and standardized to avoid confusion. In the emergency department, we are known for being very creative (anyone remember using a Foley catheter for a posterior nosebleed?), but inventing operations on the spot will be less successful than deliberately gathering your team together to brainstorm how to create more flexibility to manage the inevitable variability in your emergency department. Map out these plans, educate staff, and achieve buy-in in advance. By flexing your geography and your shifts and by planning for contingencies with on-call strategies, your emergency department will be able to bend without breaking as the situation around it changes.

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EM CASES

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Geriatric Trauma Myths and Misperceptions: Part 1

Bust these 5 triage and treatment myths to provide better care for older patients

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

The oldest Americans are the fastest-growing population in the United States.[1] Older persons are more likely to experience trauma and to have worse outcomes after a trauma.[2] Under-triaging may be the single most important modifiable factor associated with mortality and morbidity in our trauma systems. Observational studies suggest that when injured older patients are cared for at a regional trauma hospital, there is as much as a 25 percent reduction in mortality, a reduction in delirium, and fewer discharges to long-term care.[3] In Ontario, where I work, more than two-thirds of older adults with major traumatic injuries (often related to minor mechanisms of injury such as ground-level falls) are triaged by EMS to a nontrauma center, and fewer than 50 percent of these patients are then transferred to a trauma center.[4] This month, we'll explore five myths about trauma and triage in older patients. Next month, we'll bust myths about falls and other injuries common in this population

Myth 1: Transfer to a Trauma Center Is for Lifesaving Emergency Surgery Only

A pervasive myth is that patients need only be transferred to a regional trauma center if emergency surgery is likely to be required. Older patients with nonoperative injuries benefit from specialized trauma care from coordinated multidisciplinary teams at a regional trauma center.[5] The lack of need for emergency surgery should *not* preclude consideration for transfer to a lead trauma center. I believe we should be advocates for our older trauma patients by ensuring that regional trauma transfer guidelines include frailty as a high-risk factor that should warrant the consideration of transfer at a lower threshold.

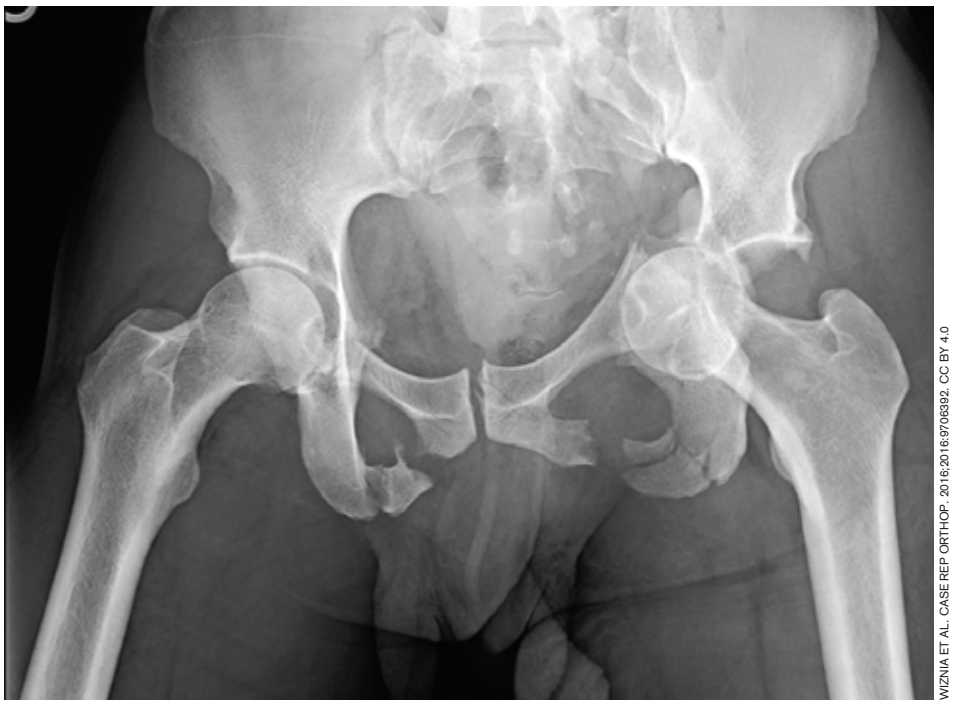
Myth 2: Prognostication of Trauma Patients Can Be Accurately Assessed Based on Age and Comorbidities in the ED

We have all cared for 90-year-old patients who seem to have the physiology of 70-year-olds and vice versa. While both age and frailty are somewhat predictive of poor outcomes after trauma, multiple studies using frailty scores have shown frailty to be more predictive of poor outcomes after trauma than age and even comorbidities.[6–9] It has been suggested that the combination of a frailty index such as the Trauma-Specific Frailty Index and Geriatric Trauma Outcome Score may improve prediction of long-term outcomes, but this has yet to be studied.[10,11] Prognostication scores following traumatic brain injury such as the International Mission for Prognosis and Analysis of Clinical Trials in TBI (IMPACT) Score have been validated in adults with a Glasgow Coma Scale score ≤12 and can predict six-month mortality when calculated in the first 24 hours of admission; however, this rarely applies to ED care.[12]

Myth 3: Volume Replacement in Trauma Patients with Hemorrhagic Shock Should Only Be Accomplished Utilizing Blood Products

While blood products are generally favored over crystalloid in the young trauma patient showing signs of hemorrhagic shock for volume replacement, older patients are often fluid-deplete

CONTINUED *on page 20*



Lateral compression pelvic ring injury and left-sided T-shaped acetabulum fracture.

at baseline and may be taking medications such as diuretics that further deplete their volume.[13] In the initial resuscitation of an elderly trauma patient who may be volume-depleted at baseline, it is reasonable to give a small bolus of crystalloid (250–500 cc) followed by frequent reassessments of volume status using a combination of clinical parameters, point-of-care ultrasound, an arterial line, and urine output.

