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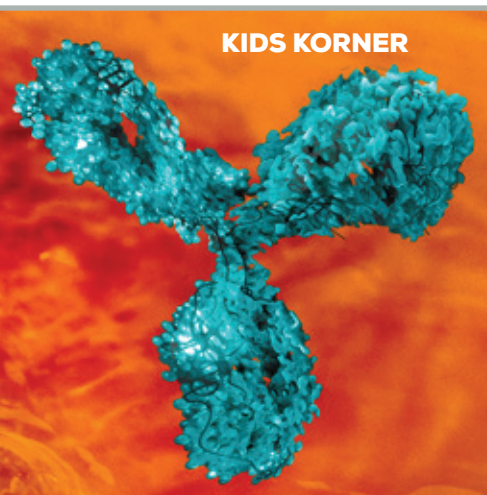
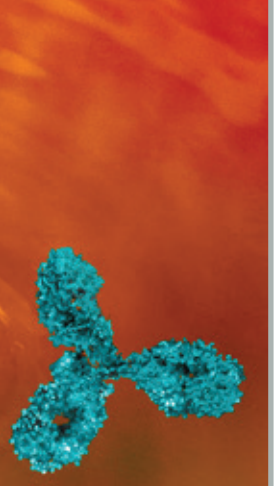


TREATMENTS *for* SERUM SICKNESS-LIKE REACTIONS



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

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

QUESTION 1: Are corticosteroids effective in the treatment of serum sickness-like reactions?

Classic serum sickness is a Type III immune hypersensitivity reaction previously described in patients receiving heterologous serum as an anti-toxin treatment for

CONTINUED *on page 4*

SOUND ADVICE

eFAST 2.0: Refining an Integral Exam

Using the "three box concept" for your critically ill patients

by NATHANIEL LEU, MD, MS; DANIEL MANTUANI, MD, MPH; MAXIMILIANO SOBRERO, MD, MS; ARUN NAGDEV, MD

The initial proposal by Rozycki et al., in 1993 on the focused assessment with sonography for trauma (FAST) exam was a novel and systematic approach for the utilization of point-of-care ultrasound (POCUS) during the initial trauma survey.[4] Although ultrasound was first described in the 1970s, this algorithm provided the framework for an integral component of our current trauma evaluation, largely replacing the need for diagnostic peritoneal lavage for the diagnosis of intraperitoneal hemorrhage.[1–3] It was not until 2004 that Kirkpatrick et al., published in the *Journal of Trauma* the protocol of the extended focused assessment with sonography for trauma (eFAST) exam incorporating the thorax in addition to the heart and abdomen assessment.[4]

Emergency physicians have been champions for implementing and teaching this

CONTINUED *on page 20*

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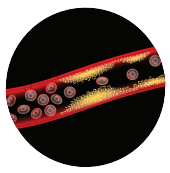
UPDATES AND ALERTS FROM ACEP

NEWS FROM THE COLLEGE

Contribute Case Images to the Monkeypox EM Project

ACEP has partnered with VisualDx to create the Monkeypox Emergency Medicine Project. Contribute your confirmed monkeypox case images to the initiative. Images will be de-identified and made freely accessible to ACEP members to better assist recognition, clinical care, and education. It will also be available within the VisualDx system. Learn more at visualdx.com/monkeypox-images. ACEP is also regularly updating its Monkeypox Field Guide (acep.org/monkeypox-field-guide) and providing regular updates in the Emerging Threats Communication Hub at engaged.acep.com, an open discussion forum for all ACEP members.



Dizzy+

New Bedside Tools Available for Posterior Circulation Ischemic Stroke and Cancer Complications

ACEP has recently added two new point-of-care tools to its growing collection of bedside resources. Dizzy+ (acep.org/dizzy) was developed by ACEP members to help in the recognition and treatment of posterior circulation ischemic stroke. It covers detecting, diagnosing, imaging, differentiating, managing, dispositiong, and more.

IMMUNOTOX

The ImmunoTox bedside tool (acep.org/immunotox) helps care for patients who are experiencing adverse events related to cancer immunotherapy. The pathway includes history/physical, testing, management, disposition, and immunotherapy pearls. The tool also includes six PDFs for download. ImmunoTox is also available on ACEP's emPOC app.

Introducing the EM Opioid Advisory Network

Receive clinical guidance, discover tools and resources, and get your questions answered through ACEP's EM Opioid Advisory Network. ACEP's new initiative connects emergency physicians combating the opioid crisis with expert advice on managing opioid use disorder patients presenting in the emergency department, creating a protocol to initiate buprenorphine, and more. The expert panel is here to help every emergency health care professional, free of charge. Learn more at acep.org/opioidadvisorynetwork.

MicroEd Videos Cover a Variety of Clinical Topics

Efficiency is the name of the game! ACEP's new MicroEd videos will bring you up to speed quickly. At only 60–90 seconds in length, MicroEd videos help fill knowledge gaps and reinforce core treatment principles. Topics include hepatic encephalopathy, hyperkalemia, social determinants of health, caring for LGBTQ+ patients, CAR T-Cell Therapy, and more. Check them out at acep.org/microed.

Specialized Course for EM Researchers Coming Up in October

Are you interested in increasing and improving research in emergency medicine? The upcoming EM Basic Research Skills (EMBRS) conference encourages and mentors young researchers in fostering and supporting research projects that contribute to improvements in patient care and by developing and increasing the number of emergency medicine researchers. The next session is October 17–22, 2022. Learn more at acep.org/EMBRS.

THE BREAK ROOM

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Diphenhydramine: "rumors of my death are greatly exaggerated"

Dear Editor,

Dr. Westafer's commentary on diphenhydramine makes several valid points about some misuses (e.g,. sleep aid) or overuses (routine adjunct in treating migraine headache) of the drug.[1] However, I disagree that emergency physicians are unfamiliar with the "not-so-commonly-known side effects" of sedation, anti-muscarinic effects, and a "high" with rapid IV push. Taken together, these points are conflicting. The well-known sedating effect is the reason why some physicians may suggest it for sleep and why most over-the-counter sleep aids contain diphenhydramine. Likewise, the antimuscarinic effect is the intended effect for avoiding or treating akathisia caused by dopamine antagonists.

Her strong recommendation for IV cetirizine over IV diphenhydramine overlooks their large cost difference. Intravenous (IV) cetirizine has a wholesale cost of over $300.[2,3] Charges to patients are likely much higher. Meanwhile, IV diphenhydramine costs less than $1.[4] This large cost difference provides a non-inferior drug that may be slightly better.

This large cost difference with modest incremental benefit is the reason why many hospitals (including my own) have not rushed to add IV cetirizine to their formularies. While cetirizine has less sedation, we generally know well that diphenhydramine is sedating and give discharge instructions to avoid driving or operating machinery.

The patent for IV cetirizine will expire in 2039, so we have 17 years to wait for the cost of IV cetirizine to approach the cost of diphenhydramine.[5] To paraphrase a quote attributed to Mark Twain, rumors of the death of diphenhydramine are greatly exaggerated.[6]

—Michael E. Mullins MD, FACEP, FAACT

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diphtheria.[1] Today, we see something similar in children called serum sickness-like reactions (SSLR). The exact mechanism is poorly understood and not the same as serum sickness, but the presentation is very similar and often includes an urticarial or erythema multiforme-like rash, fever, and hand and feet swelling with arthralgias. It's most often secondary to a drug and reported to occur one to three weeks after an exposure. The most common culprits are beta-lactam antibiotics, but other drugs such as sulfonamide antibiotics, anti-cancer agents, anti-convulsants, and antibody biologic agents have been shown to cause it.[1,2]

Cefaclor, a second-generation cephalosporin, used to be the most common cause of serum sickness-like reactions in children. According to a prospective observational study, it accounted for about two-thirds of cases.[3] Cefaclor is no longer widely used in the United States. While there are numerous case studies in the literature that treat with oral steroids there are—surprisingly—almost no larger studies.

While physicians often treat SSLR with corticosteroids, we are unable to find any prospective studies on treatment for SSLRs.[4,5] The most objective data we were able to find on SSLRs was a retrospective study by Del Pozzo-Magana (2021).[1] This study identified 83 children with SSLR based upon clinical presentation over a 10-year period who received follow up to an Adverse Drug Reactions Clinic at a children's hospital. Ages ranged from 11 months to 12 years with a median age of two years. Patients with pre-existing rheumatologic conditions were excluded. Amoxicillin was the offending drug in 87 percent (72 out of 83) of cases. The mean time from drug exposure to development of SSLR was 8.5 days. Regarding treatment, 57.8 percent of children received antihistamines and NSAIDS only, while 38.5 percent received antihistamines, NSAIDS, and oral corticosteroids. The mean time to symptom resolution for all children combined was 7.1 days. There was no significant difference in mean time to symptom resolution between children who did (six days) and did not (eight days) receive oral steroids (p=0.09). There was a trend for a shorter recovery but it was not statistically significant.

Summary

Removal of the offending agent is important. There are very limited data evaluating the efficacy of corticosteroid treatment for serum sickness-like reactions. While emergency physicians often treat SSLR with corticosteroids, we were only able to find a single study that examined this treatment and it showed no significant difference.

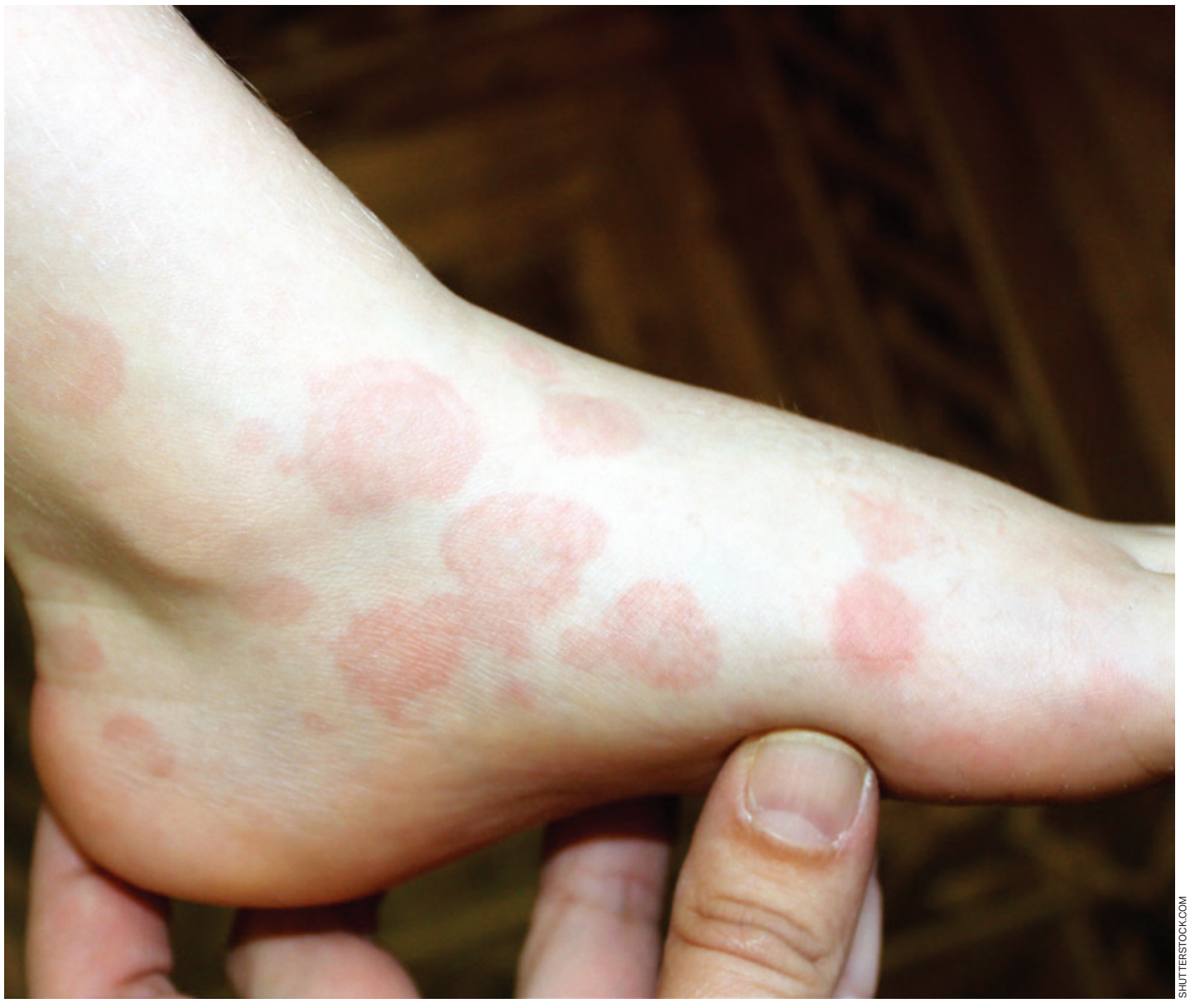
Labs for Renal Involvement for Erythema Multiforme Minor

