EM Resident
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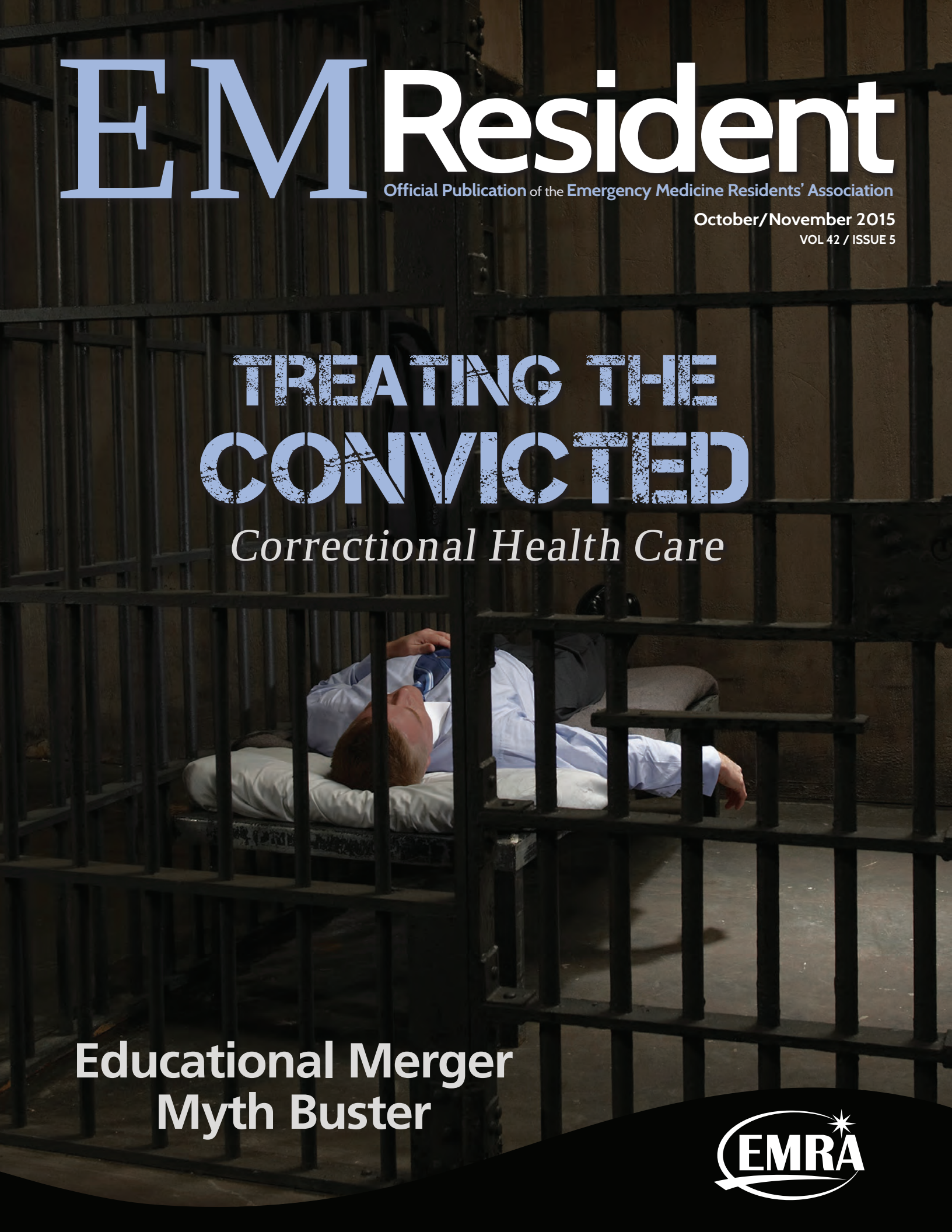
TREATING THE CONVICTED

Correctional Health Care



Educational Merger Myth Buster

EMRA

YOU CORPORATE BS

ADVANTAGE: YOU

YOU CAN OVERCOME EMERGENCY MEDICINE CHALLENGES AND GAIN CAREER WINS.

Schumachergroup

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ALSO SEE US AT ACEP (BOOTH #301).

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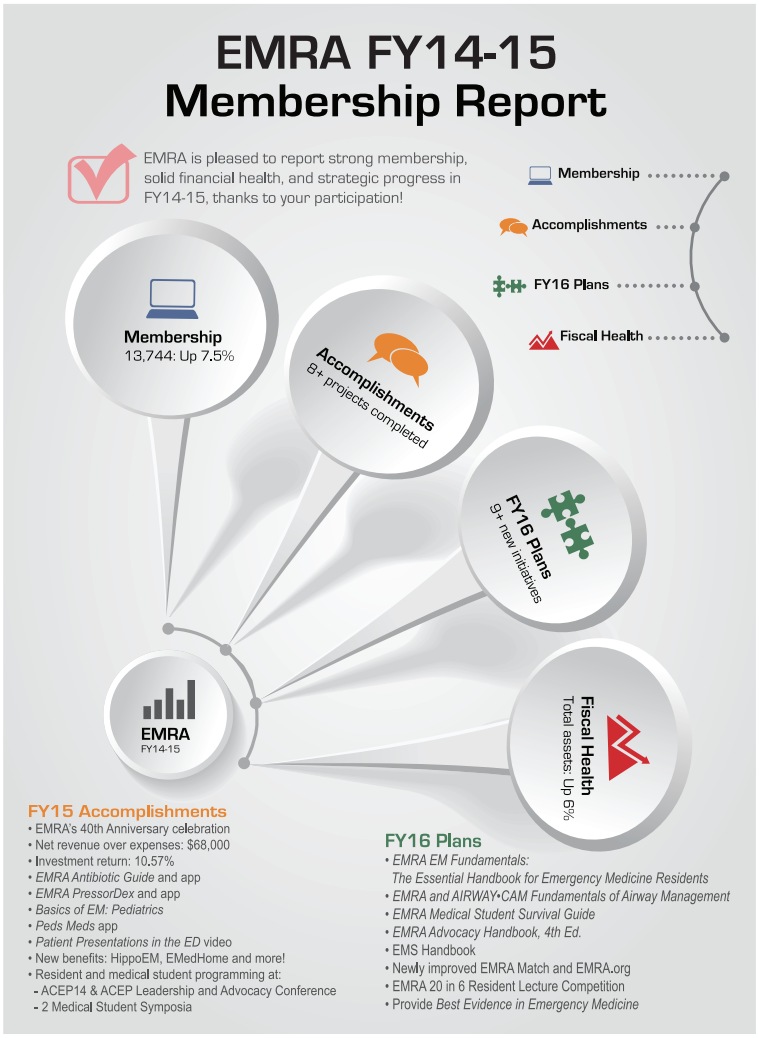

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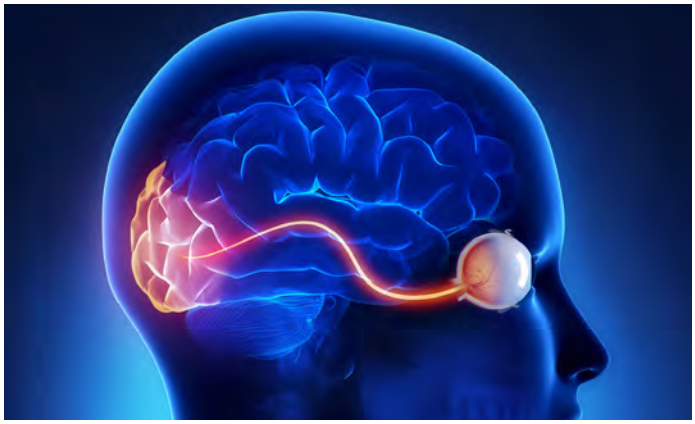

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★ ★ ★ ★

MISSION STATEMENT

The Emergency Medicine Residents' Association is the voice of emergency medicine physicians-in-training and the future of our specialty.

★ ★ ★ ★

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Matt Rudy, MD
EMRA President
University Hospital
Augusta, GA

Final Words

As I write this, my final *EM Resident* article in the role of EMRA president, it has now been 12 months since I completed my emergency medicine residency at Washington University in St. Louis. I have always looked to friends and mentors one step ahead of me in life for advice and to learn from their experiences, and in this article I hope to share with you a few thoughts to guide your thinking as you progress through training and shape your lives as emergency medicine physicians.

9. Moonlight if you can.

We are fortunate in residency to know there is always help (often standing right behind us) as we learn to intubate a critical trauma patient or resuscitate a crashing patient peri-arrest. It is comforting and essential for patient safety early on for our attending physicians to be directly involved in our training and patient care, but the experience and perspective we can gain from moonlighting can be priceless. I would argue that while the extra money you can earn moonlighting (save it or apply it all to loans, by the way) is nice, what is even more valuable is the change in mindset, knowing that if you're at a small rural hospital, you're "it" — if you cannot secure the airway, no one is stepping in to push you aside and save the day. **Moonlighting, once you're ready, is invaluable in teaching you crisis performance and helping you identify gaps in your knowledge and comfort so you can address them before you graduate residency.** It also offers you a look at community emergency medicine, so you can decide what type of practice fits best for your interests and passions.

8. Face your fears head-on.

This advice applies whether you are studying for the Boards or just refining your clinical and procedural skills. Don't shy away from areas that make you uncomfortable. If you know your slit lamp skills are lacking, make it a point to perform a full slit lamp exam whenever possible rather than simply doing a cursory exam with a bedside ophthalmoscope and consulting ophthalmology (plus you'll gain respect and credibility with your ophtho colleagues when you communicate your slip lamp findings to them in a consult). Everyone has areas where they excel (we all had that classmate who seemed to effortlessly secure every challenging airway on the first attempt), but **it's important not to rest on the laurels of your success**. It can be hard to admit what we're not good at, but doing so is the first step to becoming proficient and, ultimately, skilled in those areas. While you may stumble with your first few slit lamp exams, as you practice more and more, asking for feedback and help as needed, your skills will improve and your patients will benefit.

7. Take full advantage of your teachers and mentors.

Academic emergency medicine faculty are some of the most interesting and passionate people you will ever meet, and they have committed their professional lives to sharing their knowledge with you. Don't miss out on the opportunity to absorb every last drop of passion and knowledge from your attendings. Get them to share their stories and learn from their individual approaches and skillsets as you form your own armamentarium of knowledge and skills. Stay in touch with your faculty once you graduate – you may find an opportunity to partner on a multi-site research project or benefit from their expertise as you help update stroke or trauma guidelines at a community hospital.

6. Start saving now, even though it's hard.

Even if you somehow managed to have graduated medical school debt-free, the importance of learning the discipline to save and invest early cannot be overstated. You will be hard-pressed to find someone in retirement who regrets having saved too much money. Choosing the profession of medicine, many of us are already behind the curve in taking advantage of compound interest. Find a trusted financial adviser (know how they get paid) and **learn the value of saving** as little as $100 a month while in training, or more if you can. Financial discipline early will be one of your greatest weapons against burnout later as you find you are working because you **want** to, not because you **have** to in order to cover the payments on your new boat or car.