Myth 4: Isolated Pelvic Fractures Are a Rare Cause of Hemorrhagic Shock and Mortality in Trauma Patients

While young patients with isolated pelvic fractures rarely suffer from hemorrhagic shock and death, and isolated pubic ramus fractures are generally benign injuries, it is not uncommon for older trauma patients to suffer a lateral compression fracture of the pelvis leading to unrecognized retroperitoneal bleeding.[14] Older trauma patients are more likely to have lateral compression fractures of the pelvis than younger patients and are more likely to suffer complications of pelvic fractures leading to death.[15] These fractures in older patients carry a risk of retroperitoneal bleeding requiring angiography that cannot be detected by point-of-care ultrasound during the initial ED resuscitation. It is prudent to maintain a high level of suspicion for pelvic fractures with associated vascular injury and retroperitoneal bleeding in older trauma patients, especially if they are taking anticoagulant medications. Binding the pelvis early in the ED resuscitation of older polytrauma patients suspected of pelvic fractures should be considered.[16]

Myth 5: Opioid Analgesics Should Be Withheld from Older Trauma Patients Due to Potential Adverse Effects

Undertreating and overdosing analgesics in older trauma patients are common pitfalls.[17] All trauma patients should have their pain treated regardless of age. Side effects from opioids are minimized in older patients by appropriately lowering the standard adult dosages. Both treating pain and proper dosing of analgesics help reduce the risk of delirium and agitation in these patients.[18] Early pain control with multimodal analgesia, access to regional analgesia, and regular pain assessments are paramount in managing the older trauma patient. Goals of pain management include the ability of the patient to sit up and roll over independently.

A special thanks to Dr. Barbara Haas, Dr. Bourke Tillman, and Dr. Camilla Wong for their expert contributions to the EM Cases podcast from which this article was inspired.

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PROTECT YOURSELF FROM LEGAL RISK

MEDICOLEGAL MIND

DR. FUNK is a practicing emergency medicine physician in Springfield, Missouri, and owner of Med Mal Reviewer, LLC. He writes about medical malpractice at www.medmalreviewer.com.

Respiratory Arrest in Waiting Room

Make sure you document promptly to avoid suspicion of inaccuracy

by ERIC FUNK, MD

The Case

A 33-year-old woman presented to the emergency department with shortness of breath. She checked into the emergency department at 3:41 a.m. with respiratory symptoms. She had a complex history including type 1 diabetes, end-stage renal disease on dialysis, tetralogy of Fallot, and a partial pancreatectomy. Her triage vitals showed a blood pressure of 177/97, a pulse of 86 beats per minute, a pulse oximetry of 94 percent on room air, and a temperature of 98.7° F.

She was seen by an emergency physician. The history noted that her shortness of breath started at 7 p.m., about 8.5 hours earlier. It was worsened by lying flat and improved when she was sitting upright. She had been dialyzed one day earlier. The examination revealed normal breath sounds and no cardiac abnormality. No significant abnormalities were noted on her examination. Laboratory orders included a complete blood count, comprehensive metabolic panel, troponin, pro-brain natriuretic peptide (BNP), chest X-ray, and an ECG. The results were noteworthy for a hemoglobin of 7.7 g/dL, glucose of 418 mg/dL, creatinine of 3.9 mg/dL, BNP >5,000 pg/mL, and negative troponin.

The ECG is shown in Figure 1.

Her chest X-ray was read as "Stable cardiomegaly. There is pulmonary vascular congestion and interstitial infiltrates. Findings suggest fluid overload with congestive failure."

After reviewing these results, the physician ordered 15 units of insulin SQ (Humulin R). The patient was feeling nauseated and in pain, and so she was given ondansetron 4 mg oral disintegrating tablet and an intramuscular dose of hydromorphone 1 mg. After IV access was obtained, she was given a repeat dose of hydromorphone 1 mg.

Her blood glucose improved to 313 mg/dL. The doctor reassessed the patient, and she was doing well (see Figure 2). Given her reassuring vitals and improving blood glucose, she was discharged from the emergency department.

The discharge instructions advised her to follow up at her next scheduled dialysis appointment the next day and to return if her symptoms worsened. After she was discharged, she was taken back to the lobby of the emergency department, where she was going to wait several hours for a ride home.

Around 7:25 a.m., another patient in the waiting room suddenly came to the front desk to report that the patient had collapsed.

She was rushed back into the emergency department, where it was discovered that she was pulseless. After a few minutes of chest compressions, return of spontaneous circulation occurred. She was given calcium chloride and sodium bicarbonate due to suspicion for hyperkalemia, but her potassium was only 4.3 mmol/L on repeat blood work. She was intubated and admitted to the ICU.

Later that day, the emergency physician who intubated her went back to the chart and made an addendum (see Figure 3)

The patient survived but suffered a devastating anoxic brain injury and now requires 24-7 care in a nursing home.

The patient's family filed a lawsuit. They alleged that the physician who cared for her was negligent in giving her hydromorphone, likely contributing to a respiratory arrest. They also allege that the dose of insulin caused a hypoglycemic event that caused cerebral damage. The family also made an accusation of an EMTALA violation for not appropriately screening and stabilizing the patient's emergency medical condition.

The two sides reached a confidential settlement before trial.

Figure 1: Patient's ECG.