QUESTION 2: In well-appearing children presenting with erythema multiforme minor, should we routinely check labs to evaluate for significant renal involvement?

Pediatric erythema multiforme (EM) minor is an immune-mediated reaction typically presenting as targetoid lesions predominantly found on the extremities and face. The trunk is typically less involved and EM minor does not involve mucosal surfaces.[6] The rash with the addition of mucous membrane lesions is termed EM major and the evaluation and assessment is more extensive. Our goal here is to focus on EM minor, which is a self-limiting cutaneous reaction. Microbial infections precede about 90 percent of EM minor presentations, but drugs have also been identified as precipitating agents. In adults, EM minor appears to be most commonly precipitated by HSV infections. In children, though, viral infections, Mycoplasma pneumonia, and idiopathic causes have been noted to be most common.[7] EM minor lesions typically present over 3-5 days and resolve over the next 2-4 weeks, making patient and family education important to alleviate fear and provide realistic expectations.

A 2017 retrospective study included 30 cases of pediatric erythema multiforme.[6] This included both EM minor (n=15) and major (n=15) and ages ranged from four to 18 years. Labs were performed in 22 of these patients and were noted to demonstrate a leukocytosis in 36.3 percent of patients. Elevated CRP (> 0.5mg/L) and ESR (> 20 mm/h) were noted in 75 percent and 50 percent of patients, respectively, but were only drawn in about half of the patients. The authors note "electrolytes, kidney and liver function tests were normal in nearly all cases (one child had mild hyponatremia)." These data would suggest that labs are typically reassuring—even when including results from patients with EM major who might be a sicker population. Labs in EM minor may not be necessary.

While not specific to cases of EM minor, an older prospective study randomly evaluated 16 children with EM major only and assessed outcomes in those who did (n=10) and did not (n=6) receive methylprednisolone (4mg/kg/day).[8] Patients were all admitted and laboratory evaluations were performed at admission and "repeated as necessary." In this study, "fluid or electrolyte imbalance during hospitalization or other sequelae did not occur." While this study is not specific to EM minor, it is somewhat reassuring, again, that significant serum abnormalities do not appear to be common in patients with EM major who are likely sicker in nature. Realistically, though, it is common to still get bloodwork in children with EM major who are going to be admitted.



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Targetoid lesions present on the foot of a child.

Summary

Clinically significant serum abnormalities do not appear to be common in children with EM minor, but the data are very limited. Routine serum bloodwork of children with EM minor is probably not necessary.

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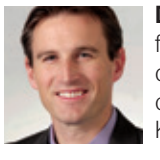
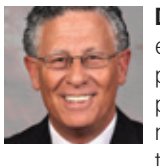


DR. JONES is assistant professor of pediatric emergency medicine at the University of Kentucky in Lexington, Kentucky.



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

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2022–2023 EMERGENCY PHYSICIAN COMPENSATION REPORT

by BARB KATZ

Two and a half years into the COVID-19 crisis and no doubt you are thinking the job market should be returning to normal, right? Not so fast . . . the news is less than stellar. The Fall 2022 market is up 15 percent from last year, but still lags behind the 2019 market by 47 percent! Other elements of the market, however, have increased. In 2019, 63 percent of available jobs were with national contract groups with 53 percent open to primary care physicians. This season, national contract groups represent 73 percent of the open jobs and 58 percent are open to physicians boarded in primary care specialties.

Due to dwindling compensation information, this year's report is a combination of position availability and compensation stats where available. All compensation numbers represent salaries only—no bonuses, benefits, or front money have been included. These are all from currently available positions and annual incomes are based on 1,560 clinical hours. As usual, the breakdown is by geographic regions.

As far as trends, the big sign-on bonuses are still mostly a thing of the past, but I have seen one or two in seriously tough geographic locations. Some of the large, national contract groups are back to offering a monthly stipend, but loan forgiveness is pretty much dead.

If you are a 2023 graduate, start your job search now and be aware that there are only enough jobs for about half of your graduating class. Of course, that doesn't include the underground spots that are never advertised and require a referral or a secret password! Best of luck!

BARBARA KATZ has been working exclusively with emergency physicians since 1991 and is the founder of The Katz Company EMC, Inc.

The Southeast provides 36% of U.S. jobs; 89% with national contract groups and 78% open to primary care boards.

ALABAMA: $410,000

TENNESSEE: $401,000; High: $436,000; *jobs in all major cities*

FLORIDA: $398,000; High: $467,000; *lots of opportunity in major cities including Miami*

LOUISIANA: $390,000

NORTH CAROLINA: $390,000

KENTUCKY: $380,000; *strong opportunity in Louisville*

SOUTH CAROLINA: $370,000

ARKANSAS: $360,000; *opportunity in Little Rock*

VIRGINIA : $360,000; *opportunities in Tidewater and DC areas*

WEST VIRGINIA : $350,000

GEORGIA : $320,000

MISSISSIPPI: N/A

The West/Southwest region represent 23% of the open jobs, 76% with national contract groups and 48% open to physicians boarded in primary care specialties.

TEXAS : $443,000; High $484,000; *huge area of opportunity in San Antonio/Austin, less in Dallas and Houston but still plentiful*

ARIZONA : $418,000; High $507,000; *good options in Phoenix and southern AZ*

CALIFORNIA : $417,000; High: $468,000; *very sparse opportunity in major cities*

UTAH : $375,000 *first job opening in Utah in a decade!*

NEVADA : $367,000; *strong opportunity in the Las Vegas area*

OKLAHOMA : $360,000

COLORADO : $300,000

NEW MEXICO: 3 jobs, N/A

HAWAII: N/A

The 12 states of the Midwest have 17% of U.S. jobs; 67% with national contract groups and 67% accepting physicians boarded in primary care specialties.

ILLINOIS: $411,000; High: $432,000; *a few spots in the Chicago area*

NORTH DAKOTA: $410,000

OHIO: $401,000; *major "C" cities have very few opportunities*

WISCONSIN: $390,000

MISSOURI: $380,000; *a few jobs in Kansas City and St. Louis*

SOUTH DAKOTA: $ 370,000*; only rural*

NEBRASKA: $360,000

INDIANA: $360,000; *good opportunity in Ft. Wayne*

KANSAS: $354,000; High: $411,000

MINNESOTA: $340,000

MICHIGAN: $312,000

IOWA AVERAGE: $293,000

The Northeastern states have 11% of the jobs 41% in national contract groups and 37% open to physicians boarded in primary care specialties.

MASSACHUSETTS: $373,000; High: $400,000; *Boston is rife with opportunity*

NEW YORK: $348,000; High: $430,000; *lots of openings in the NYC area*

CONNECTICUT: $332,000; High: $400,000

NEW HAMPSHIRE: $329,000: High: $400,000

MAINE: $300,000

RHODE ISLAND: N/A

VERMONT: N/A

The small region of Middle Atlantic has 9% of the jobs, 60% with national contract groups and only 18% open to physicians boarded in primary care specialties.

PENNSYLVANIA: $350,000; *moderate opportunity in Pittsburgh and Philadelphia*

MARYLAND: $343,000; High: $350,000; *a few jobs in the Baltimore area*

NEW JERSEY: $315,000; High: $375,000

DC: N/A

DELAWARE: N/A

Finally, the Pacific Northwest has only 4% of the nation's jobs with only 24% at national contract groups or open to physicians boarded in primary care specialties.

WASHINGTON: $417,000

OREGON: $336,000

WYOMING: no average, but a high of $460,000

IDAHO: N/A

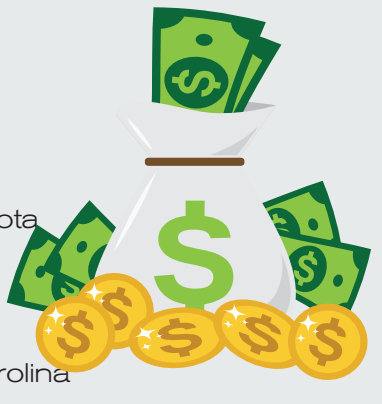
ALASKA: N/A

MONTANA: N/A

Figure 1. States Offering the Most and Least Compensation

TOP 10 STATES FOR COMPENSATION

1. Florida
2. Arizona
3. Texas
4. Illinois
5. Idaho
6. California
7. North Dakota
8. Ohio
9. Louisiana
10. North Carolina



BOTTOM 10 STATES FOR COMPENSATION

1. Iowa
2. Michigan
3. Colorado
4. Maine
5. Georgia
6. West Virginia
7. Oregon
8. Minnesota
9. New Jersey
10. Virginia

EM Workforce Entry & Attrition: 2013–2019

Emergency physician annual attrition from the workforce was collectively greater than estimated

by CAMERON J. GETTEL MD, MHS; D. MARK COURTNEY MD, MSC; AND ARJUN K. VENKATESH MD, MBA, MHS

Since publication of the multiorganization workforce report led by the American College of Emergency Physicians (ACEP), graduating emergency medicine residents have feared an empty job market.[1] Additionally, practicing physicians have considered the loss of job security and relatively high income they potentially took for granted amidst decades of rising emergency department (ED) visit volumes, increasing patient acuity, and prior physician shortages. With an assumed three percent annual emergency-physician attrition rate, the report forecasted a potential oversupply of 7,845 emergency physicians by 2030 after also taking into account emergency services and graduate medical education growth.[1] However, less attention was drawn to the report's sensitivity analysis showing that if attrition was just one percent higher than assumed, then the estimated surplus would be a more modest 2,486 emergency physicians.