5. When you first finish residency, keep living like you're still a resident.

It can be quick and easy to forget how to survive on a resident's salary once you stop doing it. If you can maintain the standard of living you had while in residency after you begin to earn an attending's wages, you're going to be golden. Use that extra money to pay off loans, invest, and save, and you will be so glad you did 5 and 10 years from now. Some new expenses, like specialty-specific disability insurance, are worth the investment, but try to resist the temptation to buy the biggest house just because you can afford it. **A colleague once told me she was "saved by the dust bunnies."** On a tour of a home a real estate agent was pushing heavily, my colleague realized that just because she could afford a 6,000 square foot house, the cost of maintaining the mansion was going to be extreme, and not something she needed, or even really wanted.

4. Reflect on what you want in your first "real job."

Unless you moonlight, until the last day of residency, we have all been mostly sheltered in the ivory towers of academic medical centers. The reality is that job opportunities in EM vary greatly, and fewer than half of us will stay in academic careers post residency. Far more than just "community vs. academic," your typical day as an EM physician will depend greatly on where you practice, the structure of your hospital or group, and what resources you have available. You'll see jobs offered with insane signing bonuses, but be wary. Decide

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Primed for BOSTON

LOOKING FORWARD TO SEEING YOU THERE!

Nida Degesys, MD
Vice Speaker of the Council
UCSF-SFGH
San Francisco, CA

Happy October, EMRA! I cannot believe that almost a year, and four seasons (depending on where you live) have whizzed by since I was elected to serve as your Vice Speaker. And what a year it has been!

I am so grateful to have met so many of you. We have had some terrific discussions about EMRA and its future. I appreciate the leadership and dedication to EMRA that our outgoing speaker, Dr. Anant Patel, has shown our organization. We thank him and wish him the best of luck.

As ACEP15 in Boston is quickly approaching, **NOW** is time to start planning how you are going to make the most of the meeting. One thing you **do not** want to miss is the election of the new board members at the Representative Council. Of course, before your program representative votes, you must meet the candidates and get the inside scoop!

You also don't want to miss the fantastic programming we have this year. Some other quick must-not-misses (in no particular order):

- ✓ **EMRA 20 in 6 Resident Lecture Competition.** The Education Committee's innovative resident lecture competition makes its debut in Boston.
- ✓ **The EMRA Job & Fellowship Fair.** Let's be honest, while we can be EMRA members for life, we can't be residents forever.
- ✓ **EMRA Resident SIMWars**. I have my money on the team from...
- ✓ **Rep Council.** It's not just for elections. This is EMRA's "mini-Congress" in action. We debate policies, resolutions, and this year we are giving you what you want: The committee and division chairs will update you on not only what is hot in EM right now, but also what great programming and opportunities there are for you to take back to your programs. Come out and take part in discussion on topics affecting your organization and your specialty. Make your opinion heard, and represent your program.
- ✓ **The EMRA Party.** EMRA parties are legendary... and I think that is all that needs to be said. ✶

Final Words *continued from page 3*

if you will be comfortable in your practice environment and if your family will be happy with the geographic location. Will you have access to consultants? How easy is it to admit patients? Who does the admit orders? What is the local standard of care, and is the hospital in a notoriously litigious area? What is the turnover rate for docs in the group? In short, it's not all about the money, and in fact, it's not about the money much at all. **Be sure you're looking for a group where the docs are happy and can take good care of patients – if you have those things, most any other challenge can be overcome.**

3. Stay connected with your class.

Your residency classmates are going to be some of your best friends. The bonds you form caring for critically ill patients and experiencing "you-can't-make-this-stuff-up" moments in the ED are priceless. Make the effort to stay connected to your residency classmates, especially after you disperse across the world for jobs post residency. You'll find you're able to help one another in so many ways, from emotional support and inside jokes only those from your residency would get, to future job opportunities. Some of my classmates attended board review courses together, and others still vacation together.

2. Implement a plan to keep learning.

After residency is over, besides the mandatory learning provided through ABEM via LLSA articles, we all need to find a routine that works for us to stay current in our medical knowledge. Each of us has a different style, but whether you choose podcasts, attending conferences, reading journals, or some other way, keep up the routine to remain a lifelong learner. Make a plan and stick to it – you'll be glad you did, because the 10-year Con-Cert exam will be here before you know it!

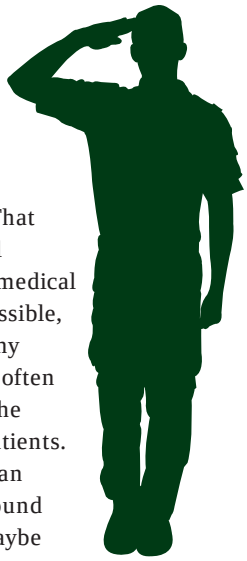
1. Stay involved.

EMRA offers us so many opportunities to be involved in organized medicine as students and residents (and even post residency as EMRA alumni), but beyond EMRA, it is worth the effort to remain engaged with the other professional medical organizations to keep you learning, teaching, and engaged with your professional colleagues. Dr. Nathan Schlicher (past EMRA Board member), told me at my first ACEP Leadership and Advocacy conference, **"Pick a club and join it."** If you're an AMA member through and through, you could be the next Dr. Steve Stack, the first emergency medicine president of the AMA. If you're more focused on EM, be sure to block off time for your state's ACEP conference, and you'll be on your state ACEP board or serving as an ACEP councilor before you know it.

It has been a true privilege and the highlight of my professional career to serve as your EMRA president. I wish you the best in your professional and personal pursuits, and thank you for your commitment to EMRA. ✶

Have your own tips to share? Tweet them to us @emresidents and @matthewprudy.

OUR CALL TO DUTY



As a young man I was a Boy Scout – khaki shirt, shoulder sash, merit badges, and all. Like all of the other boys in my troop, I used to stand at attention and recite the Scout oath and law. We would swear on our honor to do our duty to God and country, and to obey the scout law – to be trustworthy, loyal, helpful, friendly, courteous, kind, brave, and clean. We promised to help other people at all times, and to keep ourselves physically strong, mentally awake, and morally straight. "Be prepared" was our motto. Perhaps then it seemed to be a bit platitudinous, but today I realize those words worked on us as young men to found a basis for a life of service to others.

Today I realize **being an ER doc is not so far from being a Boy Scout**. Like the scout motto, we're always prepared; we often rely on ingenuity, and every once in a while we have to be able to properly put out a fire. But scouting extrapolates even further – like Boy Scouts, we too take an oath. We promise on our honor to do our best and to do our duty to our patients. We promise to help other people at all times, and we are obligated to keep ourselves mentally awake and morally straight. As physicians we should be framing our activities based on virtues like being friendly, helpful, kind, and trustworthy. **But, above all, we should value our charity and service.**

Nowhere else is that charge more prominent than in the emergency department – here we feel the burden of population medicine weighing upon us. Here **our hands form society's medical safety net**. While that brings many frustrations, it also brings great opportunity to serve. That service can extend well beyond the bounds of medical care, and whenever possible, it should. More than any other specialty, we are often very acutely aware of the unique needs of our patients. The homeless gentleman might need chronic wound care, but right now, maybe what he really needs is a warm place to stay and something to eat. When we can fix those things, then we should. Because no other physician group will.

The author as a Boy Scout, age 14.

Despite the opportunity for uplifting interventions that surround us every day, the emergency department can feel like a double-edged sword. Being so repeatedly reminded of what it's really like out there, it becomes easy to get jaded. Why should we care for that next drug overdose? Why should we be worried about chronic pain? Why should we help those who won't help themselves? **It's easy to blow those patients out the door, not often so much because they're medically simple, but because we don't feel morally invested.** We can be quick to hit that disposition button, though it's important that we remember that a disposition is intended to be for the patient's benefit, and not for ours. Clearing out a bed for any reason other than "I'm doing the best I can for this patient at this time" is the wrong way to do it.

We seemingly get benefit from our rapid redistribution of suffering. The more patients you see often translates to a higher reimbursement, more respect, or a better review with your chairman. In the end, though, none of those things matter if we aren't doing right by our patients. That doesn't mean we dole out morphine drips just to boost our Press-Ganeys, but it does mean that the "I don't know, but you ain't dying" mentality may not always be the best one. We're all guilty of that approach, and I know I am. It's easy to slip into robot mode and start churning people through one door and out another, but taking just enough time with each encounter to evaluate our motives behind each patient care decision can be revealing of our own thought processes. **It's called patient care because we should – we should CARE.** When we don't, that's when we make the gravest error as physicians.

For the most part, our mistakes are usually just human in nature, but when we find ourselves wanting for compassion, it can be easy to feel that maybe a career in a different field may have been a better choice. At some point we all doubt ourselves, sometimes for any variety of reasons, but **ultimately we all made the same decision – that we would give our efforts to help other people, because in the whole world, that's the one thing that matters more than anything else**. When we're dead no one is going to care that we made enough money to call ourselves "upper middle class" or that we attended the most prestigious of institutions. Our legacy is made through our acts, and no acts are stronger than those of compassion.

All of our patients need help. It doesn't matter who they are, who we are, or what the circumstances might be, **we just need to do the right thing**. Let us be the mark of humanism amongst the world's inhumanity. Let us be the ones who advocate for those who cannot. **Let us be the ones who do our duty.** ✶

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Editor-in-Chief, *EM Resident*
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Jordan Celeste, MD
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Florida Emergency Physicians
Orlando, FL

Strength in Our Numbers

Fiscal Year 2014-2015 (FY14-15) has been yet another success for EMRA. Our continued growth in terms of membership, member benefits, and financial standing is a true testament to the committed member base, the dedicated leadership, and the outstanding staff that EMRA is privileged to call its own.

Membership

Our membership numbers have reached an all-time high, with FY14-15 reflecting significant growth in almost every category. EMRA plans to focus on recruiting more fellow members, with an aim to provide services and benefits to suit their unique needs.

Membership is not reflected simply by the numbers, though. EMRA is extremely fortunate to have an engaged member base, with leaders serving at every level. As board members, we dedicate a large amount of our time in training to this organization. However, our committee and division leaders, our authors and contributors, our liaisons to ACEP and other external organizations, as well as many others, have all given of their time and talent to make EMRA what it is today.

Member Benefits

This past year saw the launch of many new member benefits, including HippoEM and *Basics of EM: Pediatrics*. And work has been underway for the upcoming revamped editions of the *EMRA Advocacy Handbook* as well as the *Medical Student Survival Guide*. And **keep your eyes open for new publications coming soon to the EMRA library**.

EMRA also continues to have a strong working relationship with ACEP, which is leading to new benefits as well. This year ACEP and EMRA are working together to encourage members to upload information into their ACEP Portfolio Tracker, which will provide easy access to essential personal information when you apply for licensing and jobs. And since ACEP will be moving into a new headquarters building next year, EMRA will also be moving on up!

Financial Standing

Over the past fiscal year, **EMRA's member equity has continued to grow — now totaling over $3.7 million**. Having such a strong financial footing allows our organization to offer the benefits outlined previously, to get creative during strategic planning, and to explore new ideas as well.

Financial success also allows for donations directed at improving emergency care across the nation and the world. **EMRA has again donated to the Emergency Medicine Action Fund (EMAF),** which focuses on regulatory advocacy. Following the implementation of the Affordable Care Act, this has become more important than ever as we all realize that the devil is truly in the regulatory details when it comes to legislation.