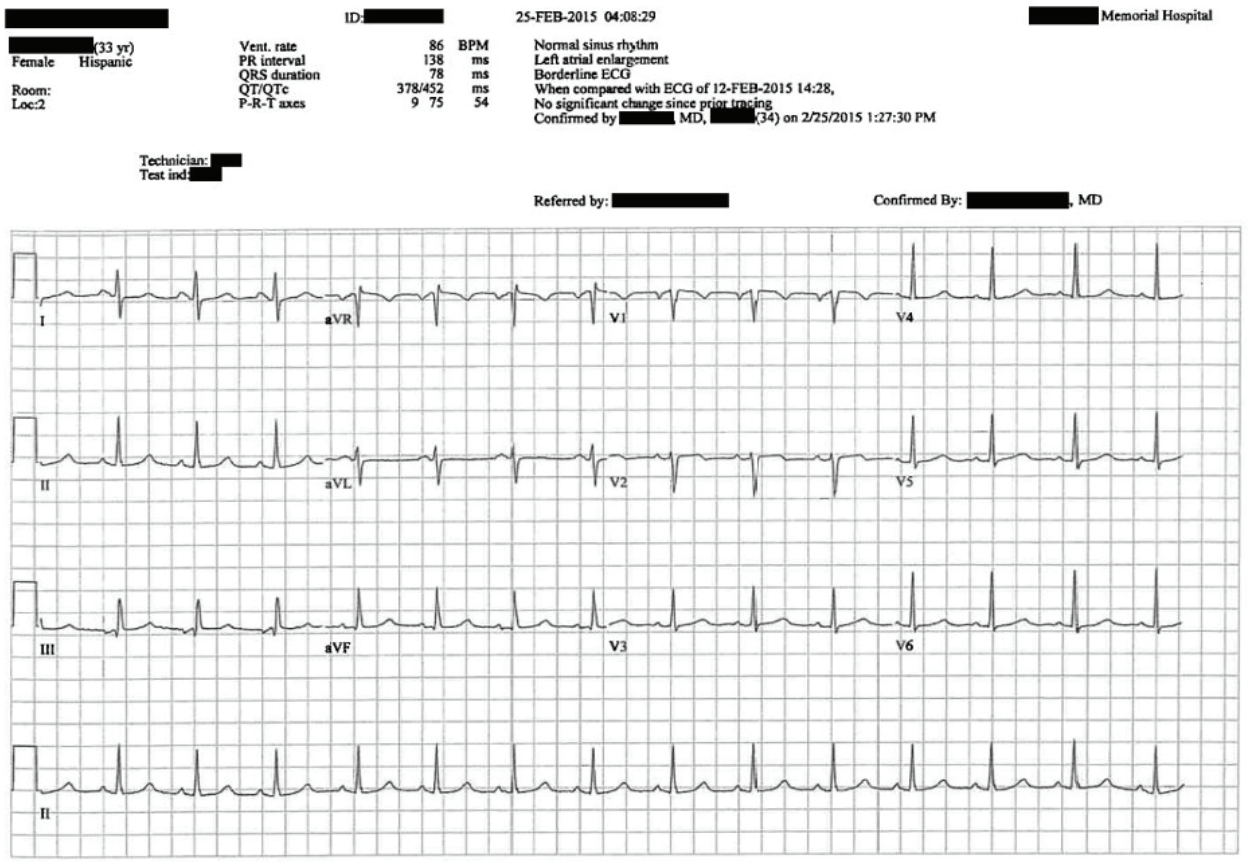
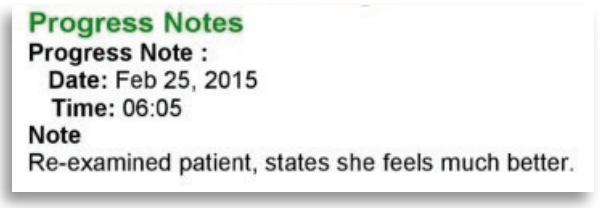


Figure 2: Progress note before discharge.



Progress Notes

Progress Note :

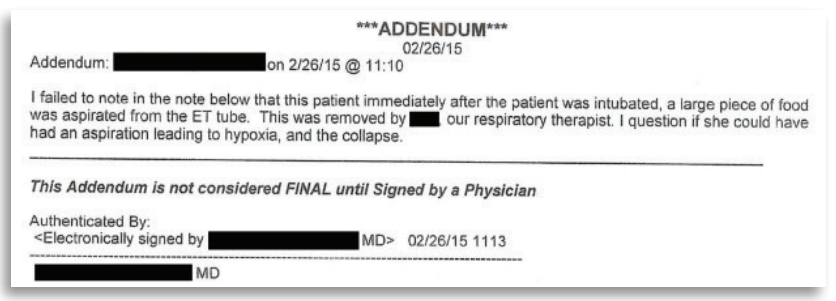
Date: Feb 25, 2015

Time: 06:05

Note

Re-examined patient, states she feels much better.

Figure 3: Chart addendum about a piece of food in the endotracheal tube during intubation.



ADDENDUM

02/26/15

Addendum: on 2/26/15 @ 11:10

I failed to note in the note below that this patient immediately after the patient was intubated, a large piece of food was aspirated from the ET tube. This was removed by our respiratory therapist. I question if she could have had an aspiration leading to hypoxia, and the collapse.

This Addendum is not considered FINAL until Signed by a Physician

Authenticated By:

<Electronically signed by MD> 02/26/15 1113

MD

Discussion

This case is unique in that there is no single clear cause of her collapse in the waiting room. There are several credible theories:

1. It was later discovered that the patient had an allergy to hydromorphone. However, there was no record of the type of reaction. The way it was previously documented in the medical record meant it did not pull into the emergency physician's note. While it was technically available for review, this fact was buried deep in the patient's chart. This highlights the danger of medical software with poor functionality and user interfaces.
2. The two doses of hydromorphone could have simply caused respiratory depression. They were given one to two hours before she collapsed in the waiting room. In an otherwise healthy patient, this dose would not be expected to cause apnea, but this patient already had underlying pulmonary edema and complained of shortness of breath.
3. She may have aspirated or choked on food in the waiting room. The doctor who ran the code noted that a piece of food was removed from the endotracheal tube. Unfortunately, the physician went back and made an addendum to the chart to mention the possibility of aspiration. This led the plaintiff to suggest that he simply wrote this to try to pass liability to the patient.
4. The patient may have suffered an arrhythmia in the waiting room. She had underlying cardiac issues (tetralogy of Fallot), history of cardiac surgeries, and predisposition to hyperkalemia. However, her ECG was reassuring, and she had a normal potassium level before and after the code.