In the pre-COVID-19 era, clinical practice slowly evolved to accommodate fewer night shifts and offer other opportunities for extended practice. But the Great Resignation during COVID-19 has drawn more attention to emergency physician attrition, prompting us to pause and re-evaluate the workforce conversation. Here, we provide a brief overview of our recently published findings that emergency physician annual attrition from the workforce between 2013 and 2019 was collectively greater than estimated in the recent workforce report, with important implications for workforce supply and demand in coming years.[2]

The Attrition Analysis

Every year, the Centers for Medicare and Medicaid Services (CMS) release reliable national data on the clinical care practices of physicians. We used this dataset to look at clinicians providing emergency services to greater than 50 Medicare beneficiaries in at least one of the study years between 2013 and 2019.

Rural Inequities

Since publication of the workforce report, many have cited concerns about the concurrent physician surplus projections alongside known geographic disparities—namely, the lack of residency-trained or board-certified emergency physicians in rural communities. The CMS data were ideal to investigate this. We identified that emergency physicians comprised 71.2 percent of the emergency-clinician urban workforce in 2013 and 51.3 percent of the rural workforce. For every study year, the number of rural emergency physicians leaving the workforce was always greater than the number of rural emergency physicians entering the workforce the following year.

Supply and Demand at the State Level

Recognizing that physician credentialing, perception of medical malpractice costs, environment, and efforts to recruit emergency physicians are often realized at the state level, we also looked at clinician supply and demand at this more granular level, as efforts to overcome inequities are more complicated than a binary division between rural and urban areas. For each state, we determined clinician densities per 100,000 population in 2013 and 2019, followed by the percent net change, reflecting how much the density increased or decreased from 2013 to 2019. The three jurisdictions in 2013 with the highest emergency physician density per 100,000 population were Washington D.C. (23.0), Michigan (16.5), and Rhode Island (16.4), while the three states with the lowest emergency physician density were South Dakota (6.0), Nebraska (6.9), and Montana (7.0).

By 2019, the three states with the highest percent net change in emergency physicians were Montana (+49.8), South Dakota (+36.7), and Vermont (+29.6). These three states all exhibited relatively low 2013 emergency physician densities and therefore the high net change seemed to be a reassuring finding, as emergency physicians migrated to the states where there was a perceived need for their services.

However, three states in the lowest quintile for 2013 emergency physician density also had negative percent net change by 2019. Idaho (-3.2), Arkansas (-2.6), and Nevada (-0.8) display concerning needs to further increase emergency physician density without positive change occurring over the study years. Separately, we identified clinician-dense states in which another mismatch of supply and demand occurred. Despite already being in the highest quintile of 2013 emergency physician density, states such as Rhode Island (+25.8), Pennsylvania (+19.2), and Michigan (+18.5) all still saw substantial increases in emergency physician density by 2019.

CONTINUED *on page 8*

Implications

These findings are salient given worsening inequities in access to emergency physicians, specifically in rural designations. We anticipate persistence of the supply-and-demand mismatch unless substantial efforts are made to address emergency physician recruitment and retention issues. Additionally, these findings are particularly important considering the recent 2022 Match. Despite an increase in emergency medicine residency positions over the last several years, the number of medical school graduates matching into emergency medicine has plateaued. Data from the 2022 cycle even suggests that the entering pipeline may be diminishing, as the number of emergency medicine residency applicants decreased 17 percent (the largest decrease among all specialties) and the number of unfilled residency positions rose from 14 to 219 compared to the 2021 application season.[3] It is therefore possible that the combination of increased attrition and decreased entry may reduce the magnitude of the expected 2030 surplus. Two key questions result:

1. Will inflow to the emergency medicine workforce continue to stagnate or even decline?
2. Will outflow from the emergency medicine workforce continue to increase? At minimum, if more recent attrition numbers mirror the years before COVID-19, the actual surplus may pale in comparison to prior expectations.

Looking Ahead

Amidst the Great Resignation, the emergency medicine community must preserve our workforce by ensuring a supportive work environment, redesigning care to accommodate shifts in the workforce, and developing approaches for periodic real-time future surveillance. This is all to avoid today's feared surplus from turning into a shortage that leaves patients without quality emergency care in a few short decades.

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Freestanding EDs as a Workforce Solution

Ways to increase demand for emergency physicians

by LEON C. ADELMAN, MD, MBA

The Cleveland Clinic has developed a hub-and-spoke acute care model that, if applied more broadly, could address three emergency medicine priorities: increasing job availability for emergency physicians, providing improved experience of care to mid-acuity patients, and broadening access to emergency care in rural America.

The hubs are large traditional hospitals, including Cleveland Clinic Main Campus. The spokes are smaller community hospitals and freestanding emergency departments (ED) in surrounding communities. *Harvard Business Review* discussed this model in "The Strategy That Will Fix Health Care".[1] Other health systems have opened freestanding EDs using similar strategies. This article focuses on Cleveland Clinic because they have published their outcomes in detail.

ACEP projected in "The Emergency Medicine Physician Workforce: Projections for 2030" that the "specialty of emergency medicine is facing the likely oversupply of emergency physicians."[2] Supply-side solutions, such as decreasing the number of emergency medicine residency spots or entry into the specialty, are unlikely to occur at least in the near term.

Ways to increase demand for emergency physicians, while providing high value patient care, are worth considering. Expanding the hub-and-spoke approach to emergency care delivery is one such solution.

Opening more health system affiliated freestanding EDs increases demand for emergency physicians in three ways. First, in the United States, two percent of patients leave EDs prior to being seen by a clinician.[3] At freestanding EDs affiliated with an academic institution, the leave without being seen (LWBS) rate is only 0.4 percent.[4] As there are 130 million ED visits in the U.S. per year, a LWBS rate decrease of one percent would translate to 1.3 million more patients to be seen by emergency clinicians annually.[4,5]

Second, health system-associated freestanding EDs increase demand for emergency medicine by providing mid-acuity patients with a better experience than they would otherwise receive in a larger hospital-based ED. Cleveland Clinic's freestanding EDs see proportionally more ESI 3 and 4 patients (mid-acuity), while their hospital-based EDs see more triage level ESI 1, 2 and 5 (highest and lowest acuity) visits.[6] Patients reported choosing the freestanding over a hospital-based emergency department because of better access to needed testing, convenience, and "ED does a better job diagnosing and treating me."[7] Discharged ED patients rate their experience more favorably at Cleveland Clinic's freestanding EDs than at their hospital-based EDs.[8]

Third, emergency medicine training is essential for physicians hired to work at a health system affiliated freestanding ED. Most freestanding EDs do not have rapid access to consultants. Much like at rural EDs, a physician working at a freestanding must have expertise in airway management, critical procedures, and trauma stabilization.

The main objections to freestanding EDs are their cost equivalence and siphoning of well-insured patients away from hospital-based EDs.[9,10] The perceived low value of care resulted largely from non-health system affiliated freestanding EDs that were out of network with most insurers and did not accept Medicare or Medicaid. Some facilities looked like urgent cares, leading patients to receive large bills for what they thought was urgent-care level treatment.

Health system affiliated freestanding EDs, like Cleveland Clinic's, do not suffer from the low-value stigma of independent freestanding EDs. Cleveland Clinic's freestanding EDs are regulated in the same manner as their hospital based EDs and are in accordance with ACEP's "Freestanding Emergency Departments" policy.[11] Those freestanding EDs participate in Medicare and Medicaid. The clinicians are consistent across sites, as are quality initiatives. Each ED has systems for rapidly managing and transferring critically ill patients to higher levels of care.[12,13] Cleveland Clinic's freestanding EDs are not siphoning insured patients away from the health system, only changing the setting of care.

A remaining concern about Cleveland Clinic's hub and spoke model is that it has preferentially placed its freestanding emergency departments in wealthier communities. This is a common practice for health systems.[14] However, the economic incentives for where to locate freestanding EDs are changing. A COVID-era federal bill has created the Rural Emergency Hospital (REH) model, which will go live on January 1, 2023. The REH legislation

CONTINUED *on page 10*

increases Medicare reimbursement for health systems opening rural freestanding EDs if they follow the law's guidelines.

Under the REH model, critical access hospitals and rural Prospective Payment Systems can convert to REH status. The REH requirements are similar to the Cleveland Clinic freestanding ED model, including:

- No provision of acute care inpatient services
- An average per patient length of stay not to exceed 24 hours
- Have a transfer agreement in place with a Level I or II trauma center
- Maintain a staffed emergency department, including staffing 24 hours a day, seven days a week by a physician, nurse practitioner, clinical nurse specialist, or physician assistant.[15]

According to a North Carolina Rural Health Research and Policy Analysis Center analysis, "The Rural Emergency Hospital could be an important step for preserving access to emergency and outpatient services in rural areas, particularly in communities that face the risk of rural hospital closures." The authors predict 68 critical access hospitals will convert to REH freestanding EDs. County-level predictors of conversion to REH status include higher unemployment rates and lower population density.[16]

Health system freestanding ED expansion can help balance emergency physician supply with demand, deliver better experience of care to mid-acuity ED patients, while improving access to emergency medicine across the county.

JORDAN GRANTHAM

A freestanding emergency department in Texas.

Disclosures: None. Leon Adelman has no financial connection with Cleveland Clinic or freestanding EDs.

DR. ADELMAN is an emergency physician in North Carolina and co-founder/CEO of Ivy Clinicians.

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Emergency Physicians Running for Congress

by CEDRIC DARK, MD, MPH, FACEP

The profession of medicine is one of the most highly-regulated industries in the country. While we can advocate for emergency physicians through our professional organizations, several emergency physicians have taken it upon themselves to enter the political arena. Here, we profile the emergency physicians running for Congress in the 2022 cycle as they answer questions posed by *ACEP Now*.

Representative Raul Ruiz, MD

Twitter: @repraulruizmd

What do you think emergency physicians need to be paying attention to in Congress?

Dr. Ruiz: One is the reversal of *Roe v. Wade*. And why is that important? It's important because in many states you'll start to see the criminalization of medical practices. In some states and in Congress already there have been attempts to be able to imprison OB/GYN physicians or fine them extraordinary amount of monies or bar them from practicing with their license for a medical procedure, whether it's done for an emergency or for other reasons. Some bills that the Republicans try to pass through the House would also deputize technicians, nurses, and anybody that works in a clinic or hospital to bring charges up against physicians. Now that's very concerning.

What do you think we should be doing about medical school debt in this country?

Dr. Ruiz: Obviously, the cost of a medical school has gone extremely high. So, we need to figure out a way where we can reduce those costs. Also, there's a lot of loan to scholarship opportunities that we need to create in order for individuals who may initially take out a loan to pay for their medical school.

And if they fulfill certain requirements, whether practicing in a medically underserved area or whether their practice serves over 60% Medicare and Medicaid patients, or whether they actually take on certain community service hours in their practice, or sign into some kind of program with a government that focuses on equity, then those loans can be converted into scholarships and there would be no need to pay them back.

How can we improve our approach to future pandemics and public health threats?

Dr. Ruiz: One of the factors that we need to improve is the ability for the CDC to collect data so that they can in real time, through either surveillance, through emergency department or hospital or state public health department reporting be able to act on that data much quicker and make better targeted decisions in terms of the precautions that are necessary. Right now, it's a hodgepodge. They have to join into over 200 data use agreements with counties [and] with states. Some entire states don't even report data. Some states leave it for their individual counties to form these data use agreements. And then some states do it as a state entity.

That is not efficient. That is not good. And the scientists [need to] know that our decisions and strategies are based on accurate information and accurate assumptions, as well. The other thing that we need to really focus on is modernization of that data, standardization of that data, and making it efficient through electronic records to provide that data to the CDC, without burdening physicians. The second issue is focusing on our workforce. We need to bolster our supply of epidemiologists. We need to bolster our supply of community health workers, our public health workers, to be in the field, to collect data, to provide the programs that are necessary in order to combat this pandemic.