EMRA also continues to significantly donate to the Emergency Medicine Foundation (EMF), which has awarded more than $12 million in research grants since its inception in 1972. These grants are directed at developing emergency medicine researchers, as well as improving patient care and developing meaningful health policy initiatives.

It is important to note the tremendous working relationship that EMRA has with both of these organizations. Since we have seats on both boards, we are able to contribute to conversation and ensure that our dollars are doing the most good.

EMRA Finance Committee

I had the honor of serving as the chair of the EMRA Finance Committee this past year. In only its second year of existence, the committee has already achieved great success by focusing on a balanced budget, reviewing EMRA's investments, and tightening internal policies. A more structured approach to our finances is allowing for informed and responsible growth as an organization.

Looking at how EMRA has grown, it is absolutely amazing that we accomplish so much with only 4.5 full-time staff members. Their hard work, long hours, and genuine care and concern for EMRA reflects the importance of our mission – and it is also one of the main reasons for that we are able to fulfill it.

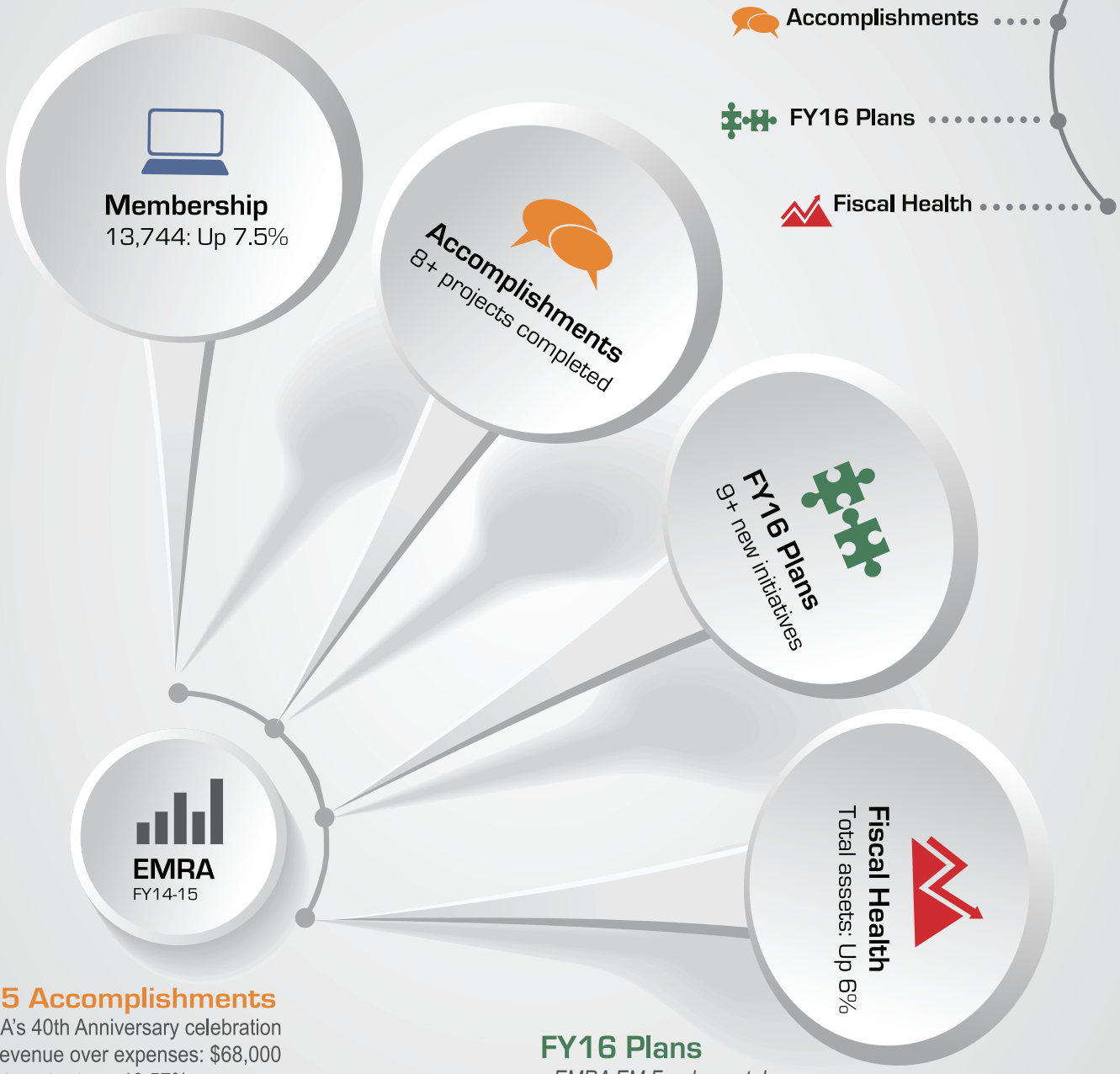
EMRA continues to expand its numbers and influence, due to your support and ideas. As we grow, we will continue to seek new ways to serve you and the community of emergency medicine. ✶

EMRA plans to focus on recruiting more fellow members, with an aim to provide services and benefits to suit their unique needs.

EMRA FY14-15 Membership Report

EMRA is pleased to report strong membership, solid financial health, and strategic progress in FY14-15, thanks to your participation!

Membership
Accomplishments
FY16 Plans
Fiscal Health



FY15 Accomplishments

- EMRA's 40th Anniversary celebration
- Net revenue over expenses: $68,000
- Investment return: 10.57%
- *EMRA Antibiotic Guide* and app
- *EMRA PressorDex* and app
- *Basics of EM: Pediatrics*
- *Peds Meds* app
- *Patient Presentations in the ED* video
- New benefits: HippoEM, EMedHome and more!
- Resident and medical student programming at:
  - ACEP14 & ACEP Leadership and Advocacy Conference
  - 2 Medical Student Symposia

FY16 Plans

- *EMRA EM Fundamentals: The Essential Handbook for Emergency Medicine Residents*
- *EMRA and AIRWAY•CAM Fundamentals of Airway Management*
- *EMRA Medical Student Survival Guide*
- *EMRA Advocacy Handbook, 4th Ed.*
- EMS Handbook
- Newly improved EMRA Match and EMRA.org
- EMRA 20 in 6 Resident Lecture Competition
- Provide *Best Evidence in Emergency Medicine*

DISPELLING THE Myths

The Graduate Medical Education Merger

This is a confusing time in the world of graduate medical education. The recent Memorandum of Understanding that will merge the American Osteopathic Association (AOA) and the Accreditation Council of Graduate Medical Education (ACGME) to one single accreditation system (SAS) has created a lot of turmoil in the minds of many residents seeking to become experts in emergency medicine. As the elected voice of emergency medicine residents, we felt it important to join together with a unified voice to provide some insight into what we know in an attempt to dispel some of the most prominent rumors about the merger.

Leonard Stallings, MD
EMRA RRC-EM Representative
East Carolina University
Brody School of Medicine
Greenville, NC

Andrew G. Little, DO
ACOEP Resident Chapter President
Ohio University Heritage
College of Osteopathic Medicine
Doctors Hospital
Athens, OH

MYTH 1.
My entire program leadership, including the program director (PD), will change when the AOA and ACGME merge.

The ACGME Review Committee for Emergency Medicine (RC-EM) has announced they will equally consider AOA certification as one of the criteria to meet the qualifications for an EM program director.[1-3]

MYTH 2.
My program will close when we undergo the ACGME accreditation process, and I won't be able to take the boards when I graduate.

Current AOA accredited programs will not automatically close during the ACGME accreditation process. These programs will maintain their AOA accreditation status until either ACGME accreditation is achieved or until June 30, 2020.

The SAS will not affect board eligibility. Osteopathic certification exams will be recognized by the ACGME as valid and appropriate credentials for service as faculty members in ACGME training programs. No MD or DO will be required to take either certification exam; both certifications will be available to DOs who graduate from an ACGME accredited program. All DO residents will be encouraged to take osteopathic certification exams to demonstrate their competency in osteopathic principles and practices within the specialty.

Under the current American Board of Emergency Medicine (ABEM) rules, a physician must have completed an ACGME accredited residency to be eligible for ABEM board certification. When an AOA program applies for ACGME accreditation it is given a "pre-accreditation" status, which signifies that an AOA accredited program is in the process of pursuing initial accreditation with the ACGME while still operating under its AOA accreditation. Our understanding is that a program's pre-accreditation status – which in many cases will qualify DO residents in that program for advanced ACGME residencies and fellowships — will not change a DO physician's eligibility for AOBEM board certification.[4] ABEM certification will be available to program graduates once the ACGME confers initial accreditation upon the AOA program, even if it is conferred on the last day of residency.[5] Initial accreditation is the status that is achieved once an AOA program is ACGME accredited.

MYTH 3.
My AOA EM program will have to close with the ACGME merger.

All osteopathic EM programs must seek ACGME accreditation before June 30, 2020 (after this date the AOA will no longer accredit GME programs) or face closure. Each program will have to meet the standards as determined by the RC-EM. Though there are some differences in the current ACGME EM standards and AOBEM standards, osteopathic EM programs are held to high standards that are similar to those of ACGME. **We are hopeful that all osteopathic programs will be able to obtain ACGME accreditation if pursued.**

To answer the direct question of whether a specific program will close, this will depend on the sponsoring institution's desire to continue educating EM residents. We encourage our members to direct this question directly to their sponsoring institution's graduate medical education department chairs.[6-7]

MYTH 4.
As an osteopathic medical student interested in EM, I will still have to apply to two distinct matches even after the merger.

The ACGME does not administer the allopathic MD match; rather, that is administered by the National Residency Match Program (NRMP) and the osteopathic match by the National Matching Services (NMS). Consequently, **this is an issue that can be resolved only when the NRMP and NMS join in the merger discussions**. However, if all programs are considered ACGME-accredited after the transition to a single GME system is complete, it is likely there ultimately will be one match. During the transition, as AOA programs get approved by the ACGME, there will likely be conversations with the NRMP and the NMS to determine the best way to administer the match during the transition process.[8] Unfortunately, this issue cannot yet be easily clarified, so there is no way to fully address this myth at this time.

MYTH 5.
As an allopathic medical student I will have more competition for the allopathic spots, but I still will not be able to apply to the osteopathic programs even after the merger.

Once the transition to a single GME accreditation system is complete, all DOs and MDs will have access to ACGME-accredited training programs, including those with an osteopathic principles dimension. However, there is no specific date when osteopathic-focused programs must begin accepting MD candidates. Prerequisite competencies and a recommended program of training are expected to be required for MDs to enter osteopathic-focused programs, though this has not been confirmed. The newly formed Osteopathic Principles Committee of the ACGME will develop the prerequisites and prior training requirements. **MDs will not be able to enter osteopathic-focused training programs until standards for these programs have been developed and that individual program has become ACGME-accredited.**[3]

MYTH 6.
If I graduate from an AOA residency program then I will not be eligible for an ABEM-sponsored subspecialty fellowship.

Nothing stops an AOA graduate from matriculating into an ABEM sponsored fellowship if the program leadership deems him/her a desirable candidate. However, at this time you will not be able to sit for the ABEM subspecialty fellowship boards if you are not ABEM certified.