The exact cause of the bad outcome is impossible to determine with any certainty. In all likelihood, it was probably multifactorial. Any one of these factors alone would likely not have caused her cardiac arrest, but the combination of several issues superimposed on her chronically ill state were ultimately catastrophic. Emergency physicians are wise to document carefully and understand the implications when making delayed addenda in the medical record. While correcting medical records when something has been left out is certainly appropriate, these will be viewed very suspiciously in retrospect.

To read the full medical record from this case, visit www.medmalreviewer.com/case-10-shortness-of-breath.

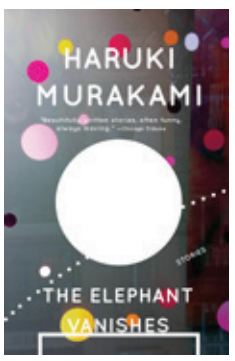
DR. BORELLI is an emergency medicine resident at the University of Texas Health San Antonio and *ACEP Now* resident fellow.

EM Book Club

Residents share books that have resonated with them

by CARA BORELLI, DO

As the resident fellow for *ACEP Now*, I plan to incorporate the intersection of the humanities and medicine into the "Resident Voice" column, and I hope to use this space for emergency medicine residents to share their reflections through a broad and creative range of topics. Last month, I invited my fellow emergency medicine residents to share reading recommendations on books that resonated with them. I received an excitingly broad array of recommendations, from poetry collections to short story collections to autobiographies. Here are recommendations and personal reflections from emergency medicine residents across the United States.



***The Elephant Vanishes* by Haruki Murakami**

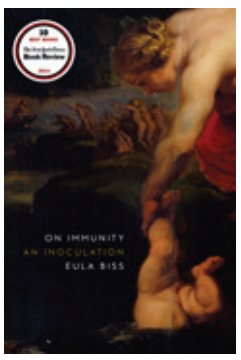
Ashley Czaplicki, DO

PGY-3, chief resident

Hackensack University Medical Center, Hackensack, New Jersey

When I was a young girl, I would curl up in the corner of my staircase with a book for hours. I was a Serious Reader. I maintained my bookworm habits throughout medical school, reading e-books from my dark iPhone screen right before sleep. However, residency life has made it difficult to stay both still and awake for great lengths of time.

One day I found myself with a used copy of Haruki Murakami's *The Elephant Vanishes* and rediscovered the livening energy of diving into an all-consuming book. Murakami's *1Q84* left an imprint on me years ago with its fantastical realism, character depth, and clever interweavings of history and pop culture. His voice remains distinct in *The Elephant Vanishes*, a collection of stories that again illustrate everyday moments in reality adjacent. A casual habit of barn burning. A bakery robbery. A woman who stops sleeping altogether. With each passage, I feel the tugs of a story coming together with lyrical clarity. At each story's end, an afterglow of contemplation. Even now after midnight, I remain still, awake, and amused at his writing. "Only, she's driven; her body—and very like the spirit attached to that body—craves after vigorous activity, relentless as a comet. Which may have something to do with why she's unmarried."



***On Immunity: An Inoculation* by Eula Biss**

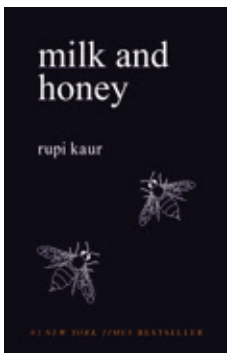
Adam Lalley, MD

PGY-2

Maimonides Medical Center, Brooklyn, New York

"Wherever telephone companies were erecting poles," Eula Biss writes in *Notes from No Man's Land,* her essay collection from 2009, "home owners and business owners were sawing them down or defending their sidewalks with rifles." Telephone wires are now so widely netted throughout our landscape that it is hard to fathom an era when they were controversial. And yet, the elements that fueled 1889's "war on telephone phones" are still at work today, when vaccination efforts have met with stalwart resistance.

In emergency medicine, we may only have a few minutes to discuss vaccines with our patients. Biss's later work, *On Immunity*, can help us to speak to them empathetically. Elegantly written, insightful, and well-researched, the book delves beyond science into the cultural, human, and social factors driving patients toward or away from medical advice. From the perspective of a new mother facing difficult decisions about vaccinating her own child, Biss explores the history of vaccines in the popular imagination, the intersection of public and individual health, and our far-reaching connectedness. "Our bodies may belong to us, but we ourselves belong to a greater body composed of many bodies. We are, bodily, both independent and dependent."



***Milk and Honey* by Rupi Kaur**

Kirandeep Sekhon, DO

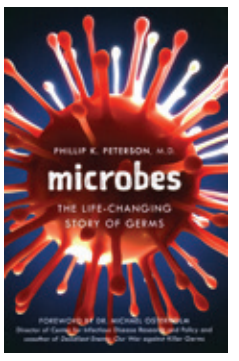
PGY-2

UT Health San Antonio, San Antonio, Texas

"Our backs / tell stories / no books have / the spine to / carry" (*Women of Color,* Rupi Kaur).

Like many young physicians, my journey in medicine is one that has perpetually kept my life in transition. From the physical moves for college in the Bay Area to medical school in Los Angeles County to clinical rotations all over the country to now residency in Texas, my bearings have been in a state of flux for the past decade. Every three to four years, I have had to uproot my life and start over with new people and a new environment. As grateful as I am to be on this path, it's hard. Poetry is how I root myself.