Representative Rich McCormick, MD

Twitter: @richforga

Why did you decide to run for Congress in the first place?

Dr. McCormick: What originally got me in into this fight was going down to the state

capitol with the Medical Association of Georgia, which is a bipartisan group of doctors that were just trying to solve a problem with surprise billing. I went down there and actually got mad at my own party. Some people that were blocking good legislation backed by patient advocacy groups and backed by a bipartisan group of doctors just trying to do the right thing for the patient. We realized that there was something to be done. And they asked if I'd be willing to run. And it kind of cascaded from there. Originally, I was asked to run for state senator, but that very quickly escalated. And it's amazing to have a guy who literally had no background in politics—no connections, didn't know one politician three years ago—to now be the nomination for one of the most hotly contested races in America.

How do you view ACEP's policy on firearm safety and injury prevention, which includes universal background checks for all firearm transactions, including private sales and transfers.

Dr. McCormick: We can't avoid the fact that this is a mental health issue. This is a parenting issue. This is a schooling issue. This is a cultural issue. Making a law is not going solve that.

We have a much deeper problem in America than our laws, but we have a real mental health crisis that we need to address because quite frankly, that's where most of gun deaths come from: suicides.

How are you best suited to solve our nation's problems in Congress?

Dr. McCormick: I can be best used and bring my very unique skill set of 20 years of military service. I've served with the Marines, the Army, and the Navy, and I'm from an Air Force family. I'm a third-generation military pilot. I bring a lot of experience when it comes to medicine. I'm married to an oncologist who is much smarter and more experienced than I am, but I'm also an ER doc, which is kind of the conduit to all of medicine.

If you look at the two biggest items of spending in the government, it's the military and health care. I bring a unique skill set to Congress that I think will be applicable, especially somebody who's literally practicing medicine. I get to witness failed policy regularly and see how we can address that. My wife has to deal with pre approvals and drug pricing, monopolistic practices and pharmaceutical and insurance problems all the time, so I get to hear about it in real time. Quite frankly, this is the one race that we really have almost certainly going to have a doctor coming into the doctor's caucus. That's going to be a unique opportunity for another physician to be added to the doctor's caucus.

Representative Mark Green, MD

Twitter: @repmarkgreen

What do you think your greatest accomplishment has been that has benefited emergency physicians?

Dr. Green: I basically gave the economics of emergency medicine, the economics of health care lecture to the entire Republican caucus. Because they were really going in the wrong direction. On balance billing and collective bargaining and some of the issues that hit us as emergency physicians, we really saved the No Surprises Act because they were going to put the power all in the insurance companies' hands. By explaining how cost shifting works and the basic economics of contract medicine in a hospital, I was able to move the Republicans away from their stand and we went with the bill that was more New York style with arbitration. The problem was, of course, that the administration interpreted it incorrectly. Fortunately, a lawsuit in Texas recognizes that the intent of Congress was significantly different than the way Health and Human Services interpreted it. So, it's still working its way through the courts. We'll get it fixed. But, keeping that from going in the wrong direction was probably the biggest accomplishment that impacts emergency physicians that I've had in Congress.

What do you think that emergency physicians should be paying attention to in Congress right now that we aren't focused on?

Dr. Green: Saving rural hospitals and then allowing rural freestanding emergency departments. That bill will continue to come up until we're [Republicans] in charge. Nancy Pelosi's just not been allowed to solve that problem, if you're more than 35 miles from another ER a freestanding ER can't bill CMS for Medicare and Medicaid. So, I'm trying to get that removed because when a rural hospital closes, we'll get at least keep the ER as a freestanding ER.

Maybe a business model would be that the rural hospital becomes a freestanding ER and a nursing home or something like that. That way you keep the jobs in the rural community and you keep some emergency medicine coverage in that rural community. I've run this bill every year that I've been in Congress and I can't get with a Democrat co-sponsor. I can't get Nancy [Pelosi] to let the bill be heard.

You founded a hospital ED physician group in Tennessee. Can you tell me more about that? The trend right now is of independent physician groups apparently being swallowed up by either hospitals or by investor groups. And I was wondering what your thoughts are about that.

Dr. Green: I founded [the company] and we grew the company up to 52 contracts in 11 states when I left. We had about 1000 clinicians when I sold the company. The way I did it was the physicians owned the net revenue from their local facility. It was almost like a franchise and I believe the company that took it over from me continued to do that. The company that took it over from me was American Physician Partners. I like the idea of the doctor owning the upside of their business at their lo-

CONTINUED *on page 14*

cal place now. The advantage of having larger groups is you can negotiate better rates with the payers. You know, a small ER group of eight guys and gals working in their own ER goes to Blue Cross Blue Shield (BCBS). BCBS says you're going to get 85 percent of Medicare on your reimbursement rates, whereas if you've got 75 ER docs then you might get 150 percent of Medicare from Blue Cross Blue Shield. If I was to do it again, I would probably try to find some way where there could be a co-op or an association of independent groups so that they can negotiate together, but the laws are a little bit restrictive on how you can negotiate because antitrust. The turnover in the company was less than 2 percent. In fact, the only people that left the company for the first three years were asked to leave because they had customer service, patient satisfaction issues, or competency issues.

Representative Ronny Jackson

Twitter: @repronnyjackson

What do you think has been your greatest accomplishment since you've been in Congress that has benefited emergency physicians specifically?

Dr. Jackson: We helped one hospital in particular to get proper funds for the Provider Relief Fund, which actually was a big deal for them and it probably would have ended up basically collapsing without it. And then we had another hospital that we were able to make sure they kept their participation in the 340B drug processing program, which also would have been detrimental had they not. If you're in a rural area of Texas like I am where I have 41 counties and 42,000 square miles, if you don't take care of the rural hospitals and you don't take care of emergency care for people in your district a lot of times they can't get to another hospital because they're just too far away. So, I think keeping our rural hospitals up and running, trying to do everything we can to prevent rural hospitals from collapsing, which is hard to do nowadays, I think has been my biggest contribution to emergency medicine since I've been in Congress.

I've seen recently a lot of burnout surveys, emergency medicine went from fourth or fifth burnout to being number one or number two spot this past year. What's more stressful for you personally? Is it working in the ED or being in Congress?

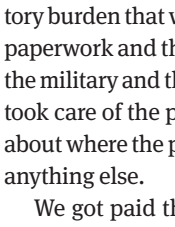
Dr. Jackson: For me, it's more stressful being in Congress. I spent 25 years as an emergency physician practicing emergency medicine. But I did most of that at urgent care centers.

Now that I'm in Congress and I'm talking to my civilian colleagues all the time, there are so many things they had to deal with that I didn't have to deal in the military—the insurance companies, the hospitals, all the regulatory burden that was imposed upon them, the paperwork and the administrative burden. In the military and the Navy in particular, we just took care of the patients and we didn't worry about where the payment was coming from or anything else.

We got paid the same no matter what we did, you know, and I just think that it wasn't as stressful for me having practiced in the military is as it is for my civilian colleagues. So, I can imagine after talking to a lot of my colleagues, it would probably be more stressful to practice in that environment than being Congress.

What is it like being the White House physician?

Dr. Jackson: I did 14 years of my active-duty career at the White House and I took care of President Bush, President Obama, and President Trump. I was there for the last three years of the Bush administration, all eight years of the Obama administration, and then the first three years of the Trump administration. But the impact I think I had there and the way I think I changed things as I kind of changed the way that we approached medicine at the White House. If you look at what the White House physician does on a day-to-day basis, it's about probably 30 percent primary care and about 70 percent contingency planning. If everything goes well, you're not going to be doing a lot, but you're planning for everything, you're planning for that bad day. What happens if the President takes a round to the chest? What happens if an IED hits a motorcade, or if the President has a stroke or a heart attack? So, it's just contingency planning and there's no better person in medicine to be responsible for that, especially for our head of state and our commander-in-chief, than an emergency physician.



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

RESIDENCY SPOTLIGHT

CONEY ISLAND HOSPITAL

Instagram: @coney_em
Location: Brooklyn, NY
Year founded: 2015 by Dr. Regina Hammock
Number of residents: 20
Program length: 4 years

CONEY ISLAND NURSING

Coney Island Residency wellness event at a Brooklyn Cyclones minor league baseball game.

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

Coney Island Emergency Medicine is a medium-sized community hospital in a big city setting where there is never a time to be bored. Residents have the chance to demonstrate their passions through quality improvement initiatives within the hospital that directly affect the community they are taking care of. The residency and emergency department administration are always supportive of residents' endeavors. If you want to invoke change within a community while obtaining high-quality, hands-on education–Coney Island Hospital is the right place for you!

What are some fun activities residents like to partake in?

First-year residents start with 18 shifts per month and decrease by one shift every consecutive year. This gives first-year residents time to settle into the program and enjoy their time learning and living in Brooklyn, New York. Residents enjoy exploring the neighborhoods around the hospital and learning about Eastern European (primarily Russian) culture and food. Residents also enjoy the beach, boardwalk, hiking, running, and exploring New York City!

How should potential applicants learn more about your program?

Visit our website at coneyem.com and (check out our Medical Student section!) and Instagram @coney_em.

SHUTTERSTOCK

Railroad-related activities are plentiful in San Francisco.

Four Perfect Days in San Francisco

Enjoy the sights and flavors of the Bay Area while attending Scientific Assembly 2022

by DERRICK LUNG, MD

After we moved to San Francisco in 2009, neither my wife nor I would have imagined that we'd find a home in this wonderfully unique city. It didn't have the driveways and lawns of the South Bay neighborhoods of our youth, it didn't have the warm beaches of our college and med school years in San Diego, and it wasn't quite as walkable as our residency home in Washington, D.C. But, we became enamored with this packed seven by seven mile space—a city with a diversity of parks, vistas, activities, food, and people that matches its colorful politics and microclimates. Here are a handful of itineraries that are a short walk or bus/train/BART ride away and, in my honest opinion, provide a taste (often literally) of the historic and contemporary communities of San Francisco.

Saturday

Kick off your weekend with a rapid-fire contrast in topics and personalities, both of whom with which I've been fortunate to have worked. First, one of my residency program's favorite attendings, Rita Manfredi-Shutler, MD, FACEP, discusses the evolution of telemedicine in emergency medicine, and then EM-Critical Care-trained Jennifer Wilson, MD, FACEP, advises on the management of cardiac tamponade.

Speaking of contrasts, when you're ready to explore San Francisco, start with the quintessential pair of contrasting neighbors: Chinatown and North Beach.

If you choose to explore the east side of Columbus Street, you'll venture into the old Italian neighborhood of North Beach and its iconic sites. Pick up a sandwich from Molinari Delicatessen or The Italian Homemade Company, focaccia from Liguria Bakery, and a slice of tiramisu or sacripantina from Stella Bakery. Enjoy a leisurely lunch in Washington Square or hike up to Coit Tower. You can browse City Lights Bookstore on your way back. Dinner options include the venerable Original Joe's or Café Jacqueline, known for its souffles (but it is closed Mondays and Tuesdays).

If you chose the west side of Columbus St., you'll enter the oldest and largest Chinatown in the United States. While still home to a multi-generational Cantonese community, its businesses are largely targeted toward tourists or families looking for low-cost groceries. Many would argue that better quality Chinese food is found on Clement Street (Marvel superhero Shang-Chi rented an unwarranted garage space in that neighborhood, after all), but there are still gems to be found.