The current policy of the American Board of Medical Specialties (ABMS) is such that an AOA residency graduate who is not certified by one of the member specialties (e.g., ABEM) cannot become certified in an ABMS subspecialty even with completion of an eligible fellowship. Unfortunately, at this time graduating from an AOA accredited fellowship program will not result in ABEM subspecialty certification.[5]

In order to sit for an ABEM subspecialty examination for certification, an AOA graduate would have to complete a residency program that has been given ACGME initial certification, become board certified by ABEM, complete an ABEM-sponsored fellowship program, and successfully pass that examination. The designation of "pre-accreditation status" is an ACGME designation that the ABMS does not recognize in this context. Graduates from osteopathic programs who are AOBEM certified and complete an ABEM fellowship may apply for a certificate of added qualification (CAQ) through AOBEM (visit aobem.org for more information).

The merger process will be ongoing until July 1, 2020, and as new information becomes available, the facts will be distributed. If at any time you have questions or concerns, please feel free to contact your representatives from EMRA and the ACOEP-RC by tweeting your questions to @emresidents or @ACOEPRC. You can also email the EMRA RRC-EM Representative at rrcemrep@emra.org.

Special thanks to Jan Wachtler, CSA, ACOEP Executive Director; Ashley Guthrie, DO, EM resident St. Joseph's Regional Medical Center, EMRA Member-at-Large; Drew Kalnow, DO, EM resident Doctors Hospital, ACOEP Treasurer. ✶

The recent Memorandum of Understanding that will merge the American Osteopathic Association (AOA) and the Accreditation Council of Graduate Medical Education (ACGME) to one single accreditation system (SAS) has created a lot of turmoil in the minds of many residents seeking to become experts in emergency medicine.

Zach Jarou, MD
EMRA Membership Development Coordinator
Denver Health/
University of Colorado
Denver, CO

ACEP's Local Benefit

ACEP CHAPTER OPPORTUNITIES FOR RESIDENTS AND STUDENTS

When you joined EMRA and ACEP, did you know that you also became a member of a third organization? There are 53 ACEP chapters, representing each state, as well as Government Services, the District of Columbia, and Puerto Rico (http://www.acep.org/chapters).

In addition to the numerous educational, networking, leadership, and award opportunities provided by EMRA and ACEP, in most cases residents and students are also welcome to become more involved on a local level through their ACEP chapter.

A recent survey distributed by ACEP's National/Chapter Relations Committee sought to determine what methods are currently being practiced by ACEP chapters to increase resident and student engagement. Of the 45 ACEP chapters that have resident members, 43 responded.

Residents and Students as ACEP Chapter Board Members (Table 1)

The majority of ACEP chapters that responded encourage resident participation on their boards of directors. Three-quarters (77%) of chapters allow residents to serve as voting members of the board, while another 12% appoint residents in a non-voting capacity. Many chapters have opportunities for more than one resident representative on their board, and the most inclusive chapters attempt to have representation from each residency program in their state. Texas and Iowa take their level of engagement to the next level by inviting medical students to serve as board members.

Residents as ACEP Councilors

One-third (35%) of ACEP chapters allow residents to serve as either full or alternate ACEP councilors. Five chapters (California, Michigan, New York, North Carolina, and Pennsylvania) permit residents to serve as full delegates to the ACEP Council, while another 10 chapters (Alabama, Colorado, Delaware, Government Services, Massachusetts, Missouri, New Mexico, Ohio, Texas, and Washington) allow residents to serve as alternate delegates. The number and availability of these positions fluctuates based upon resident interest. If it interests you, let your chapter leadership know!

Other Means of Resident/Student Engagement (Figure 1)

In addition to opportunities to serve on the board or as an ACEP Council delegate, there are a number of other ways that ACEP chapters are engaging physicians-in-training, including:

- Travel grants to ACEP's annual Legislative Advocacy Conference and Leadership Summit;
- Resident- and student-specific programming, either in combination with the chapter's annual meeting or as stand-alone events;
- Chapter-level awards for outstanding resident and student members;
- Student/resident research grants.

Areas for Future Research

While the results of the 2015 ACEP chapter survey provide a brief overview of some of the many ways in which students and residents are being engaged locally, there are still a few engagement areas that were not captured and should be investigated in the future.

In terms of measuring student engagement, the current survey identified two states that appoint medical students to their ACEP chapter boards of directors. While this is an important way of recognizing the contribution of a few outstanding students who will undoubtedly serve as future leaders in emergency medicine, it does not capture the engagement of EM-bound students as a whole. Quantifying the existence of state- and chapter-wide medical student committees with student representation from each school, like those that have been implemented in Texas and Michigan, as well as identifying chapters that make annual visits to all of the EMIGs that comprise their current/potential members, are other important metrics for student engagement that should be tracked going forward.

Another important area to study is the transition from resident to attending physician. This is a crucial period for retention in membership organizations. Many ACEP chapters have implemented leadership development programs for recent residency graduates that provide mentorship by experienced chapter and national leaders and allow selected participants to become involved with ACEP in a guided but accelerated pace. The composition of these programs varies greatly, and capturing the collective experiences of chapters that have successfully implemented these programs would likely be beneficial to chapters considering starting programs of their own. ✶

FIGURE 1. Other Means of Resident/Student Engagement

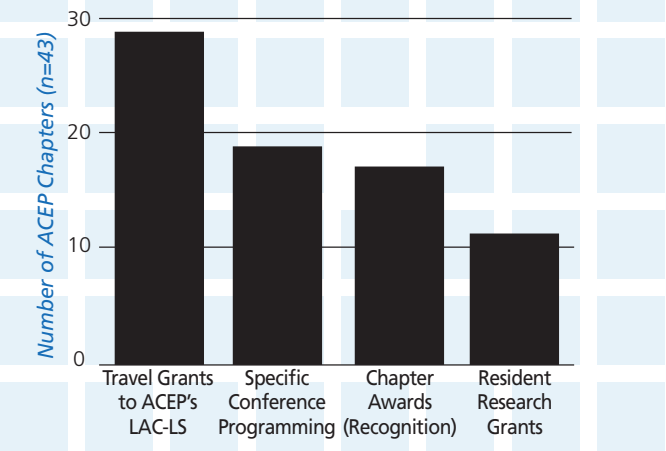


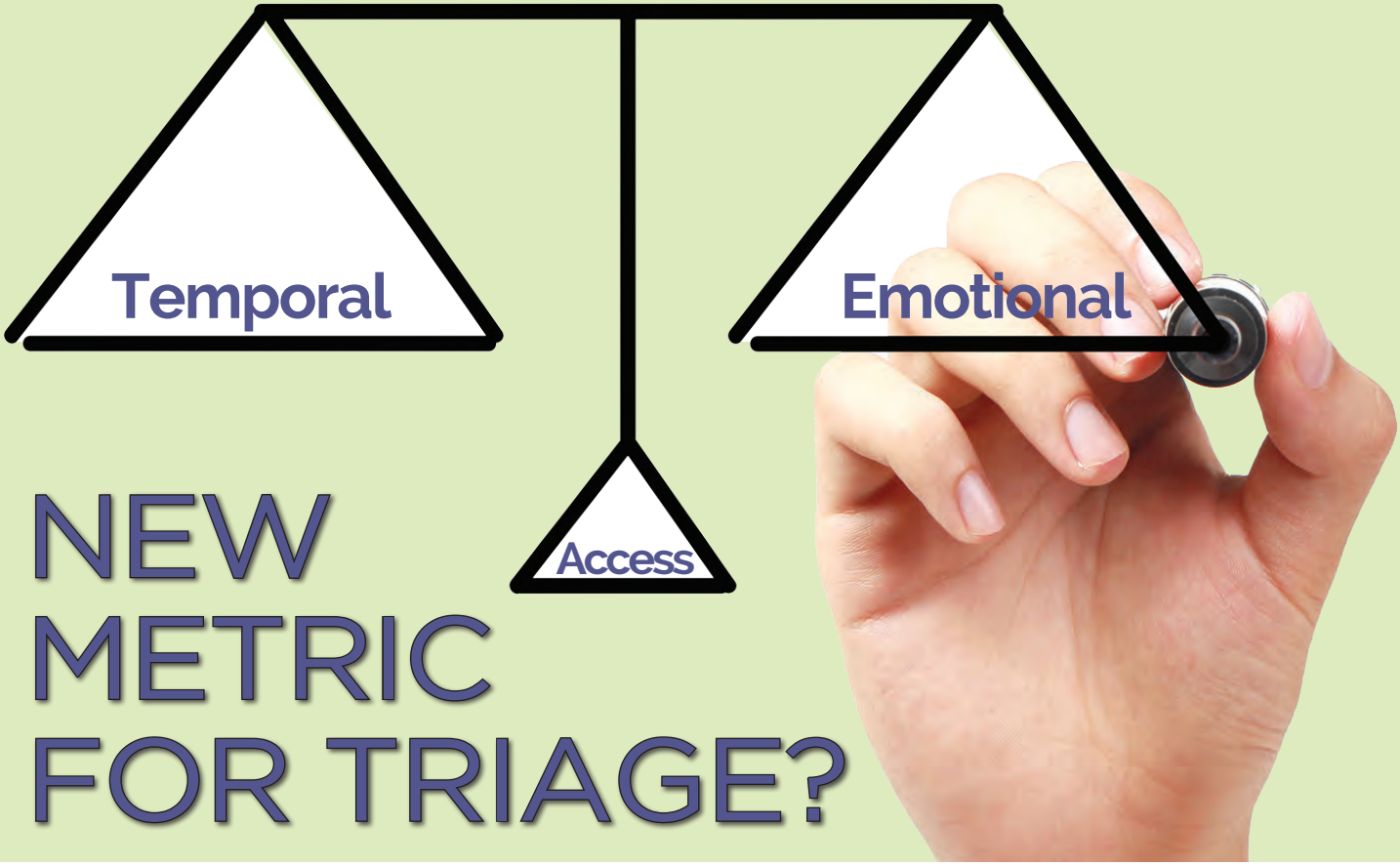
TABLE 1. Summary of Opportunities by ACEP Chapter

CHAPTER	Resident or Student on Chapter Board of Directors*	Resident (Alternate) Delegate to ACEP Council**	Student or Resident Specific Conference Programming	Resident or Student Research Grants?	Resident or Student Chapter Awards?	Resident or Student LAC Travel Grants?
Alabama	NV	AD	Yes	No	Yes	Yes
Arkansas	NV	No	No	Yes	Yes	Yes
Arizona	Yes	No	No	Yes	No	Yes
California	Yes	D + AD	Yes	No	Yes	Yes
Colorado	Yes	AD	No	Yes	No	Yes
Connecticut	No	No	Yes	Yes	Yes	Yes
Delaware	Yes	AD	No	No	No	Yes
District of Columbia	Yes	No	No	No	No	No
Florida	Yes	No	Yes	Yes	No	No
Georgia	Yes	No	Yes	No	Yes	No
Government Services	Yes	AD	Yes	Yes	Yes	Yes
Illinois	Yes	No	Yes	No	No	No
Indiana	Yes	No	Yes	No	No	Yes
Iowa	Yes + Stu	No	No	No	No	Yes
Kansas	Yes	No	No	No	No	No
Kentucky	NV	No	No	No	No	Yes
Louisiana	Yes	No	No	No	No	Yes
Maine	NV	No	No	No	No	Yes
Maryland	Yes	No	No	No	No	No
Massachusetts	Yes	AD	Yes	Yes	Yes	Yes
Michigan	Yes	D + AD	Yes	No	Yes	Yes
Minnesota	Yes	No	No	No	No	Yes
Missouri	Yes	AD	No	Yes	Yes	Yes
Nebraska	Yes	No	No	No	No	Yes
Nevada	No	No	No	No	No	Yes
New Hampshire	Yes	No	No	No	Yes	No
New Jersey	NV	No	Yes	No	Yes	No
New Mexico	No	AD	Yes	Yes	No	Yes
New York	Yes	D + AD	No	No	Yes	Yes
North Carolina	Yes	D + AD	Yes	No	Yes	No
Ohio	Yes	AD	Yes	No	No	No
Oklahoma	Yes	No	No	No	Yes	No
Oregon	Yes	No	No	Yes	No	Yes
Pennsylvania	Yes	D + AD	Yes	No	No	Yes
Rhode Island	Yes	No	No	No	No	Yes
South Carolina	NV	No	Yes	No	Yes	Yes
Tennessee	Yes	No	No	No	No	Yes
Texas	Yes + Stu	AD	Yes	Yes	Yes	No
Utah	Yes	No	No	No	No	Yes
Virginia	Yes	No	Yes	No	No	Yes
Washington	NV	AD	No	No	No	Yes
West Virginia	Yes	No	Yes	No	Yes	No
Wisconsin	Yes	No	No	No	No	Yes

**Yes + Stu = Voting Resident + Student; Yes = Voting Resident; NV = Non-Voting Resident*

***D + AD = Full or Alternate Delegate; AD = Alternate Delegate Only*

Two chapters (Mississippi and Puerto Rico) did not respond.