I discovered that through poetry I could express my thoughts in a way that was creatively stimulating but also allowed me to process my emotions. One of my favorite poetry collections is *Milk and Honey* by Rupi Kaur. She divides her book into four different stages of her life, from hurting to healing, and each poem is written during that stage. Her collection is extremely raw and honest. When I read her poems, I feel a connection to my own life, and that gives me a bearing. I started writing poetry more seriously in medical school, but it wasn't until residency that I started performing it at open mic nights. The vulnerability of performing live is both terrifying and empowering, but more than anything, it has given me a sense of control in my life when so many other aspects are constantly evolving.



***Microbes: The Life-Changing Story of Germs* by Phillip K. Peterson**

Adam Roussas, MD, MBA, MSE

PGY-1

Cook County Emergency Medicine Residency, Chicago

In early 2020, when the tsunami that would be SARS-CoV-2 was only a receding tide, I enrolled in a health economics course taught by an economist and retired infectious disease specialist. During his lectures, he would often reminisce on his 50 years on the front lines of public health crises. Interest in this topic led me to *Microbes* by infectious disease physician Phillip Peterson, which bridges the gap between public health, the experiences of experts like my professor, and the public. The first section provides scientific background on the microbial world and reviews historical pandemics. The second section takes a deep dive into modern outbreaks such as the avian influenza viruses, HIV, and coronaviruses, describing how they were managed, their social contexts, and their lasting impacts—for example, Toronto's billion-dollar 2003 SARS lockdown and the global catastrophe that it likely averted. The final section discusses the future: vaccines, emerging therapies, and the role microbes may play as existential threats to humanity.

After reading *Microbes*, physicians should feel better equipped to fight disinformation and educate our patients and loved ones on these important topics. As Churchill wrote, "Those that fail to learn from history are doomed to repeat it," as it appears we are now.

***The Scalpel and the Silver Bear* by Lori Arviso Alvord**

Jessica T. Evans-Wall, MD

PGY-3, chief resident

University of New Mexico, Albuquerque

The hospital exists in a space between worlds. Especially for those most in need of the care inside its walls, it is a separate reality from the life before and the life after. Lori Alvord writes with a beautiful intimacy of living and practicing between the worlds of Western medicine and traditional Navajo healing. Her autobiography takes the reader on a journey from Crownpoint, New Mexico, to Dartmouth to Stanford and back to the desert Southwest. Along the way, she tells of how to make bridges between "fixing" and "healing." She was the first Diné (Navajo) woman to become a board-certified surgeon:

> "From the beginning I knew I had to do a similar thing with the strands of my story—to tell how a girl from a small and remote town on an Indian reservation was able to become a surgeon, able to work in the high-tech realm of a surgical operating room, and combine that with another story, about how ancient tribal ways and philosophies can help a floundering medical system find its way back to its original mission: healing."

My father gifted me this book at the outset of medical school. I had no idea that residency would bring me to New Mexico. Now, in my final year of training, I revisit this incredible story and feel the intertwining of my naive hopeful inspiration with the determined drive to continue working daily to see the beauty in a challenging time in medicine. The thread we all weave of our stories in and out of medicine is multicolored, and it connects us to our past and future paths.

DR. BORELLI is an emergency medicine resident at the University of Texas Health San Antonio and *ACEP Now* resident fellow.

2021 ACEP Leadership AWARD WINNERS

Congratulations to the 2021 recipients of the College's most prestigious awards. These recipients will be recognized during ACEP21.

John G. Wiegenstein Leadership Award

Jay A. Kaplan, MD, FACEP

Dr. Kaplan is medical director of care transformation and director of the Be Well Center for LCMC Health in New Orleans. He is clinical associate professor of medicine at LSU Health Sciences Center and an attending physician and academic faculty for the LSU emergency medicine residency at University Medical Center New Orleans.

Dr. Kaplan is a past President of ACEP and current national faculty for ACEP, as well as a member of the National Academy of Medicine Action Collaborative on Clinician Well-Being and Resilience. A graduate of Harvard Medical School, he was named ACEP's Outstanding Speaker of the Year in 2003. Other honors include the Studer Group Physician Fire Starter Award, Grace Humanitarian Award of the Thomas Jefferson University Hospital Department of Emergency Medicine, and a Letter of Commendation from ACEP in September 2018.

Dr. Kaplan served as chair of the department of emergency medicine and medical staff officer including chief of staff at Saint Barnabas Medical Center in Livingston, New Jersey.

James D. Mills Outstanding Contribution to Emergency Medicine Award

James J. Augustine, MD, FACEP

Dr. Augustine is an emergency physician and clinical professor in the department of emergency medicine at Wright State University in Dayton, Ohio. He is chair emeritus of the National Clinical Governance Board of US Acute Care Solutions.

He served two terms on the ACEP Board of Directors and is on the ACEP Epidemic Expert Panel. He is chair of the task force planning for the future of ACEP's Clinical Emergency Data Registry. He was chair for The Joint Commission Hospital Professional and Technical Advisory Committee and on the Board of Commissioners. He is Vice President of the Emergency Department Benchmarking Alliance.

He began his career in EMS when in medical school in Dayton. After serving as president of the regional Fire EMS Council, he became the first chair of the Ohio EMS Board. He moved to Atlanta in 2001 and served as medical director for Atlanta Fire Rescue. He later served as assistant fire chief and medical director for the District of Columbia Fire EMS Department. Dr. Augustine is currently medical director for several fire rescue agencies.

John A. Rupke Legacy Award

Jeffrey D. Bettinger, MD, FACEP

A graduate of Hahnemann Medical College in Philadelphia, Dr. Bettinger completed his residency in internal medicine at the University of Miami. He is board-certified in both internal medicine and emergency medicine.

Upon completing his residency, Dr. Bettinger served as a staff physician and, later, as emergency department medical director for the Emergency Medical Group of Miami (EMG). In the mid-1980s, he built a billing and accounts receivable management system for EMG. In 1997, Dr. Bettinger assumed the role of executive vice president of billing and reimbursement for TeamHealth.