Check out my go-to place for take-out dim sum at Good Mong Kok Bakery (cash only), Chong Qing Xiao Mian, R&G Lounge (visited by President Obama), and Golden Gate Bakery (known for its dan tat—a Cantonese pastry with an egg custard). It is plenty enjoyable to take in the energy of the weekend crowds, and browse the produce markets, traditional medicine shops, and occasional live chicken shop. Don't blink, however, or you may miss the newly renovated Chinese Hospital which was created to serve Chinatown's segregated community and opened in 1925.

A SHORT-LIST OF RECOMMENDATIONS

- **Iconic Eats:** House of Prime Rib, Tadich Grill, Harborview, In-N-Out (closest at Fisherman's Wharf), Mitchell's Ice Cream
- **Hikes and Views:** Twin Peaks, The Palace of Fine Arts, The Presidio, Land's End, Golden Gate Bridge, Point Bonita Lighthouse (limited hours), Marin Headlands
- **Entertainment:** Club Fugazi, Orpheum Theatre, SF Jazz Center
- **Excursions:** Angel Island, Alcatraz Island, Golden Gate Park, Half Moon Bay, Sonoma, Napa
- **Neighborhoods for Exploring:** Ferry Building/Embarcadero, Hayes Valley, The Castro, The Marina/Cow Hollow, Nob Hill, J-Town, Tiburon, UC Berkeley, Lake Merritt

Sunday

On the second day of the conference, start your productive day with a lecture on productivity—Christian Rose, MD, shows you that you don't have to be a TikTok star to leverage mobile devices—learn which phone applications are must-have items. In the same spirit, make time for the James D. Mills Jr. Memorial Lecture by one of my first mentors (and *ACEP Now* Associate Editor), Catherine Marco, MD, FACEP. She was (and is) an inspirational model of personal productivity—being both a present spouse and parent, successful and satisfied professional, and triathlon beast.

In the spirit of self-improvement, visit the newest San Francisco neighborhood of Mission Bay, built on reclaimed industrial and dock lands. There are plenty to see here, beginning at the South Beach Marina with Oracle Park, the home of the San Francisco Giants who will be in town playing series against foes from Colorado and Arizona. At the adjacent Mission Creek, you can book leisure time in the water at City Kayak. As you walk through the new residence towers, for morbidly fun detective work, you can identify the longest standing structures by the degree of landfill sinkage on their adjacent sidewalks. Enjoy the scattered art pieces, including my favorite, the dual monoliths *Ballast*. Take advantage of the Mission Bay sunshine by eating lunch at the SPARK Social SF food truck park, and playing a round of mini-golf at Stagecoach Greens.

If you really need to put your body to work, pack your climbing shoes, and head into the traditionally blue-collar Dogpatch neighborhood for rock climbing at Dogpatch Boulders. Immediately replace those hard-lost calories by gorging on a take on chicken and waffles across the street at the Hard Knox Café, started by a former Vietnamese-Houstonian family.

If you feel the need to exercise your soul, head further south into the heart of the Bayview neighborhood to eat dinner at one of our beloved charity organizations, Old Skool Café. This jazz themed supper club is run by at-risk, formerly incarcerated and foster care youth. Some of our first friends in the city helped start this program that provides loving mentorship and job training for these wonderful kids.

Monday

Conference day three can push us to orient our perspective outside of ourselves. Nancy J. Auer lecture, Climate Fever, presented by Renee Salas, MD, addresses how climate change touches our daily work. Nanveet Cheema, MD, (one half of the fabulous Cheema doctor sisters) gives afternoon lecture on electrical injuries discussing what happens when climate (yes, I know, it's technically "weather") literally touches you.

To match this outward-gazing state of reflection, the following itineraries land you in the neighborhood that might most palpably reflect the ongoing socio-economic and cultural movements in the state of California. Gifted with a rare pocket of warmth and sunshine in San Francisco, The Mission continually draws new waves of both Latin American immigrants, and young professionals and entrepreneurs, with all the expected creative and disruptive tensions such a collision inevitably creates.

The Mission, West:

Start your excursion at the indefatigable Senator Feinstein's old, after-school hangout, the Zuckerberg San Francisco General Hospital (her father was once chief of surgery). On campus, all three generations of the hospital are still standing. Then head south a few blocks and walk east through the commercial corridor of 24th, where there is a plethora of Mexican panaderias, carnicerias, mercados, and joyerias. Take time to breathe in the innumerable murals that ornate the neighborhood (hot tip: you may be able to find a free SF walking tour of the murals organized by the SF Library). Try some of the amazing culinary patchwork that has evolved here. If you need a jolt, get a hand-poured coffee from Philz Coffee. Go to Dynamo Donut & Coffee for their famous Maple Glazed Bacon Apple donut. For lunch, try my old toxicology fellowship hangout El Metate at 22nd and Bryant, or eat at Taqueria El Farolito or El Patron, typically in the conversation for best Mexican food in the city. Weirdly, one of the best sushi values in the city is at Basa Seafood Express. Finish your walk with Secret Breakfast ice cream at Humphry Slocombe.

The Mission, East:

From the 24th street BART station, walk east and head up Valencia for my favorite corridor of the Mission. Here you will find all manner of business and human. Super hungry? Grab a pastry and coffee from Arizmendi Bakery. Turn west on 18th street and pick up a picnic lunch at Tartine Bakery or the Bi-Rite market, or just ice cream from the Bi-Rite Creamery. After gathering your picnic lunch, join locals and tourists alike at Mission Dolores Park for some of best views of the city. Nearby is the park's namesake, Mission Dolores. On the way back to the BART station, zig zag through the street grid to pick up a treat either at Boba Guys or Garden Creamery.

Tuesday

Tuesday's schedule includes speakers from emergency medicine stalwarts in the East Bay and Central Valley. From a hospital that needs little introduction, Highland Hospital's Charlotte Page Wills, MD, shares up-to-date advances in trauma care. From UCSF-Fresno, one of the pillars of Wilderness Medicine, Danielle D. Campagne, MD, FACEP, gives new life to an "old" topic in Secrets of the Chest Imaging Masters.

As you expand your conference connections outside of San Francisco, expand your tourism to get a taste of the richness of the rest of San Francisco and the greater SF Bay Area.

Conclusion

Clearly, there's an immense richness to the SF Bay Area, that even we, as natives, have only experienced a tiny fraction. But, I'm glad for this chance to share a little of our life with you. And, in the end, even if you'll be too busy (or lazy!) to go anywhere else besides the Westfield mall food court, I hope you have a satisfying conference and enjoy our city.

How to Network at ACEP22

Take this golden opportunity to build your career connections

by ANGELA SILER FISHER, MD, FACEP

Networking is the key that opens the door to all opportunities. Intentional and proactive strategies for effective networking is the foundation upon which relationships develop and mentorships are formalized. It requires stepping outside our comfort zones. Fortunately, as emergency physicians we understand that being comfortable with being uncomfortable is just part of the job and like any other skill, practice makes perfect. When it comes to building your contacts within emergency medicine, ACEP Scientific Assembly is the Super Bowl. Let's get you ready for the game.

Pregame

First, you need to have an idea where you want your career to go. Ask yourself: Will I truly be happy in academics? Will I be happy working in community practice? What is the path within emergency medicine that will bring me the most fulfillment?

When I talk about having these forward-thinking conversations with yourself, I mean it literally. Set a weekly appointment with yourself, and use that time to write down five and ten-year goals. Consider what you need to do to accomplish those goals. Making time to reflect helps you figure out where you want to go next. Once you know your dream career path, you can seek out leaders who are already on that road and make those connections.

You also want to make sure your curriculum vitae (CV) is updated, along with a short personal bio. Use that weekly meeting with yourself to update your materials, and don't forget to review your social media presence. Power is perception; to be perceived, one must be visible. Your visibility on social media should reflect that which makes you uniquely exceptional. Do your accounts reflect your personal interests and expertise?

Prior to leaving for ACEP22, create or update your virtual business card. If you have an iPhone, having a virtual card is just setting up your own contact page with your photo, who you represent, and long-term contact information. (Avoid using temporary school/employer emails that could become obsolete.) Setting up a virtual card on your phone makes it easy to quickly share your basic information with new contacts.

As you're getting ready for the convention, look through the faculty list. Circle the names of people you already know and need to reconnect with. Circle the names of faculty you would like to meet. Follow this same process for your fellow attendees. Usually, the list of attendees will be in the conference app.

For the people I'm already acquainted with, I reach out via text message or email to let them know I'm going to be at the conference. It's as simple as, "I can't wait to see you at ACEP! Let's grab coffee or a drink so we can catch up."

For those I'd like to meet at the conference, I look for ways we can cross paths. Will we be at the same reception? Do we have any shared friends? Is this person presenting a session? Will they be at a section or committee meeting at a certain time? Scientific Assembly is a big conference, so some advanced planning is often required to end up in the same room with potential connections.

Game Time

You've heard this before, but I'll say it anyway: Dress for success. These are professional meetings, so pick clothes that make you feel competent and confident. Hone your elevator speech beforehand because there are no second chances to make a strong first impression. When our paths cross in the convention center hallway or escalator, how will you introduce yourself and start a conversation? We're all emergency physicians, so try to include something specific or memorable to set yourself apart. This is where the advance planning comes in – if you're already informed about the person you're meeting, you'll know enough about them to connect over shared interests, mutual colleagues, etc.

Sometimes conversations feel awkward and slow, but don't get discouraged. I think the best way to get a good discussion going is by asking questions. Most people like to talk about themselves! Keep asking questions and the conversation should begin to flow as you discover things you have in common.

When I want to build a connection that extends beyond that initial conversation, I'll say, "Hey, great meeting you/seeing you again! Can I send you my business card? What's a good phone number or email for you?" Then I'll message them with my virtual card along with a message that reiterates how good it was to see them and that I'd love to follow up on [insert topic we discussed]. I try to write something specific in my message that will remind me who they were because I know I'll be scanning my messages later when I'm at the airport, and those hints will prove helpful after a few days of meeting new people.

Postgame

The postgame recap is as important as the preparation. You invested your time and money into attending this meeting – what did you take home? Who are those new contacts you collected? Did you make connections that could help advance your career?

When I'm at the airport waiting for my flight home, I'll circle back to my original list of people I wanted to meet to see how I did. I think it's the perfect time, while the conference conversations are still fresh, to send follow-up messages to further those new connections.

One last thing: I know it's not always easy to connect with potential mentors, and many leaders in our specialty are very busy because they are engaged with so many things at once. Instead of asking for hours of their time, see if you can work on a project with them. Try to serve on an ACEP committee with them. Working together with individuals you respect is a great way to build meaningful relationships.

ANGELA SILER FISHER, MD, FACEP, is founder of MaveRx, a leadership consulting firm. Her knowledge of and expertise in business education and leadership simulation has advanced the accomplishments and success of many men and women in securing educational opportunities, in acquiring elected and appointed positions, and in attaining a variety of leadership roles. Dr. Siler Fisher was a founding member of the Baylor College of Medicine Department of Emergency Medicine and residency training program. She continues to practice in Houston.

WHERE TO NETWORK AT ACEP22

"Always, always go to the opening party. Don't look at your phone at the reception because people won't come up to you if they think you're busy. When you attend lectures, sit next to someone who is also alone and start a conversation. Go to section meetings a little early and then stay until the end. There's a lot to talk about."