NEW METRIC FOR TRIAGE?

Collecting Better Data for Better Care

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As new interns embark on the path towards becoming EM physicians, many may be surprised (and sometimes frustrated) to realize the sheer volume of patients who may not meet any criteria for urgency in their visits. Now, in my third year of residency, I think I've heard it all when it comes to making sense of this national dilemma. And much of it comes down to access: Non-emergent patients turn to the ED when they don't have any other access to a doctor at the time, place, and cost that suits their socio-economic status.

Besides access, education and emotion both play a role in a patient's decision to visit the ED. Often intertwined, both speak to a particular culture that is reinforced in the dramatization of health. An example might be the person who comes because their friend or relative has a serious condition and it began in very much the same way as they are now perceiving their own symptoms. Probably the most frustrating for residents is the otherwise asymptomatic, first-trimester vaginal spotters. With the rate of ectopic pregnancies being so low and the rate of this particular symptom being so high, the extent to which we work up these patients can become an acute point of frustration.

Finally, we have what I like to think of as our public service patients: those who show up for a warm or cool place to stay for a few hours, perhaps a meal, and even perhaps a fix. These patients have found a second home in our always-open department. Eventually, one may come to appreciate them perhaps for the mere fact that they're the only population of patients in the ED more than you. In this group, I may also count the patients who are ushered to the ED for an inpatient admission without any need for ED stabilization. The downstream systemic effects of what appear on the surface to be benign practices can be crippling.

Interestingly, rationales may be perceived differently by providers on this issue. On the provider side, we have recognized that the patient who doesn't necessarily need to be in the emergency department receives sub-optimal care (e.g. a battery of tests for the most dangerous things without ever resolving the actual thing) and yet we never turn away a patient. Even the semblance of turning away a patient by doing something simple like adding an expected wait time

is sometimes frowned upon. The reason often cited by providers and ED administrators is EMTALA and medical malpractice liability. There are a number of ways to dissect this issue further, and many smarter people have. Especially as a trainee, the fact of the matter is that any judgment on our part on the validity of the emergent nature of a visit may bias our medical decision-making and lead to misses. When patients step into the ED, for better or for worse, we are there for all of them.

Patients continue to turn to the ED even when they recognize their symptoms do not constitute a medical emergency. Though we know it's a problem, we, as a community, lack data that can help clarify this issue. We know the ED is a safety net for all people and outpatient health care is a complex beast that stumps even the educated. In this day and age, we should have better data on the exact percentage of visits that are deemed to be appropriate for an ED visit versus those that would be more appropriate in an outpatient setting. In addition, we should be able to identify and quantify why this misstep happened.

The Emergency Severity Index (ESI) is a tool that is currently used to classify patient visits by disease and resource intensity in almost all EDs in the country. It resembles a medical evaluation, which is characteristically apart from the actual distinguishing factors that separate emergent from non-emergent visits. We know all these patients need a doctor, and sometimes they may need a lot of resources, but in my experience, the young "chest pain for many months" patient can get classified to be more appropriate of an ED visit than a suspected broken bone.

A new classification system or metric is in order that can help further our knowledge in this area and advocate for our patients more effectively. Realizing that reasons why patients with non-emergent symptoms come to the ED are actually secondary to socio-economic, educational, or emotional reasons, **I propose the new new metric displayed below**.

How would this help?

Ideally, we would have a more quantitative and specific way to detail the degree to which we serve as a safety net for America. Sometimes, I find myself wondering what our departments would be like if we only saw the true emergency cases. Would our patients get better, less rushed care? Would our decision making criterion become more sensitive and specific? Would our patient satisfaction improve? Would our number of misses and near misses decrease? If we get any closer to any of these goals, then I believe it will be worthwhile. ✶

Non-emergent patients turn to the ED when they don't have any other access to a doctor at the time, place, and cost that suits their socio-economic status.

PROPOSED NEW METRIC

Temporal Questions	Emotional Questions	Access Questions
3 points related to the temporal nature of the issue:	3 points related to the emotional component of the patient's symptoms:	3 points related to the economic component of the patient's symptoms:
0 → I've had this problem for a few months and/or there is no change or anticipated change in my symptoms.	**0** → I have no fear that this issue will cause any immediate threat to my health, and I might have waited a week to be seen if I could get an appointment.	**0** → I do not have a doctor or cannot go to a doctor because I have no mode of transportation, or no time to get there, or I don't have money to go to an office doctor.
1 → I've had this problem for a few weeks and/or it just began to change slightly.	**1** → I fear that this issue will lead to a bigger issue if I don't get treatment in the next few days.	**1** → I have a doctor but I cannot get an appointment when needed (including after business hours) or I cannot get transportation when needed.
2 → I started having this problem in the last few days and/or it has begun to evolve.	**2** → I fear for a lengthy illness if I don't get treatment in the next few hours.	**2** → I have a doctor but he or she is on vacation or otherwise temporarily unavailable.
3 → I just began having this problem and/or I believe this problem is evolving rapidly.	**3** → I fear for my (or my dependent's) life if I don't get treatment within the next few hours.	**3** → I have a full set of doctors whom I can see as needed.

Min score: 0, Max score: 9

To protect from the unintentional consequences, it could be immediately anonymized and remain hidden from the patient's chart.

PHOTO CONTEST

Thank you to everyone who submitted photos! The full series of entries can be found on emresident.org.

EMRA is pleased to recognize the winners of our seventh annual EMRA Photo Contest. Competition was fierce, with high-quality images from dozens of residents. Our panel of judges – including a winner from the first-ever EMRA Photo Contest – debated (and didn't always agree).

SPORTS/EVENTS WINNER
Climb On
Ms. Hannah Wolsiefer-Leak, IUSM

NATURE AND WILDLIFE WINNER
Nepal @ 17560
Ms. Hannah Wolsiefer-Leak
IUSM

SPORTS/EVENTS RUNNER-UP
Dreamdecay
Scott Beaudoin, MD
Temple University Hospital

NATURE AND WILDLIFE RUNNER-UP
Out of the Sun
Shane R. Sergent, DO
Conemaugh Memorial Hospital

MISCELLANEOUS RUNNER-UP
Full Moon Rising
Matthew Dolan, MD
Yale-New Haven Hospital

MISCELLANEOUS WINNER
Ember Trails
Matthew Dolan, MD
Yale-New Haven Hospital

TRAVEL AND LANDSCAPES WINNER
Bursting into Life
Daniel Ting, MD
University of British Columbia

TRAVEL AND LANDSCAPES RUNNER-UP
Lakeside Village
Meena Subramanian, MD
University of Nevada SOM-Las Vegas

TRAVEL AND LANDSCAPES RUNNER-UP
Panamint Valley
Scott Beaudoin, MD
Temple University Hospital

ON-THE-JOB WINNER
Learning to Listen
Mr. Jacob Turnbull, West Virginia
School of Osteopathic Medicine

ART PHOTGRAPHY WINNER
Flow
Matthew Dolan, MD
Yale-New Haven Hospital

ART PHOTOGRAPHY RUNNER-UP
Phoenix
Rachel Solnick, MD, Yale

PEDS SORTING IT OUT EM

The Options for Training in Pediatric Emergency Medicine

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Emergency Medicine-Pediatrics
Combined Residency
University of Maryland
Baltimore, MD

Ashley Strobel, MD
Assistant Professor of EM
Hennepin County Medical Center
University of Minnesota Masonic
Children's Hospital
Minneapolis, MN

Do you remember the "sorting hat" from *Harry Potter*? Plop it down on the noggin of an aspiring young student, and it mumbles and grumbles in consideration before triumphantly announcing the house that best fits the student's personality. Recently, we happened to have a slow day on a pediatric ward service, and our team took the "Sorting Hat Quiz" online. (Come on, what do you expect? *It's peds.*) Being a combined EM/peds resident, it made some sense that my sorting hat split me between two houses. The "hybrid" resident is fairly common in my institution, but for many it's a foreign idea. Those individuals considering a career in pediatric emergency medicine may have a hard time sorting out their future. There is more than one pathway to get there, but not everyone knows the options.

It only takes one scary encounter with a pediatric patient to help us remember why there is a need for pediatric emergency specialists – the American College of Emergency Physicians (ACEP) and the American Academy of Pediatrics (AAP) agree. **Pediatric training really does make a difference for these patients.** Currently, there are three recognized routes to this specialty:

1) Pediatric residency, followed by a pediatric emergency medicine (PEM) fellowship;

2) EM residency, followed by a PEM fellowship;
3) EM/peds combined residency.

The first two result in *pediatric emergency medicine sub-board eligibility*, whereas an EM/peds combined residency results in *double-board eligibility*.

Why consider combined training over a fellowship route? The overall number of combined training programs is on the rise. Many know about EM/IM and med/peds, but there are many others, including EM/FM and pediatrics/adult/adolescent psychiatry. Currently there are four existing EM/peds residencies: Indiana University, University of Maryland, University of Arizona, and Louisiana State University. Each program typically accepts 2-3 residents per year who commit to 5 years of training. Though the curricula vary slightly between programs, residents typically alternate EM and pediatric clinical duties every few months in such a way that they do not miss the seasonal variations inherent in some illnesses. In so doing, it is possible to rotate through extremes of training in the same season – think newborn nursery to adult multi-trauma. In fact, **the constant variation in training experiences is one of the largest assets of this type of program**; practice style develops from EM and pediatrics synchronously, rather than in tandem.

EM/peds combined trainees appreciate the importance of participating in continuity clinic alongside their categorical pediatric colleagues. Parents often bring their children to the emergency department for non-emergent conditions and for treatment of primary care complaints. Having a half-decade to be the primary care pediatrician for a subset of children has the benefit of reinforcing fundamentals of normal growth and development. Training in this way helps with recognition of subtle abnormal findings that might otherwise be missed in the ED, carrying massive implications for those children lost to care by their primary care doctors. Furthermore, **primary care time teaches residents how to navigate the sea of resources from community, state, and federal agencies**.