In 2000, Dr. Bettinger and Dr. John Stimler founded the consulting company Bettinger, Stimler & Associates, LLC (BSA Healthcare).

A 30-year member and former chair of the ACEP Reimbursement Committee, Dr. Bettinger also served as chair of the Florida College of Emergency Physicians' Medical Economics Committee. He co-chaired ACEP's Alternative Payment Model Task Force and is the former

CONTINUED *on page 24*

CLASSIFIEDS

chair of the ACEP/EDPMA Joint Task Force's Out-of-Network/Balance Billing Workgroup.

Colin C. Rorrie, Jr, PhD Award for Excellence in Health Policy

Susan M. Nedza, MD, MBA, FACEP

Dr. Nedza is a graduate of Loyola Stritch School of Medicine and completed her emergency medicine residency at Christ Medical Center in Oak Lawn, Illinois. She is a past president of the Illinois College of Emergency Physicians and is the EMS medical consultant to the Illinois Department of Public Health. She has served ACEP as a committee, section, and task force chair and as a member of the Board of Directors.

After completing her master's of business administration from Northwestern University, she was named a regional chief medical officer for the Centers for Medicare & Medicaid Services. She later served as the vice president of quality and patient safety at the American Medical Association.

Pamela P. Bensen Trailblazer Award

Rita A. Manfredi-Shutler, MD, FACEP

Dr. Manfredi is professor of clinical emergency medicine at the George Washington University School of Medicine and Health Sciences in Washington, D.C. She received her MD from Brown University in Providence. After a Navy tour, she completed an emergency medicine residency at the University of Massachusetts in Worcester.

She completed a fellowship in health and spirituality at the George Washington Institute for Spirituality and Health and recently became board-certified in hospice and palliative medicine after fellowship training.

Dr. Manfredi served as the past national chair for the ACEP Well-Being Committee and a member and subcommittee chair. She has been a member of the Legislative and Regulatory Committee and served as one of the early board members of the American Association of Women Emergency Physicians before it was designated a section. She is a member of the Society for Academic Emergency Medicine (SAEM) Wellness Committee. In 2020, Dr. Manfredi received the ACEP Wellness Section's Outstanding Director of Wellness Award.

Judith E. Tintinalli Award for Outstanding Contribution in Education

Michael S. Beeson, MD, FACEP

Dr. Beeson is a graduate of The Ohio State University College of Medicine, having completed his emergency medicine residency training at Akron City Hospital. He also earned an MBA from Case Western Reserve University in Cleveland. He became a residency director in 1994, a position he continues to hold. He developed online questions and testing for Council of Residency Directors in Emergency Medicine (CORD) and SAEM that were in use for more than 15 years by the majority of residencies and clerkships.

Dr. Beeson is the current Editor in Chief for ACEP's *Critical Decisions in Emergency Medicine*. He has been honored to serve as CORD President and has served on the Residency Review Committee for Emergency Medicine, both Milestones working groups, three Model of the Clinical Practice of EM task forces, and most recently on the American Board of Emergency Medicine (ABEM) Board of Directors.

Judith E. Tintinalli Award for Outstanding Contribution in Education

Michael A. Granovsky, MD, FACEP

Dr. Granovsky is president of LogixHealth, a national ED coding and billing company processing more than 13 million annual encounters. Following completion of his emergency medicine residency, Dr. Granovsky went on to found Greater Washington Emergency Physicians, serving as the chief financial officer.

For the last 15 years, Dr. Granovsky has served as the director of the ACEP reimbursement course. He is the past chair of national ACEP's Reimbursement Committee and Coding and Nomenclature Advisory Committee as well as the reimbursement subject matter expert to multiple task forces.

Dr. Granovsky is editor for both ED Coding Alert and the American Academy of Professional Coders CEDC Certification Exam. He has been honored with numerous awards including ACEP Speaker of the Year and the Judith Tintinalli Lifetime Education Achievement Award.

Diane K. Bollman Chapter Advocate Award

Stephanie Butler

Ms. Butler has been the sole staff for the Arizona College of Emergency Physicians (AzCEP) as the executive director since 1999. Over the years, she has assisted in implementing programs such as the annual ED Doc Day @ The Capitol, an EM Research Seed Grant program since 2011, and an EM Opioid Summit since 2018, and she is currently organizing a reception for the chapter's 50th anniversary. Ms. Butler has worked to keep close ties with all six residencies in the state as well as the six medical schools in Arizona. In addition to her duties with AzCEP, she also is the executive director for the state International Trauma Life Support (ITLS) chapter, organizing and managing the annual ITLS on the River course in Laughlin, Nevada. Over the years, she has served on various national ACEP committees, including National Chapter Relations, State Legislative, and PR, and she currently serves on the Wellness Committee. In addition, she was recently selected as the chair for the Chapter Executives Committee.

Council Meritorious Service Award

Sanford H. Herman, MD, FACEP

Dr. Herman received his MD from the American University of the Caribbean and trained in general surgery in Ann Arbor, Michigan. He began his practice of emergency medicine in 1986 and has been a member of ACEP since that time, participating actively in the Michigan, Ohio, and Tennessee chapters.

At the national level, Dr. Herman has been a councillor since 1989 and was a member of the Council Steering Committee from 2000 to 2002. He was chair of two sections; a member of the

CONTINUED *on page 30*

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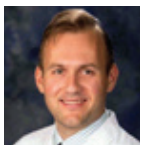


DR. BARDEN is emergency medicine residency associate program director.

DR. RASHEED is an emergency medicine resident at Eisenhower Health System in Rancho Mirage, California.