Sandra Schneider, MD, FACEP

"Contact your residency program or affiliated group to see if they're organizing networking dinners. These are common in the evenings and are a great way to touch base with some friendly, familiar faces while away from home. Sign up for at least one skills workshop. They are always high-quality, and this is a great way to polish your skills while working hands-on with peers from across the country. These are typically run by people you want to know."

John Corker, MD, FACEP

"If you come to our EMS Section or EMS Committee meeting, it's the most natural thing in the world to introduce yourself and ask any of us about the EMS systems we get to serve as medical directors, clinical educators, consultants, etc. That often leads to questions about how you developed an interest in EMS. And then, we're off to sharing "war stories" about the adventures we've had! The same applies to nearly every other interest area of EM – peds, rural, wellness, diversity/health equity/inclusion, etc."

Jeff Goodloe, MD, FACEP

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invaluable tool into the culture of trauma care, altering the clinical care pathway for numerous critically ill trauma patients. After our nearly two decades of experience performing and interpreting the eFAST exam at a Level I trauma center, we believe that this durable bedside examination can benefit from a further nuanced conceptualization and approach.

Incorporating the eFAST Exam

Compared to when POCUS was first implemented for the assessment of trauma, computed tomography (CT) scanners have become faster (and more accurate), resuscitation theory has advanced, and the literature's approach to traumatic injuries has changed.[5,6] In response to these changes, emergency physicians must determine the optimal ways of incorporating the eFAST exam. The goal of the eFAST examination for emergency physicians is not to replace CT imaging, but to complement modern trauma care in an evidence-based and practical manner.

Although emergency physicians have successfully incorporated the eFAST examination into the evaluation of patients with both blunt and penetrating trauma, we feel that the following recommendations can further enhance bedside decision making during your next critically-ill trauma resuscitation.

1. The "Three Box Concept"

When evaluating the acutely injured trauma patient, emergency physicians should be aware of the "three box concept" (See Figure 1). The thorax, heart, and abdomen comprise the three "boxes" that should be sonographically interrogated in order to determine whether an emergent intervention is warranted in the trauma bay, further imaging should be pursued, or the patient needs to proceed directly to the operating room (OR). In our experience, the order in which these "boxes" are evaluated as part of the eFAST should be based on the mechanism of injury as well as the patient's clinical status. For example, patients with penetrating injuries to the chest should be initially evaluated for the presence or absence of pericardial effusion, pneumothorax, and hemothorax. A massive hemothorax/pneumothorax or a hemopericardium that is causing hemodynamic compromise may force the emergency physician to perform stabilization measures at the bedside (e.g., tube thoracostomy, pericardiocentesis, ED thoracotomy) without further imaging, or prompt the trauma surgeon to take the patient directly to the OR. If sonographic evaluation of these two boxes fails to reveal emergent pathology, evaluate the abdomen for the presence or absence of free fluid. Presence of hemoperitoneum in a hemodynamically unstable trauma patient classically leads to a direct need for operative intervention.

Alternatively, in the blunt trauma patient with hemodynamic compromise, the thorax and abdomen should be the first two boxes evaluated by eFAST. This approach can clarify the need for early tube thoracostomy in the setting of massive hemothorax/pneumothorax or help guide the trauma team to pursue operative stabilization if massive hemoperitoneum is noted. In contrast, significant hemopericardium following blunt trauma is an uncommon and often non-survivable event, and thus the pericardium should be scanned after the other two boxes are rapidly and thoroughly evaluated.[7]

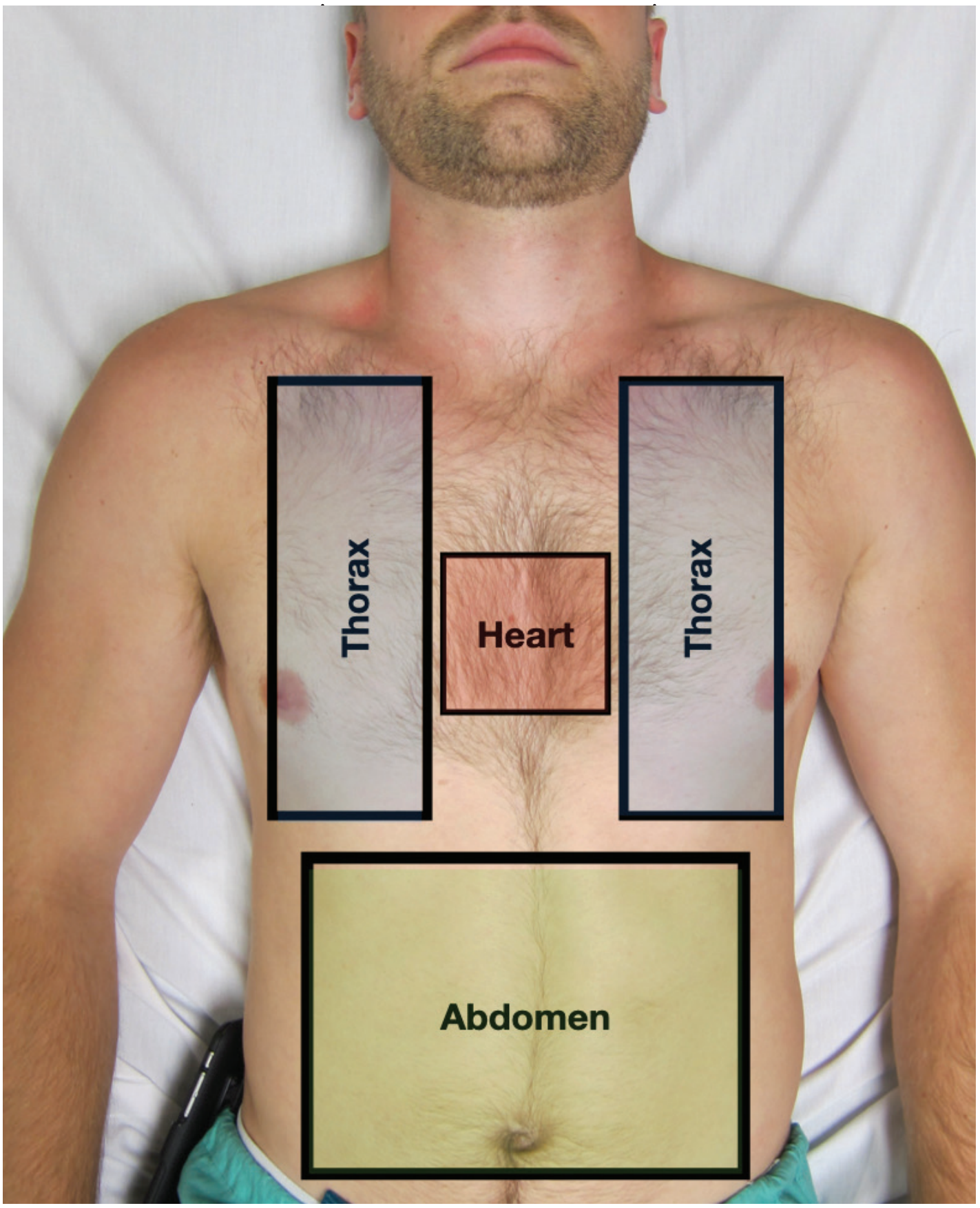

FIGURE 1: A representation of the "three box concept" indicating the locations that need to be interrogated during an eFAST examination.

The eFAST exam is highly specific for free fluid in the abdomen and highly sensitive for pneumothorax, hemothorax, and pericardial effusion.[8–10] Therefore, most emergency physicians utilize the eFAST in unstable patients to decide whether or not the patient needs rapid operative stabilization or can undergo further CT imaging.

2. Goal-Directed Communication

The eFAST examination findings must be properly communicated when working alongside your trauma colleagues. There should be bidirectional communication with the trauma team leader to facilitate appropriate and timely intervention while always taking into account the patient's clinical status. The eFAST is not a binary test—the interpretations are nuanced and the assessment of the "three boxes" should be interpreted in real time. Communication to the trauma team should be in a granular or detailed manner so that these results can properly be incorporated into the care of the patient.

When communicating these results to the trauma team, it is critical to interpret both positive and negative eFAST exams in the context of the patient's clinical status. For example, in the patient with a blunt abdominal injury and a trace amount of free fluid in Morrison's pouch, this source of bleeding is unlikely the cause of significant hypotension as the hemorrhagic volume needs to be much greater than the minimum 150 to 200mL required to be visualized on an eFAST.[8] This is in contrast to advanced trauma life support (ATLS) hemorrhagic shock classifications where blood pressure would not typically lower until class III shock (1500–2000mL of blood loss).[11] While this should be reported as a "positive" abdominal component of the eFAST examination for documentation purposes, it is imperative to communicate to the trauma team leader that this degree of free fluid in the abdomen does not clinically correlate with the patient's hemodynamic instability. Alternative or concurrent injuries in the other two boxes (e.g., thorax or heart) or the possibility of an unstable pelvis/retroperitoneal injury or long bone injury and/or neurogenic shock should also be considered.

Finally, a repeat ultrasound of the abdomen can be performed to see if there is progression of real time intra-abdominal bleeding. Conversely, a positive eFAST in a hemodynamically stable patient (e.g., small pneumothorax or trace hemoperitoneum) should be clearly communicated to the trauma team, but should