In addition to the MICU and SICU/trauma ICU experience of categorical EM residents, EM/peds residents spend several months in the NICU and PICU settings. They gain extra proficiency in managing the unstable pediatric population, including the ever-feared ex-premie or complex congenital disease patient.

EM/peds graduates are board-eligible in *both* emergency medicine and pediatrics, but what do they do with that? A recent survey of EM/peds graduates provides some insights.[1] The respondents were dispersed across 20 states. They work in community EDs, freestanding children's hospitals, and in community settings. Interestingly, many graduates have filled administrative positions in their respective practices. Similar to EM residents who elect to do a PEM fellowship, EM/peds graduates note that the two additional years of *trainee* income is a drawback compared to their colleagues who moved on from categorical training to *attending* salaries. In the end, 91% reported having a salary at the same level as their emergency medicine colleagues. Nearly 90% of graduates responded their combined training was an asset to their job search and ultimate career satisfaction. Most cited broader career options, excellent training, and unique versatility as assets of their combined background. Respondents reported using ultrasound in their adult *and* pediatric practice. **EM/peds graduates can assist in achieving the goal of great pediatric care no matter location, time of day, or hospital.**

It only takes one scary encounter with a pediatric patient to help us remember why there is a need for pediatric emergency specialists.

So, what if you are a student who loves emergency medicine... but you think adults are stinky? What if you love pediatrics but would rather be tortured by "dementors" than go to a primary care clinic? Maybe you are an EM resident who just particularly enjoys playing with bubbles at work. The PEM fellowship route is a wonderful fit! Less focus on primary care means more time in the emergency department. Many PEM fellowships allow EM-trained fellows to moonlight to provide an income similar to their graduated colleagues. **Unfortunately, as of 2000, the number of PEM fellowship slots filled by EM residents has continued to decline.** Per the study by Murray, et al in 2007, the number of PEM fellows with an EM background as their primary training was only about 5%.[2,3] Pairing a categorical pediatric or EM residency with the reciprocal PEM fellowship takes 5-6 years but has the benefit of PEM sub-board certification. EM/peds combined graduates are *not* PEM eligible since 1998.

In fact, in the same EM/peds graduate survey, the most commonly reported shortcoming of combined training was ineligibility for the PEM sub-board certification.[1] The lack of this designation was *perceived* to be a detriment to securing academic positions in dedicated children's hospitals by 81% of graduates. It is noted that only a fourth of the same respondents actually worked in freestanding children's hospitals, and only 8% felt a freestanding children's hospital was the ideal work setting for them. Conversely, Althouse and Stockman reported that almost 80% of surveyed PEM physicians certified by the ABP plan to practice exclusively in an academic setting, and that 3% practice in a rural setting.[4]

The life of a medical student might be easier if we could add a "sorting hat ceremony," especially for those considering emergency or pediatrics. Medical students know that categorically-trained pediatricians and emergency docs are more than capable of providing excellent care to children, but for those who want to *specialize* in the emergent care of children, hopefully these mumblings and grumblings help them find the house that is right for them. Of course, which house just depends on who *they are* and what *they want*. Good luck sorting that out.

If you're interested in further pediatric emergency medicine knowledge or training tracks, please see the EMRA PEM Division page for PEM blogs, twitter handles, and faculty mentorship match to help "sort" into which house you belong. ✶

Saying Yes to NO

Nitrous Oxide for Pediatric Sedation

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In the emergency department, we perform minor surgical procedures and invasive tests on children every day. Intravenous procedural sedation is often used to facilitate these procedures and needed studies. Every sedative medication has the potential to result in loss of airway protection, cardiopulmonary compromise, and all except intranasal medications require the added trauma of using a needle in an already terrified, apprehensive, and often screaming child. **Nitrous oxide administration is a reasonable alternative.** Nitrous oxide (NO) has been used for decades in pediatric dentistry, and is largely viewed as effective and safe.[1] It is an odorless, tasteless gas that produces dissociative euphoria and results in amnesia and analgesia appropriate for performing minor emergency procedures in children.[2]

Efficacy

When nitrous oxide is inhaled at levels below 50%, patients maintain airway protective reflexes and do not require fasting or post-procedure monitoring.[3] This is in contrast to sedatives such as propofol or ketamine, which provide much deeper sedation, and require post-procedural monitoring. Typically a mask with a good seal is initiated at 30% nitrous/70% oxygen, and increased to 50% nitrous/50% oxygen until effective. Nitrous oxide reaches equilibrium in the brain within minutes and provides its peak effect at approximately 5 minutes from the start of administration.[4] Due to the low blood-gas solubility coefficient of nitrous, it also has a quick offset within 4-5 minutes from removal.[4,5] **Compared to propofol, nitrous has similar clearance after administration, but has the additional benefit of not producing respiratory depression** (see Table 1).[4-6] This makes it a very attractive agent for use in the emergency department. Its primary advantages over other agents include its quick on and off sedation and that it does not require an IV.

Some studies have shown that **nitrous alone is not adequate for analgesia**, but should primarily be used as an anxiolytic. It is best used in conjunction with local analgesia such as nerve blocks or local lidocaine infiltration for laceration repair.[3] In the right patient, it is an appropriate form of sedation for procedures including peripheral IV insertion, lumbar punctures, laceration repair, incision and drainage, reduction and splinting of fractures, among others.

Adverse Effects

In general, nitrous oxide is well tolerated. The gas has anxiolytic, amnestic, and mild-to-moderate analgesic properties. Several studies have shown that adverse events are rare, but can occur in up to 10% of children. These are generally mild and consist of nausea and sometimes vomiting post sedation.[2] Luhmann and colleagues compared nitrous oxide to midazolam in a randomized controlled trial looking at anxiety relief during laceration repair in children aged 2-6 years. This showed that nitrous oxide use had fewer adverse effects and faster recovery times.[7] In the same study, they secondarily found that rates of ataxia, dizziness, and crying were higher in the midazolam group compared to the nitrous oxide group. All of these adverse reactions can be very distressing to an already traumatized patient and parent.

Another well-known adverse effect of NO is post-sedation headache. This is caused by diffusion hypoxia, and generally results when gas administration is discontinued. As nitrous oxide rapidly diffuses back into the alveoli there is a decrease in alveolar oxygen concentration. This can be avoided by administering 100% oxygen through the circuit for 3-5 minutes after nitrous oxide is discontinued so that the nitrous can be exhaled and eliminated.[8] **During sedation, ventilation remains intact, and thus pCO_2 does not tend to increase, but hypoxia can occur if the oxygen to nitrous oxide ratio is too low.**[3,9] Thus, having adequate equipment for gas administration and elimination is a necessity for any emergency department wanting to use nitrous oxide for procedures.[10]

When used in otherwise healthy children, nitrous oxide has very little significant effect on hemodynamics. In a small study of 12 infants by Hickey and colleagues, it was determined that nitrous oxide led to an average heart rate decrease of 9%, and a mean arterial pressure decrease of 12%.[11] This mild systemic hemodynamic depression is unlikely to be significant except in those infants with severely depressed cardiovascular function.

There are absolute contraindications for administration of nitrous oxide in certain patients. These include those with intracranial hypertension, pneumothorax, or other disorders that involve an accumulation of gas in a closed area (i.e. intestinal ileus or sinusitis), as well as unconscious patients with inability to protect their airway.[12]

Special Considerations

Many emergency departments have established equipment for the administration of inhaled nitrous oxide. Per the American Academy of Pediatrics, inhalation equipment that delivers nitrous oxide must have the capacity of delivering 100% oxygen, but never less than 25% oxygen at an appropriate flow rate for the size of the child.[10] Studies done on children using nitrous oxide generally use a 50% concentration of nitrous to oxygen, though sometimes as high as 70% nitrous to 30% oxygen.[9] Equipment that delivers variable ratios of the two gases with a

TABLE 1. Comparison of Selected Procedural Sedation Medications

Medication	Class	Route	Onset	Duration	Adverse Effects
Nitrous oxide	Anxiolytic	Inhaled	Minutes	4-5 minutes	Nausea, vomiting, headache
Midazolam	Anxiolytic	PO, PR, IV, IM, IN	PO/PR 20-30min IV 1 min IM 5-10 min IN 5 min	1-4 hours	Ataxia, dizziness, paradoxical reaction (inconsolability)
Fentanyl	Opiate	IV, IN	IV 1-2 min IN 4-11 min	IV 30-60 min IN 30-60 min	Bradycardia, respiratory depression, chest wall rigidity
Ketamine	Dissociative	IV, IM, IN	IV 1-2 min IM 3-5 min IN 3-5 min	IV 10 min IM 30-35 min IN 30-60 min	Nausea, vomiting, laryngospasm, increased ICP and/or IOP
Propofol	Hypnotic Sedative	IV	Seconds	Minutes	Respiratory and cardiovascular depression, painful injection

Adapted from *Tintinalli's Emergency Medicine*, 7th edition 2011.

delivery system that covers the mouth and nose must be used in conjunction with a calibrated and functional pulse oximeter.[10]

In dentist offices, nitrous oxide has traditionally been self-administered through a device that involves a demand valve (only delivering the gas with negative inspiratory pressure). The benefit of this delivery mode is that the patient will not take deep enough breaths to administer more gas when adequate sedation is achieved. This method is appropriate for adults or older children, though this is less feasible in young children due to their inability to cooperate with instruction or produce the adequate amount of negative inspiratory pressure. Therefore, a continuous flow system with the mask held by a parent is what is usually used with small children and has been shown to be safe.[13] It is important to use a scavenging device to avoid staff and parent incidental exposure.

To increase acceptance of the mask delivering nitrous oxide, dentist offices will often use flavored lip balms or other pleasing odors around the rim of the mask. This is a comfort measure that can increase success for physicians attempting to use nitrous oxide for pediatric anxiolysis in the ED.

Conclusion

Many studies have established the efficacy of nitrous oxide in pediatric patients and it seems reasonable that this could be applied to the pediatric ED. Nitrous provides a dissociative euphoria that would be appropriate for use in patients having to undergo painful emergency procedures. Some departments have already adopted this method of procedural sedation, and through collaboration with anesthesia and emergency physicians, this may become more widespread in the future. ✶

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Smaller, Floppier, Scarier

The Pediatric Airway

Clinical Scenario

You are working an overnight shift at a single-coverage emergency department, when EMS calls ahead with a pediatric medical alert. They are three minutes out with a two-year old female found in respiratory distress. Her initial oxygen saturation was 78%, but it improved with bag-valve mask (BVM) ventilation. EMS unsuccessfully attempted to intubate the patient twice, and she remains in respiratory distress without effective spontaneous breathing. The panic level rises in the ancillary staff around you, and questions begin to race through your head. What challenges did the paramedics have attempting to secure an advanced airway? What equipment should I get ready prior to this 2-year-old girl's arrival? What is my plan B if she is a difficult airway?

Pediatric Airway Challenges

While cliché, nowhere is the old adage "kids aren't just little adults" more true than in the management of emergent pediatric airways. Both anatomically and physiologically unique, not only from adults, but also from age to age, pediatric airways require forethought and planning in order to provide appropriate care.