A Tricky Cut

Removal of incarcerating metallic penile hardware

by MATTHIAS BARDEN, MD, FACEP; AND IMAN RASHEED, MD

The location of our emergency department in the greater Palm Springs, California, area has likely contributed to significant departmental experience with the removal of constrictive metallic penile hardware. This presentation can be quite anxiety-provoking, both for the patient and the clinicians involved. Removing penile hardware is a time-sensitive, appendage-threatening procedure for which the emergency physician may have limited specialist backup.

Standard tools used for digital jewelry removal in the emergency department have often proven insufficient to deal with this particular type of ring (see Figure 1), and more powerful equipment may not be readily available.

An option described previously has been to rely on EMS for additional tools and assistance, such as use of pneumatic saws or grinding tools.[1] However, our experience has been that requesting EMS come into the hospital to assist with a procedure has created liability and scope-of-practice concerns.

A better option is making sure the necessary equipment is ready and available for the emergency department to handle this presentation internally. There have been published case reports describing the use of a widely commercially available electric rotary grinding tool (e.g., a Dremel) for similar situations.[2] As described, using a power tool in such proximity to an already vascularly compromised penis poses multiple risks and concerns. Here, we describe our tips and tricks based on our multiple experiences with successfully managing these cases in our department.

Suggested Equipment and Process

You will need a rotary grinding tool such as a Dremel, saline drip set for irrigation, face shield to avoid spark injury to the physician, metallic guard such as a foam aluminum splint or forceps split in half, and towels to avoid spark injury to the patient (see Figure 2).

The patient should be advised of the risks, benefits, and alternatives for the procedure. We have occasionally utilized moderate sedation with patients who are extremely apprehensive or anxious, but in general, it is helpful to have the patient awake so that they may provide feedback on any discomfort that develops during the procedure. Three major risks that must be mitigated include direct injury if the grinder contacts the skin, injury caused by sparks, and burns from heat generated from the grinding that can be conducted through metal rings.

To avoid direct injury, a metal guard should be inserted between the ring and the patient's skin. A foam aluminum finger splint can be used. If the available foam aluminum splints are too wide or thick to get into this tight space, we have also had success using a standard set of forceps, which can be manually split into two parts, with one half being used as the guard.

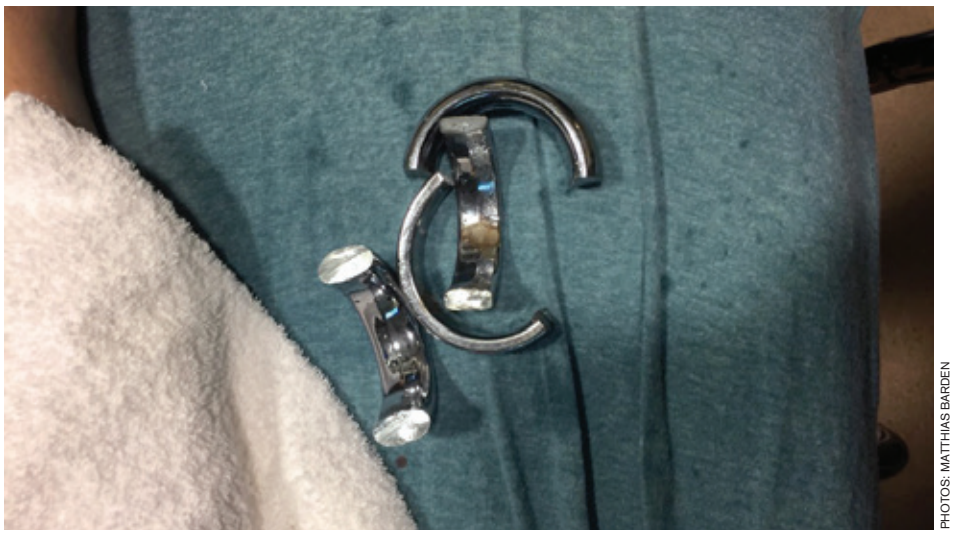
The patient should be draped with towels with consideration of the path sparks will take during the procedure. Face masks or other eye protection are advised for all clinicians working near the site of spark generation.

Continuous fluid irrigation directly onto the site of cutting is advised, as a considerable amount of heat is produced by the grinding device (see Figure 3). The patient should be advised of this expectation and be asked to give feedback if they feel heat developing so that additional time can be allowed for heat dissipation. Once a cut has been made through the entirety of the ring, some relatively malleable metals can be spread apart wide enough to allow for removal from the genitals. More rigid materials may require the clinician to rotate the ring approximately 180° to make a second full thickness cut.

With these practices, we have had success managing this presentation in our department, but practice patterns may vary depending on the setting of practice. Urology involvement may be beneficial, if available, and there are additional techniques described by urological specialists that could be employed in particularly difficult cases.[3]

KEY POINTS

- We recommend obtaining an electric rotary grinding tool (e.g., a Dremel) for your department in anticipation of this potential presentation.
- Anxiolysis can be beneficial, but maintaining patient responsiveness will help minimize unrecognized burns or other injuries.
- Use continuous irrigation to avoid burns from conducted heat, shield the patient and clinicians from spark injuries, and insert a metal guard under the ring to avoid direct contact of skin with the rotary tool blade.



PHOTOS: MATTHIAS BARDEN

Figure 1: Example of multiple rings removed from a single patient that were too hard and thick for normal ring removal devices.

Figure 2: This removal technique requires a rotary grinding tool such as a Dremel, saline drip set for irrigation, face shield to avoid spark injury to the physician, metallic guard such as a foam aluminum splint or forceps split in half, and towels to avoid spark injury to the patient.

Figure 3: IV drip set irrigation is being used to dissipate heat, the patient and clinicians are shielded from sparks, and a foam aluminum splint is used to protect the skin beneath the device. (In this case, a pneumatic grinding device supplied by EMS was used.)