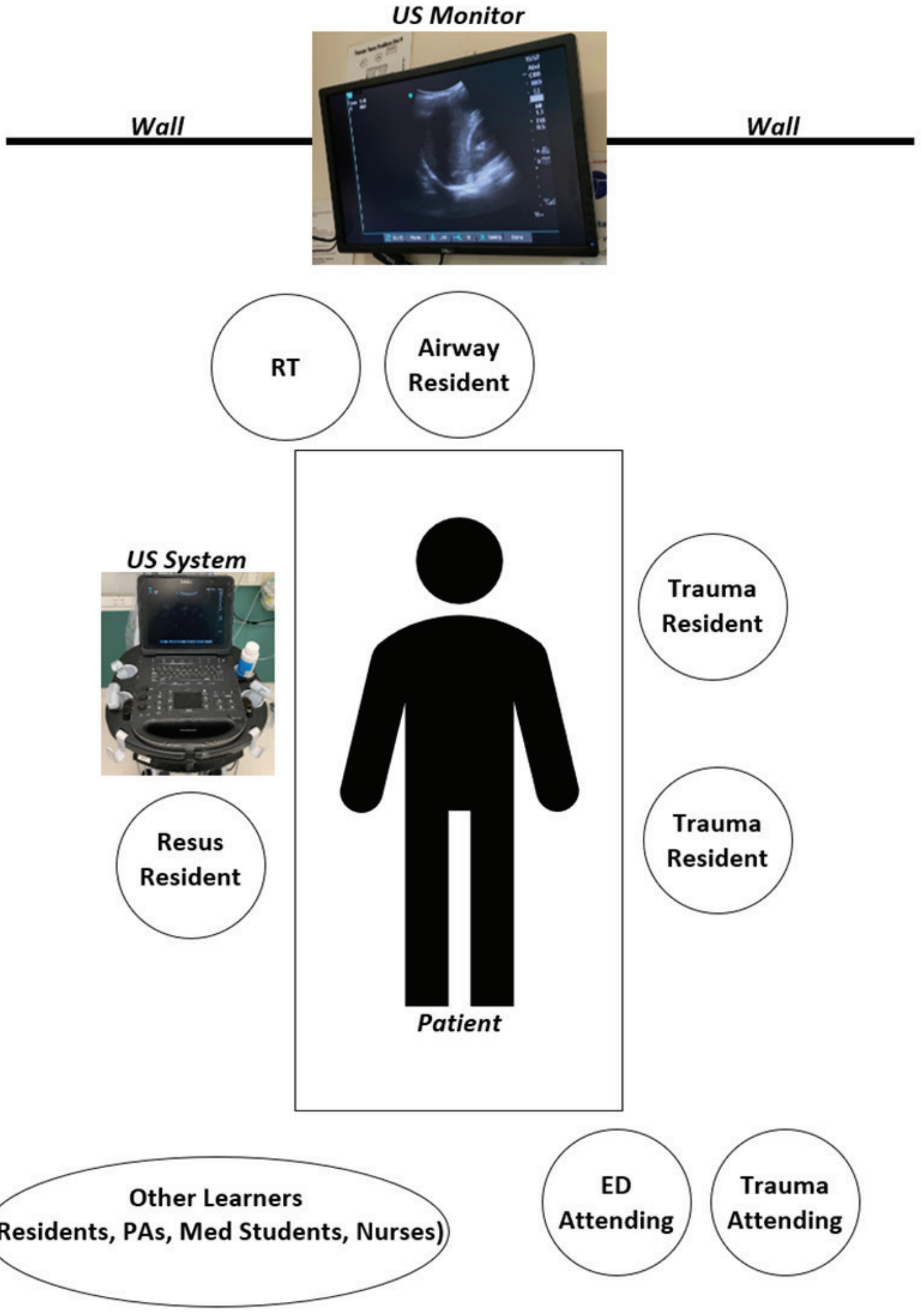

FIGURE 2: Monitors are placed at the head of the trauma bay so that all members of the trauma team are able to view the ultrasound images during an eFAST examination.

likely not delay advanced imaging with CT.

At Highland Hospital, we have implemented a simple technological solution that allows for bidirectional and objective communication. Monitors that wirelessly mirror POCUS images from an eFAST examination were secured on the wall above the head of the bed allowing the entire trauma team to easily view real-time images. Data (either positive or negative findings) are verbally communicated to the trauma team in our "three box" format as images are projected for the trauma leader to view. This allows the trauma sonographer to replay images and discuss findings with trauma leaders to ensure that decisions are made in a clear and consensual manner (See Figure 2—https://www.aliem.com/idea-series-big-screen-ultrasound-resuscitation-bays/).

3. Negative eFAST in the Setting of a Hypotensive Trauma Patient

After a negative eFAST exam in a persistently or newly hypotensive trauma patient, other significant pathologies must be considered. We employ a simple algorithm to help remind our sonographers during this uncommon, yet cognitively challenging scenario. First, consider an unstable pelvic fracture leading to a large retroperitoneal injury. The eFAST is insensitive for free fluid in the retroperitoneum including the pelvis, therefore empiric pelvic binder placement can reduce further suspected hemorrhage.[12] Second, repeat the eFAST examination to evaluate for interval changes such as increased intraperitoneal free fluid or an enlarging pneumothorax/hemothorax. A repeat FAST exam has been shown to significantly increase the sensitivity for free fluid in blunt trauma.[13] Third, we recommend a more detailed echocardiographic examination including evaluation for valvular injury, underlying poor cardiac function, secondary signs of aortic dissection (e.g., trace pericardial effusion, large left ventricular outflow tract, or aortic insufficiency), or other cardiac obstructive causes (e.g., right heart strain concerning for pulmonary embolism, regional wall motion abnormalities suggestive of ST elevation myocardial infarction) which may have been the initial insult leading to the traumatic injury (e.g., STEMI resulting in MVC).[14] Finally, consideration of neurogenic shock and other causes of traumatic hypovolemia that may not be apparent on eFAST (e.g., retroperitoneum, thigh, or external blood loss on scene) should always be occurring in parallel. Remember, a bidirectional and open conversation with your trauma colleagues will allow for the best care for your critically ill trauma patient.

Summary

The eFAST examination has become a cornerstone of the evaluation of the critically ill trauma patient. The clinical context of the injury and hemodynamic status must be incorporated into the order and interpretation of the exam components. Utilize the "three box" concept as a framework and modify the order of the eFAST components depending on the mechanism of trauma and the patient's clinical status. Proper and granular communication of ultrasound findings should be relayed to your trauma colleagues and interpreted in the hemodynamic clinical context of the patient. Finally, when faced with the newly or persistently hypotensive patient after an initially negative eFAST exam, a structured algorithm should be employed to reduce cognitive load in an often stressful situation. Our simple additions to the eFAST examination in no way replace the amazing work done by numerous physicians who have brought this life-saving tool into trauma care, but rather a minor refinement to an integral exam in modern trauma resuscitation.

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ETHICAL ISSUES OF THE EMERGENCY MEDICINE WORKFORCE

by CATHERINE A. MARCO, MD, FACEP; ERIK BLUTINGER, MD, MSC; ELIZABETH CLAYBORNE, MD, MA; LAURA VEARRIER, MD, DBE; DANIEL R. MARTIN, MD, MBA, FACEP; T. DOUGLAS SALLADE, DO; JOHN C. MOSKOP, PHD


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A recent study commissioned by the American College of Emergency Physicians (ACEP) identified a likely scenario of a surplus of over 7,000 emergency physicians (EPs) in the United States in 2030. This future scenario was based on an estimated 2% annual graduate medical education (GME) growth, 3% annual EP attrition, 20% of ED encounters seen by a nurse practitioner or physician assistant, and an 11% increase in ED visits relative to 2018. This study raised important questions about the future supply of and demand for emergency physicians, including whether to intervene, what are the likely consequences and moral implications of potential actions, and how to implement potential changes.

The future of the workforce in EM depends on balancing the supply with the demand for emergency physicians. We propose that evaluation of potential actions to balance supply and demand should rely on the ethical principles of beneficence (doing good), nonmaleficence (*primum non nocere*, or "do no harm"), and justice (fair and equitable treatment).

The Supply of Emergency Physicians

GME in emergency medicine is a 3- or 4-year program. Most federal funding comes from the Centers for Medicare & Medicaid Services (CMS) Medicare GME program, which provided as much as $10.3 billion in 2015. With sustained funding and the continuing popularity of the specialty, the number of EM residency programs has expanded dramatically in recent years. The latest data from the Accreditation Council for Graduate Medical Education (ACGME) in 2020-21 show that EM has a total of 276 accredited residency programs, placing emergency medicine on the latest "top five" list of specialties with the greatest increase in programs (+16 programs) since 2016-2017. CMS recently announced plans to fund an additional $1.8 billion over the next 10 years for additional residency slots, specifically for hospitals serving underserved and rural areas.

Emergency medicine continues to be a popular specialty choice among medical graduates. In fact, post-graduate emergency medicine residency slots increased by 27.5% from 2014 (1,786 slots) to 2018 (2,278), according to a report from the American Board of Emergency Medicine and Accreditation Council for Graduate Medical Education. This rapid growth in EM residency programs poses novel ethical issues, including questions about maintaining the quality of emergency medicine residency training, allocating limited graduate medical education funding equitably, and supporting the work life of emergency medical care professionals. To develop and sustain a highly skilled workforce, medical students and residents must have adequate clinical training opportunities. Data have shown that market forces may not always align with high-quality medical training, and residency expansion does not always mirror the demand for medical specialists. If, for example, a large supply of new emergency physicians significantly exceeds demand, new physicians may confront diminished job prospects and significant salary decreases.

Strategies for striking an optimal balance between the supply of emergency physicians and societal needs for emergency medical care remain uncertain. Some have argued that emergency medicine training requirements should become more rigorous and longer. This is potentially a good solution for enhancing the skills of residency-trained emergency physicians and promoting high-quality patient care. Any changes in training requirements should be directly related to proficiency and quality patient care.

Demand for Emergency Physicians COVID-19's Effect on Emergency Physician Demand

Initial COVID-19 surges decreased ED volumes and emergency physician staffing in 2020, but these rebounded in 2021. Physicians report greatly increased stress and burnout since the onset of the current pandemic.[1] In a survey by the Physicians Foundation, 58% of physicians often had feelings of burnout versus 40% in 2018, and 37% wanted to retire in the next year.[2] A study of physician interruptions of practice during the pandemic found that these were mostly transient, but that practice interruptions without return for physicians aged 55 and older were significantly greater than for younger physicians. These data suggest that the emergency physician attrition rate of 3% used to calculate emergency physician demand is likely an underestimate due to COVID-19. If that is the case, reductions in the number of emergency medicine residency program graduates could create a future shortage of emergency physicians, with adverse consequences for the accessibility and quality of emergency medical care.

EMTALA and the prudent layperson standard requiring an emergency service to evaluate and treat any condition that patients believe requires immediate unscheduled medical care ensures that there will be continuing demand for emergency physicians. Demand for emergency physicians' services is reinforced by their commitment to a fundamental moral duty to act for the benefit and welfare of their patients and "respond promptly and expertly, without prejudice or partiality, to the need for emergency medical

care," while being stewards of finite healthcare resources.

Distribution of Emergency Physicians

Rural EDs serve larger proportions of disadvantaged populations. They also face the challenge of a shortage of physicians, especially emergency physicians. Access to care in rural areas is anticipated to worsen, for these reasons:

- While approximately 20% of the US population lives in rural areas, only about 10% of all physicians practice in those areas.
- Physicians practicing in rural EDs are less likely to be EM trained or board certified.
- Over approximately the last decade, this shortage has increased, with the density of emergency physicians per capita in small and large rural areas decreasing.
- Many rural emergency physicians are nearing retirement age.
- Rural hospitals are experiencing a closure crisis due to financial challenges. This crisis pre-dated the COVID-19 pandemic and has subsequently been exacerbated by it.
- Rural hospitals have higher mortality rates for acute conditions.

The challenges facing emergency medical practice in US rural areas pose a significant threat to the moral goal of universal and timely access to quality emergency medical care. While financial incentives are effective in attracting physicians to rural locations, the effects may be transient – once student loans are repaid, physicians tend to return to urban areas. The most consistent factor influencing practice in a rural area is growing up in a rural area.

Factors Influencing Future Demand for Emergency Physicians

Emergency physicians are becoming more involved in a variety of professional activities outside of the direct clinical care of ED patients. The Society for Academic Emergency Medicine (SAEM) website for fellowships now lists 500 available positions in nearly 40 different fellowship programs, and the American Board of Emergency Medicine (ABEM) listed 2,927 ABEM emergency physicians with subspecialty certification in 12 different subspecialties. The National Residency Match Program (NRMP) match data for 2021 showed that ACGME-certified fellowships experienced record high numbers of filled positions.

Despite significant interest in pursuing emergency medicine, the latest 2022 NRMP match illustrated a big drop in the percentage of positions filled, with a 7.0 percent point drop compared to last year. The reasons for this change are uncertain, but may reflect uncertainty relating to future employment opportunities.