The first challenge in pediatric airways is overcoming the anatomic challenges associated with younger pediatric patients. A more anteriorly positioned larynx and a large head-to-body ratio result in more acute angles between the oropharynx and the larynx. The tongue and epiglottis tend to be more prominent and soft, making displacement visualizing the vocal cords more difficult. **The cricoid cartilage is the narrowest part of the airway**, so the tube may pass the cords but may be difficult to advance beyond that. Finally, the relatively small size of the cricothyroid membrane serves as a relative contraindication to traditional cricothyrotomy in the event that airway management from above the vocal cords is unsuccessful.[1]

> Pediatric airways are both anatomically and physiologically unique.

Pediatric patients also present several unique physiologic challenges when considering emergent airway management. **A relatively small oxygen reserve results in more rapid desaturation than in adults.**[2] Common medications used in rapid sequence intubation have different volumes of distribution and metabolism than for adults, resulting in shorter duration and the potential need for re-dosing.[3]

Due to these challenges, forethought must be given to the child's positioning and having properly sized primary and adjunct equipment to minimize the stress

associated with managing an emergent pediatric airway.

Pediatric Airway Pearls

Positioning

Placing a towel roll under the patient's shoulders helps facilitate neck extension and better alignment of the oropharynx and trachea, making anatomic obstruction of the airway less likely and improving success of visualizing the vocal cords on direct laryngoscopy. Gentle thyroid cartilage manipulation may additionally help to bring more anteriorly positioned airways into view.[4-6]

Primary Equipment

An appropriately sized BVM may be the single most important piece of equipment to have available. Masks should be large enough to cover the entire mouth and nose, but not so large as to slide off the face and prevent an appropriate seal. Effective BVM is often sufficient to provide adequate oxygenation and ventilation in the case when an advanced airway is unable to be obtained.[7,8] Use a Broselow tape, or equivalent, to estimate weight- and age-based equipment if needed. To estimate the appropriate size of an endotracheal tube (ETT), use the equation (Age/4) + 3.5 mm for cuffed ETT, and consider potentially using an uncuffed tube in for children requiring less than a 5.5 mm tube.[9] Miller blades are generally used over Mac blades, as they assist in maneuvering the epiglottis out of the way.[5] When selecting blade size, error on the side of too large as opposed to too small. When the age is not known, the child's pinkie diameter can be used to approximate the size of the ETT.

Adjunct Equipment

Laryngeal mask airway (LMA) sizes range from infant to adult, and are based on the patient's weight in kilograms. In the case of failed intubation with direct laryngoscopy, LMAs can be inserted and do not require direct visualization.[10] Video laryngoscopy often negates the anatomic differences between pediatrics and adults, making its use in pediatrics similar to that in adult populations.[11] **Double-balloon devices, such as the King or Combitube should not be used in children less than 48 inches.**

Conclusion

An emergent pediatric airway can be a stressful event, so having a systematic approach to appropriate patient positioning and the primary equipment can increase the likelihood of success. Weight-based or length-based estimating tools are useful to identify correct doses and equipment size. Finally, being familiar with adjunct equipment can often be used to successfully manage difficult pediatric airways. ✶

Fertile for complications

Emergent Concerns in Ovarian Stimulation

Clinical Case

A 39-year-old female presents with acute right lower abdominal pain that awoke her from sleep. Her only medical history involves progesterone use, prescribed from a fertility clinic. She initially appears nontoxic and has normal vital signs, though does have moderate pain in her right lower quadrant. An immediate transvaginal ultrasound reveals no evidence of an intrauterine pregnancy, though both ovaries are markedly enlarged, and there is scant free fluid in the pelvis. In a matter of minutes, the patient becomes hypotensive and tachycardic, and bedside abdominal ultrasound shows a large quantity of intraperitoneal free fluid. Soon thereafter her hemoglobin returns at 6.2g/dL, down from a baseline of 12.8. She is aggressively transfused and transferred to the OR with a presumptive diagnosis of ruptured ectopic pregnancy. There, laparoscopy reveals a ruptured and torsed right ovary measuring 14cm x 12cm x 10cm. There is no evidence of ectopic pregnancy. She is then diagnosed with acute hemorrhagic shock secondary to her torsed, hemorrhagic ovary, caused by ovarian hyperstimulation. The patient ultimately does well, and later goes on to support a viable twin gestation.

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Discussion

In the United States, 6.7 million women are diagnosed with impaired fecundity.[1] With advances in reproductive technology and wider insurance coverage, more than 175,000 cycles of assisted reproductive technology (ART) are performed on an annual basis.[2] Whereas the use of in vitro fertilization in the United States is recorded in a national registry, the use of non-ART ovulation stimulation is not reported, and specific data is not available. By one estimate, **the mean percentage of all U.S. births conceived with non-ART ovulation stimulation was 4.62%** in 2005 (95% CI 2.8%–7.1% corresponding to 114,782–292,713 infants yearly).[3] **Approximately 40.5 million women are currently seeking infertility treatment globally.**[4] As these numbers are thought to be increasing, these patients are more likely to seek care in a local emergency department. Emergency physicians, therefore, need to have knowledge of both the common and the life-threatening complications of fertility treatment, including both ART and non-ART ovulation stimulation.

In normal ovulation, a dominant follicle is triggered to ovulate by a surge in luteinizing hormone (LH), while the few non-dominant follicles undergo apoptosis and are absorbed into the ovary. The dominant follicle matures into a corpus luteum made of granulosa cells, which secrete estrogen and progesterone, in addition to smaller amounts of vasoactive proteins. Ovulation stimulation hinges upon the hormonal manipulation of ovarian follicles using a combination of gonadotropin releasing hormone (GnRH) agonists and antagonists, as well as hCG timed to maximize oocyte formation.

The physiological changes induced by these hormonal interventions may have complications. **Ovarian hyperstimulation syndrome, ovarian torsion, ectopic and heterotopic pregnancy, ovarian hemorrhage, ovarian cyst rupture, and infection secondary to oocyte harvest have all been reported in patients who have undergone ART.** Each of these entities usually presents as lower abdominal pain, nausea, and bloating with free fluid in the abdomen visualized on ultrasound. It is important, but challenging, to distinguish between these diagnoses.

Ectopic pregnancy is commonly considered among the high-risk diagnoses that may lead to abdominal pain in pregnancy. **This potentially life-threatening diagnosis occurs in 2.3% of pregnancies from ART.**[5] Additionally, 1% are heterotopic pregnancies: a viable intrauterine pregnancy in conjunction with a concurrent ectopic pregnancy.[6] The presentation of the case above was suggestive of ectopic pregnancy. While ectopic pregnancy is prevalent in this population, additional etiologies must be considered in the fertility patient.

Ovarian stimulation – the medical induction of ovulation – contributed to the patient's presentation in our case. However, ovarian hyperstimulation syndrome (OHSS) – the constellation of symptoms or medical side effects directly from ovarian stimulation therapy – should also be in the differential diagnosis. **OHSS exists on a spectrum ranging from mild to life-threatening symptoms**. Mild presentations include abdominal discomfort, nausea, vomiting, and bloating due to a small amount of ascites from follicle rupture after ovulation, and are usually managed as outpatients in conjunction with their fertility specialist. OHSS becomes severe when fluid rapidly shifts into the peritoneum, resulting in weight gain and massive ascites. These fluid shifts can progress to oliguria, hemodynamic instability, and respiratory compromise. If not appropriately and aggressively managed, these patients can develop acute respiratory distress syndrome (ARDS), hepatic failure, renal failure, hyperviscosity, thromboembolism, or ovarian rupture and hemorrhage.[9,10]

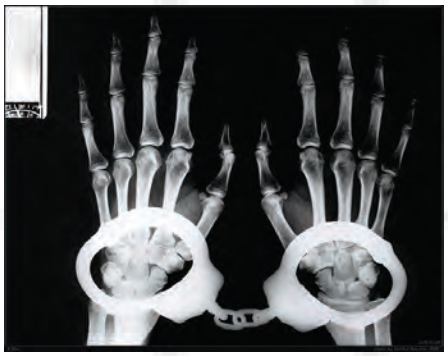
Hyperstimulated ovaries may also become engorged and prone to torsion. The torsion risk may be further increased when OHSS has developed, particularly when the patient is pregnant.[10,11] As with ectopic pregnancy, this represents a surgical emergency with implications for future fertility and the viability of the current pregnancy.

Differentiating between these potential etiologies is challenging. Abdominal discomfort or a bloating sensation could result from OHSS, ectopic pregnancy (including heterotopic), or torsion. Intra-abdominal free fluid could either be blood or ascites. OHSS produces an engorged ovary with abundant follicles, and the appearance of an ectopic pregnancy can be difficult to distinguish from the multiple complex ovarian cysts of OHSS. Patients presenting with these diagnoses often have pregnancies that are too early to detect by ultrasound at all, further obscuring the diagnosis of ectopic or heterotopic pregnancy. There are multiple case reports of heterotopic pregnancy with hemoperitoneum presenting as OHSS, for example.[10]

Summary

Ovarian stimulation is used therapeutically to treat infertility. It is associated with multiple complications, notably ectopic pregnancy, OHSS, torsion, and ovarian hemorrhage. The possibility of multiple concurrent diagnoses should prompt a broad-based investigation and early consultation with the patient's gynecologist and reproductive endocrinologist, but **timely recognition and intervention hinge on the actions of the emergency medical provider**. ✶

While ectopic pregnancy is prevalent in this population, additional etiologies must be considered in the fertility patient.



TREATING the CONVICTED

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Residents in the receiving hospital for one of the world's largest correctional facilities see a wide variety of incarcerated patients with an array of chief complaints. The CDC defines incarcerated men and women as an at-risk population.[1] According to the NAACP, **1 in every 32 adults is incarcerated**, meaning that 3.2 percent of the U.S. population is under some form of correctional control. Despite this fact, there is a relative neglect of this topic in medical education. The incarcerated represent a unique patient population with a breadth of interesting presentations.

Mortality

There are marked differences in mortality between those who are incarcerated and the general population. Statistics have shown a death rate 19% lower for incarcerated individuals aged 15-64, but in the 64 and older group, mortality is 56% greater. It is postulated that the lower death rate in the younger population may be attributable to lower rates of traumatic death, including motor vehicle accidents. Additionally, the incarcerated have seen an 84% reduction in AIDS-related deaths since 1991, though death rates from all other illnesses have risen 82%.[2]

There are significant mortality differences between the genders in prison. Compared to women, imprisoned men are more likely to die from 9 out of the 10 leading causes of death in the United States, and this translates to a 72% higher risk of death in males.