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Emergency Medicine Practice, Bylaws, and Finance committees; and a member of the first two Work Force Studies and the second ACEP Report Card working group.

Disaster Medical Sciences Award

Joseph A. Barbera, MD

Dr. Barbera is a graduate of the University of Pittsburgh School of Medicine. He completed residencies in family medicine at the University of Connecticut in Mansfield and in emergency medicine at Bronx Municipal/Jacobi Medical Center in Bronx, New York. He is currently associate professor of engineering management and systems engineering at The George Washington University in Washington, D.C.

Dr. Barbera was the lead medical subject matter expert for the Federal Emergency Management Agency in the development of the National Urban Search & Rescue (US&R) Response System and for the Office of U.S. Foreign Disaster Assistance in developing the International Search and Rescue program.

Dr. Barbera led the development of an effective emergency management program at The George Washington University Hospital in the 1990s and shepherded the implementation of the prototype emergency health care coalition for Washington, D.C.

Honorary Membership Award

Sally Winkelman

Ms. Winkelman received her bachelor's of business administration in management and marketing from the University of Wisconsin–Madison and spent most of her career working with nonprofit professional membership organizations. Prior to retiring in June, she served for eight years as an account executive with Badger Bay, a Wisconsin-based association management company where she was the executive director for several statewide medical specialty associations, including the Wisconsin chapter of ACEP.

Ms. Winkelman is honored and humbled to have been selected to receive award. She is especially grateful to the outstanding leadership of Wisconsin ACEP for the nomination. She also wishes to give a shoutout to her "chapter exec" colleagues, each of whom deserves to be recognized for their tremendous support of one another and for serving their state chapters with unwavering dedication and professionalism.

Outstanding Contribution in Research Award

Ahamed H. Idris, MD, FACEP

Dr. Idris began his medical career in the U.S. Army, trained as a clinical specialist, and served as a medic with the 1st Air Cavalry in Vietnam from 1969 to 1970. He was awarded the Bronze Star Medal for meritorious achievement. He discovered his love for biology and medicine while in the Medical Corps. After his military service, he attended Northwestern University and Rush Medical College in Chicago. He did his residency at Cook County Hospital there and was co-author of a study on transfers to a public hospital published in the *New England Journal of Medicine* in 1986. This study led to EMTALA. In 1986, he joined the emergency medicine faculty at the University of Florida in Gainesville. Since 2003, he has been professor of emergency medicine at University of Texas Southwestern Medical Center and director of the Dallas-Fort Worth Center for Resuscitation Research, which was part of the Resuscitation Outcomes Consortium.

Dr. Idris served as the National Chair of Basic Life Support for the American Heart Association and a consultant to the National Institutes of Health, the U.S. Army, and NASA. He was the director of the NASA Human Space Flight Rescue Team for the Space Shuttle from 1994 to 2003 and was inducted into the NASA Space Technology Hall of Fame in 2008.

Innovative Change in Practice Management Award

Matthew Rill, MD, FACEP

Dr. Rill is an emergency physician, currently privileged to serve as the CEO of Emergency Resources Group (ERG) and Telescope Health.

Prior to elevation into the role of CEO, he served as medical director of several emergency departments. He also recently co-founded ERG's newest clinical platform, Telescope Health, whose mission is to improve accessibility and health care connectedness through the use of telemedicine and other health services. Dr. Rill was recently recognized by Trust Across America as a Top Thought Leader in Trust for leadership during the pandemic.

Dr. Rill earned his MD from the University of Florida in Gainesville. In addition to his administrative duties, Dr. Rill still enjoys working as an attending emergency physician, seeing patients with his peers in the emergency departments and via telemedicine.

Outstanding Contribution in EMS Award

Craig A. Manifold, DO, FACEP (posthumous)

Dr. Manifold earned his DO at Philadelphia College of Osteopathic Medicine and completed his emergency medicine residency at San Antonio's Wilford Hall Medical Center. Dr. Manifold enlisted in the U.S. Air Force at age 18, and during his military career he served as associate residency director at Wilford Hall Medical Center, EMS initial education director, chief of professional services, and joint surgeon for the Texas National Guard.

He received many awards during his career, including the Legion of Merit, Meritorious Service Medal, Joint Service Commendation, Michael Copass EMS Leadership Award, and the Humanitarian Service Medal. He passed away on Sept. 20, 2020.

Policy Pioneer Award

Jordan GR Celeste, MD, FACEP

Dr. Celeste is an emergency physician with Emergency Physicians of Central Florida. She earned her MD at the University of Maryland School of Medicine in Baltimore and completed her emergency medicine residency at Warren Alpert Medical School of Brown University in Providence, Rhode Island.

She is a member of the Florida College of Emergency Physicians' Board of Directors. She previously served as ACEP representative and president of the Emergency Medicine Residents' Association and chair of the Emergency Medicine Foundation Board of Trustees.

Community Emergency Medicine Excellence Award

Michael A. McGee, MD, MPH, FACEP

Dr. McGee is a full partner with Vituity Emergency Medicine in Gary and Merrillville, Indiana, as well as president and CEO of Premier Urgent Care and Occupational Health Center in Chicago's Hyde Park. Dr. McGee has a master's in public health in epidemiology and biostatistics from the University of Illinois in Chicago and an MD from Rush Medical College in Chicago. He completed his internship and residency in the department of emergency medicine at New York University/Bellevue Hospital Medical Center.

Dr. McGee worked as an assistant professor of emergency medicine at Emory/Grady Medical Center in Atlanta. In March 2008, he became the president and CEO of Northwest Emergency Associates (NEA), LLC. In 2019, NEA merged with Vituity Healthcare, where Dr. McGee is a full partner. He is the chair of the Firearm Violence and Injury Prevention Committee of the ACEP Diversity, Inclusion, and Health Equity Section. He is the founder of a violence prevention nonprofit organization called Project Outreach and Prevention, Inc.

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