Given the number of unanticipated changes that have a significant impact on the healthcare workforce, such as the COVID-19 pandemic, emergency physicians will continue to explore ways to diversify their careers. A study from 2011 demonstrated that 36% of EDs surveyed reported an observation unit in their hospital, with over half of those units staffed by emergency physicians. Urgent care centers have increased in the US from 6100 in 2013 to 9616 in 2019. A recent systematic review of telehealth during the COVID-19 pandemic listed several categories of use in the ED, and the number of descriptive papers regarding emergency physicians using telehealth continues to grow. Tele-emergency allows a specialty-trained EP to provide oversight for another clinician in a remote ED. This practice has been shown to improve the quality of care and health outcomes in rural hospitals. These trends in EP training and in clinical practice arrangements may decrease the number of emergency physicians providing basic ED care, but they may also increase the quality of care and the treatment benefits enjoyed by ED patients.

Conclusions

The future of the EM workforce depends on the supply and distribution of emergency physicians and the demand for emergency medical care. Potential actions to balance these forces should be evaluated using the ethical principles of beneficence (doing good), nonmaleficence (*primum non nocere*, or "do no harm"), and justice (fair and equitable treatment). Patient access, safety, and the quality of emergency care should be the primary goals of balancing the emergency medicine workforce.

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110 bed community hospital non-stemi/non-stroke. Only 0.8 patients/hour, 140 hour plus incentives, 12-hour shifts, 13 shifts/month.

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Low volume 620/month. Urgent care, non-paramedic receiving, less stress, patients 0.9 hour. Base $138 hour plus volume/procedure incentives. 6/24-hour shifts or 13/12- hour or combination. 28-year contract with stable history.

NORWALK
Low volume 650/month. Paramedic receiving. Patients 0.9/hour. 12- and 24-hour shifts. 15-year contract with stable history. $145 hour plus volume/procedure incentives. 13 shifts a month.

SAN FERNANDO VALLEY
169 bed hospital medsurg and psych, non-trauma/stemi, paramedic receiving, 8 days 4 nights, plus incentives. $350,000 year MD. Also, NP/PA

LOS ANGELES COUNTY
Hospital Medicine physician's and NP/PA 150 bed hospital. Competitive salary plus incentives.

HIGH DESERT (Between Las Vegas/Los Angeles)
Hospital Medicine physicians. 7 on, 7 off, days/nights, $300,000 year plus incentives. ER Medicine. $250.00 hour plus incentives. Days/nights (group of days scheduled).

FAX CV 323-306-0076, call 747-283-1809/
susan@intercaredrfagan.com

Baylor College of Medicine
HENRY J.N. TAUB DEPARTMENT OF EMERGENCY MEDICINE

(Emergency Medicine) Instructor – Physician Assistant
Houston, TX

Summary
To provide coverage for patient care for Emergency Medicine at Ben Taub General Hospital. This is a critical piece of the clinical service that will help maintain coverage within the Emergency Center.

Minimum Qualifications
Education Required: Master's degree in Physician Assistant Studies. NOTE: Bachelor's degree in Physician Assistant Studies accepted based on terminal degree requirements at time of graduation.

Certification/Licenses/Registration: Current license as a Physician Assistant by the State of Texas Physician Assistant Board. Specialty certification as required by department. Basic Life Support (BLS) Certification.

Applications can be submitted via the Baylor College of Medicine Jobs Website: https://jobs.bcm.edu/job/Houston-%28Emergency-Medicine%29-Instructor-Physician-Assistant-Texa/812405100/?feedId=295800&utm_source=Indeed&utm_campaign=Baylor_Indeed

EPT | Emergency Physicians OF TIDEWATER

Private Democratic group in Norfolk, Virginia Beach, and Suffolk

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

Opportunities:

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

Practice Variety · Democratic Group · Partnership · Leadership · Teaching

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

LocumTenens.com specializes in staffing emergency medicine physicians and advanced practice providers in all 50 states. Unlike other staffing agencies, the clinicians we represent benefit from working with recruiters who work only in emergency medicine, allowing each recruiter to understand all of the complexities and nuances of your medical specialty. Over the years, we've filled over 28,000 shifts in EDs in nearly 2,400 hospitals. With the current physician shortage and high demand, we are experiencing one of our busiest years. Let us help you find an opportunity that provides you with flexibility to practice on your terms. We cover all travel, housing and medical malpractice insurance. Contact for more information.

Visit us at the ACEP conference in booth 510.

Penn State Health Emergency Medicine

About Us:

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

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

Benefit highlights include:

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

PennState Health

FOR MORE INFORMATION PLEASE CONTACT:

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

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

By the Numbers

EM Workforce

UNIQUE CLINICIANS
82,499
Total

EMERGENCY PHYSICIANS
47,000

ATTRITION RATE
5.3%

EMERGENCY MEDICINE ACADEMIC FACULTY
(1990-2020)

FEMALE
+22%

NON-HISPANIC WHITE
-14%

BLACK
0%

ASIAN
+6%

HISPANIC
+2%

Visit **ACEPNow.com** for the sources of these statistics.

ETHICAL ISSUES | CONTINUED FROM PAGE 23

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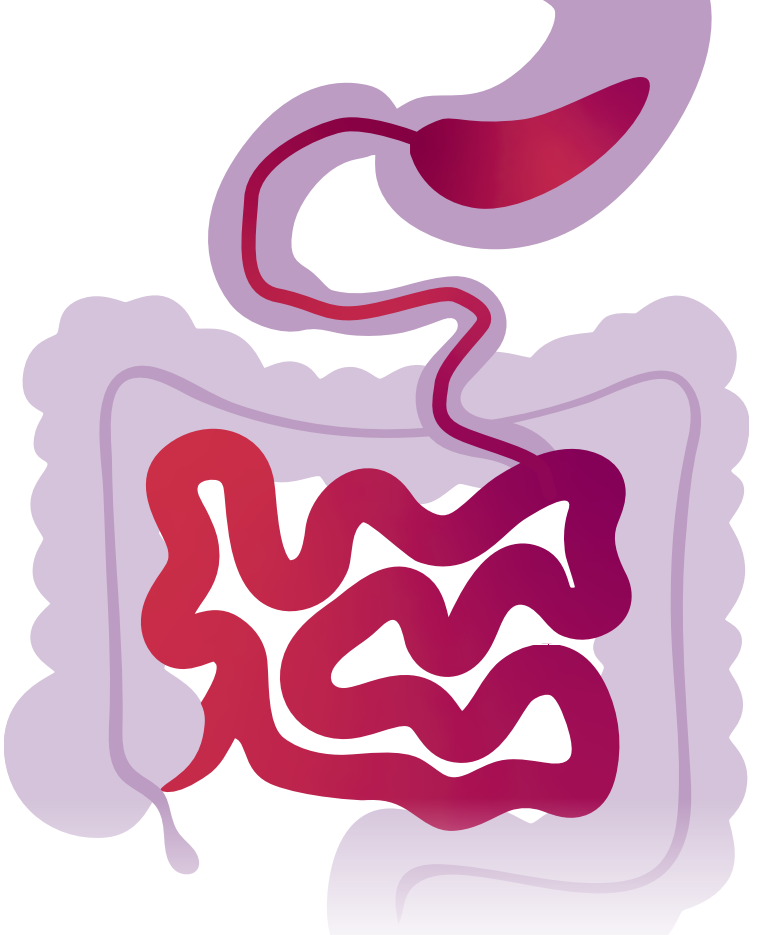
For hemodynamically unstable patients on warfarin

SEVERE GI BLEEDS CALL FOR IMMEDIATE INTERVENTION

Act fast in the face of these unstable vitals*

- PT-INR **>2**
  Moderate-to-severe bleeding
- Heart rate **>100 bpm**
- Blood pressure **<90/60 mmHg**



KCENTRA®
Prothrombin Complex Concentrate (Human)

Choose KCENTRA for urgent warfarin reversal

Learn more about KCENTRA and GI bleeds at KCENTRA.com/case-studies

FASTER ACTING†
Superior INR reduction at **30 minutes after end of infusion vs plasma**

FASTER ADMINISTRATION, **LOWER** VOLUME
Mean infusion time is under 25 minutes ~**85% less volume vs plasma**

SUSTAINED INR REDUCTION‡
Statistically significant INR reduction **sustained ≤1.3 for up to 8 hours vs plasma**

SCAN TO LEARN MORE

*Not inclusive of all symptoms of hemodynamic instability.
†In 2 head-to-head trials, KCENTRA demonstrated superiority to plasma in 3 of 4 efficacy endpoints. Superior hemostatic efficacy in the Urgent Surgery/Invasive Procedures trial and equally effective hemostasis efficacy in the Acute Major Bleeding trial. Faster INR reduction (to ≤1.3 at 30 minutes after end of infusion) in both head-to-head trials.
‡8 hours for Urgent Surgery/Invasive Procedures trial and 12 hours for Acute Major Bleeding trial. Administer vitamin K concurrently to patients receiving KCENTRA. Vitamin K is administered to maintain vitamin K-dependent clotting factor levels once the effects of KCENTRA have diminished.

Important Safety Information

WARNING: ARTERIAL AND VENOUS THROMBOEMBOLIC COMPLICATIONS

Patients being treated with Vitamin K antagonist therapy have underlying disease states that predispose them to thromboembolic events. Potential benefits of reversing VKA should be weighed against the risk of thromboembolic events, especially in patients with history of such events. Resumption of anticoagulation therapy should be carefully considered once the risk of thromboembolic events outweighs the risk of acute bleeding. Both fatal and nonfatal arterial and venous thromboembolic complications have been reported in clinical trials and postmarketing surveillance. Monitor patients receiving KCENTRA, and inform them of signs and symptoms of thromboembolic events. KCENTRA was not studied in subjects who had a thromboembolic event, myocardial infarction, disseminated intravascular coagulation, cerebral vascular accident, transient ischemic attack, unstable angina pectoris, or severe peripheral vascular disease within the prior 3 months. KCENTRA might not be suitable for patients with thromboembolic events in the prior 3 months.

Indications

KCENTRA is a blood coagulation factor replacement indicated for the urgent reversal of acquired coagulation factor deficiency induced by Vitamin K antagonist (VKA—eg, warfarin) therapy in adult patients with acute major bleeding or the need for urgent surgery or other invasive procedure. KCENTRA is for intravenous use only.

Important Safety Information

KCENTRA is contraindicated in patients with known anaphylactic or severe systemic reactions to KCENTRA or any of its components (including heparin, Factors II, VII, IX, X, Proteins C and S, Antithrombin III and human albumin). KCENTRA is also contraindicated in patients with disseminated intravascular coagulation. Because KCENTRA contains heparin, it is contraindicated in patients with heparin-induced thrombocytopenia (HIT).

Hypersensitivity reactions to KCENTRA may occur. If patient experiences severe allergic or anaphylactic type reactions, discontinue administration and institute appropriate treatment.

In clinical trials, the most frequent (≥2.8%) adverse reactions observed in subjects receiving KCENTRA were headache, nausea/vomiting, hypotension, and anemia. The most serious adverse reactions were thromboembolic events, including stroke, pulmonary embolism and deep vein thrombosis.

KCENTRA is derived from human plasma. The risk of transmission of infectious agents, including viruses and, theoretically, the Creutzfeldt-Jakob disease (CJD) agent and its variant (vCJD), cannot be completely eliminated.

Please see full Important Safety Information on the following page. Please see enclosed full prescribing information, including boxed warning.

To report SUSPECTED ADVERSE REACTIONS, contact the CSL Behring Pharmacovigilance Department at 1-866-915-6958 or FDA at 1-800-FDA-1088 or www.fda.gov/medwatch.

KCENTRA is manufactured by CSL Behring GmbH and distributed by CSL Behring LLC.

CSL Behring