Statistics from the Department of Justice show that inmate mortality is 11 times higher in inmates older than 55 than in the 34-44 age group. Despite this rise in mortality, suicide rates remain constant across all age groups. It is interesting to note that 5 out of the 6 states with the largest prison populations represent 40% of all prison deaths in the United States (Texas, California, Florida, New York, and Pennsylvania).[2,3]

Comorbidity

Beyond mortality alone, morbidity among the incarcerated population is also unique. They possess a significant burden of co-morbid conditions. Despite the relatively young age of prison inmates, the CDC has reported that 76% see a medical professional for a known medical problem. The most common medical complaints are arthritis and hypertension, each representing 12%.[2,3]

Not all comorbidities in this population are medical — a significant portion of the incarcerated population also has an underlying psychiatric illness. **More than half (54%) of jailed inmates have met criteria for mania, nearly a third (30%) have had symptoms of major depressive disorder, and almost a quarter (24%) have met criteria for another psychotic disorder.** Underlying mental health conditions are challenging to manage in a prison setting, and patients with mental health conditions are twice as likely to be injured in an fight during their incarceration.[3]

Toxicology: Stuffers and Packers

While often confused with each other, body packers (aka mules) and body stuffers represent two very different entities. A packer is someone who transports drugs by ingesting packets into his/her GI tract. An important distinction is that packers often have the toxin encompassed in protective packaging. One article published in the *Emergency Medical Journal* studied 1,250 subjects apprehended by U.S. Customs officials at JFK Airport. The mean age of these individuals was 33 years, 70% were male, and the most commonly transported substance was heroin (73%). Of the 1,250 individuals apprehended, 56 were admitted to a hospital. Of these, 45% required surgical intervention, while the rest were managed conservatively.[4]

This same article advocated for a protocol approach to this particular patient population. The first diagnostic test should be an abdominal X-ray, but if inconclusive the provider should move on to an abdominal CT. Patients presenting with bowel obstruction, intoxication, or vital sign instability should have the packets removed surgically. If none of these are present, then conservative management (observation) can be pursued. If the packets have not passed in 5 days, then surgical removal should be reconsidered. Patients can be considered "cleared" when they have two normal bowel movements and a normal abdominal X-ray.[4]

Stuffers, on the other hand, are people who ingest a large quantity of a substance to conceal it from officials with the intention of avoiding prosecution. While it is difficult to acquire data, one study analyzing the packaging of 683 body stuffers showed that 96% of toxins ingested were cocaine and 4% were heroin. This likely varies depending on local drug abuse patterns. In the setting of cocaine stuffing, the time to peak concentration is 50 to 90 minutes and follows first order elimination. Current protocol advocates for between 6 and 72 hours of observation for asymptomatic

patients. This varies, as it is often difficult to assess a true history or drug type and quantity consumed.[5]

Foreign Body Ingestion

It is not uncommon to encounter incarcerated patients presenting with either an ingested or inserted foreign body. According to a 2015 article, **the annual incidence of foreign body ingestion was 1 in 1,900 inmates**. The same review article states that the predominant risk factors for foreign body ingestion include incarceration, psychiatric disease, and being of the male gender.[7] The prison population represents a unique interaction of all three of these potential risk factors. It has been observed in prior studies that inmates treated for foreign body ingestion often escalate their ingestions with larger, more dangerous, and more toxic objects.[7]

Management of Near Hangings

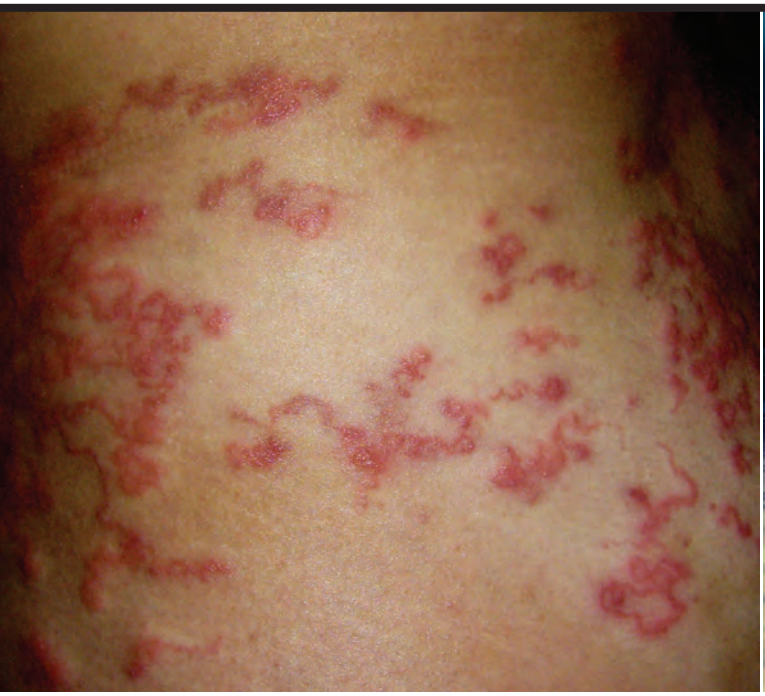
As previously mentioned, psychiatric disease, including depression, is rampant within incarcerated populations. This leads to a high risk for suicide and suicide attempts. According to Mansoor, et al, the suicide rate in the United States has been rising for the past 10 years.[7] Between 2000 and 2010, hanging accounted for 52% of all suicides. Case fatality for all hangings ranges from 69-84%.[7] Suicidal hangings differ from judicial hangings in that the body does not generally fall from great heights. **Spinal cord and skeletal injuries are rare in suicidal hangings.** In a review of literature cervical spine injuries occurred in only 0.6% of patients (4/689).[8] Despite this, X-rays and CT scans to evaluate the cervical spine are routine. The actual cause of mortality is debated. The two most likely events are venous obstruction leading to stagnant cerebral hypoxia or arterial occlusion leading to brain ischemia. It is thought that airway damage leading to difficulty in airway management is rare, and death secondary to airway closure is uncommon.[8]

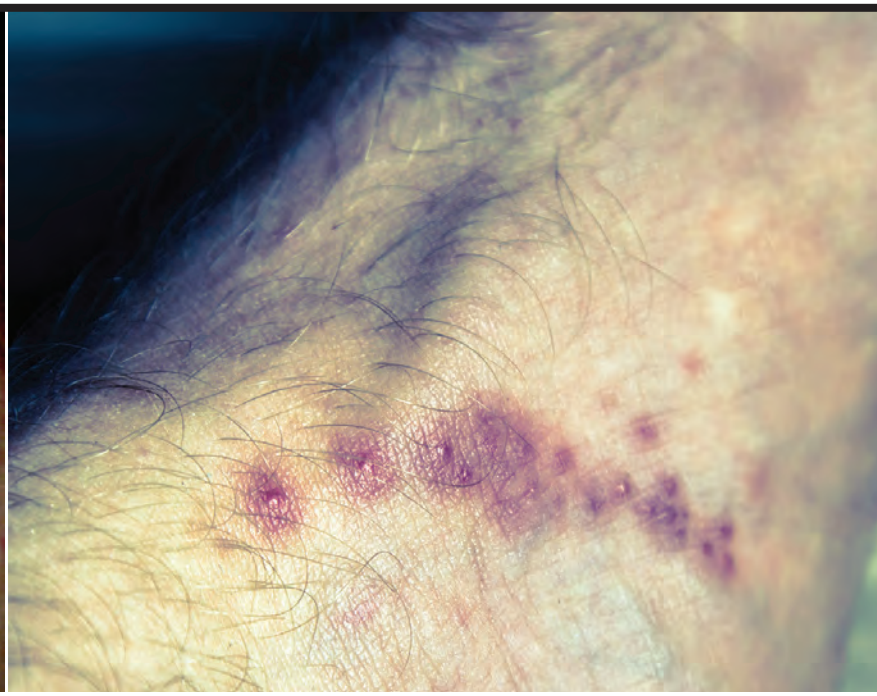
The Challenges of a Safe Discharge "Home"

One of the greatest challenges facing correctional health care providers is safe discharge planning. This can complicate even the simplest of medical issues. **For the most part we are discharging patients into an environment that is much less safe than home** – a place where their access to care, or even their willingness to accept that care, is impeded. Follow-up is a challenge, as we often have to trust the prison health system to appropriately coordinate care. In a lawsuit filed by the ACLU against a Nevada state prison, a physician investigator noted a "horrific pattern of neglect" and "frequently under-qualified staff."[9] While it is unfair to extrapolate this across the entire correctional system, it should give you pause when classifying someone as a safe discharge.

Finally, in most situations with a complicated patient and uncertain outcomes, shared decision-making can be employed. This is a particular challenge when the patient is handcuffed to the bed with prison guards at the bedside. How much information is a provider required to disclose to the prison guards? As with most protected health information (PHI), **medical information about your incarcerated patient should be disclosed only if it would help to prevent immediate harm to the individual or public**. PHI may be inadvertently passed to non-medical staff if they are allowed to stay within audible distance of the patient during your history taking. An emergency provider should always balance his/her own safety and that of the patient by asking the guards to maintain visible contact with the patient, but be out of hearing range of the conversation. Inversely, when doing a physical exam the patient has a right to privacy, so the guards should be close enough to hear any incidents, but should not be allowed to see the exam; the Society of Correctional Physicians recommends "privacy of sight and sound to the degree possible without creating a risk to the provider or other individuals."[10]

The concerns regarding discharge planning for incarcerated men and women are well-placed. There are no obvious solutions, so it is therefore incumbent upon those of us committed to providing health care for these individuals to provide the best care possible. These individuals represent a truly medically underserved population with unique medical needs. Recognizing these differences can make us more effective providers for these patients. ✶





Foreign Travelers: Cutaneous Parasitic Infections from Abroad

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Case Presentation

You step into the room of a 22-year-old female sent from her primary care physician for incision and drainage of two facial abscesses. She has had swelling, redness, and discharge from her forehead and right infra-orbital region that began a few weeks ago. She lives in New York but returned from the Amazon two months ago, where she suffered multiple insect bites. On her exam she has two erythematous, indurated nodules with seropurulent discharge in the regions mentioned (Image 1). *Upon closer inspection, the tip of a white larva can be seen migrating in and out of a punctum in the infra-orbital nodule. It becomes clear this is no longer a case of an ordinary abscess...*

Emergency physicians should be familiar with all of these entities.

Introduction

Skin disorders affect 12-18% of all travelers and are among the six most common reasons returning travelers seek medical care.[1,2] The differential diagnosis for skin lesions in the returning traveler is broad and is based on the appearance of the skin lesion, travel locations and duration, and associated symptoms. Dermatoses seen in travelers can be broadly grouped into infectious and non-infectious etiologies. Skin infections are a result of bacteria, viruses, fungi, parasites, helminths, and protozoa. Non-infectious dermatoses are secondary to arthropod bites, allergic reactions, trauma, sunburn, and animal bites.[3]

The 10 most frequently encountered dermatologic diagnoses in travelers are listed in Table 1.[4] Other significant infections include rickettsia, dengue, swimmer's itch, filariasis, leprosy, seabather's eruption, and mycobacterium marinum. Emergency physicians should be familiar with all of these entities, but we will focus on the four most common tropical infections: cutaneous larva migrans, leishmaniasis, tungiasis, and myiasis.

Cutaneous Larva Migrans (CLM)[1,4-7]

Epidemiology: CLM is the most common dermatologic infectious disease in the returning traveler. It is caused by the hookworm larva, most commonly by the cat and dog hookworms, *Ancyclostoma braziliense* and *caninum*, respectively. The larva is found in soil and sand and is acquired by walking barefoot in endemic areas. CLM is found in Southeast Asia, Africa, South America, the southern United States and the Caribbean. CLM is the diagnosis in approximately 10% of travelers returning with skin complaints.

Incubation/latency: Symptoms can begin as early as a few hours after exposure and as late as one month after exposure.

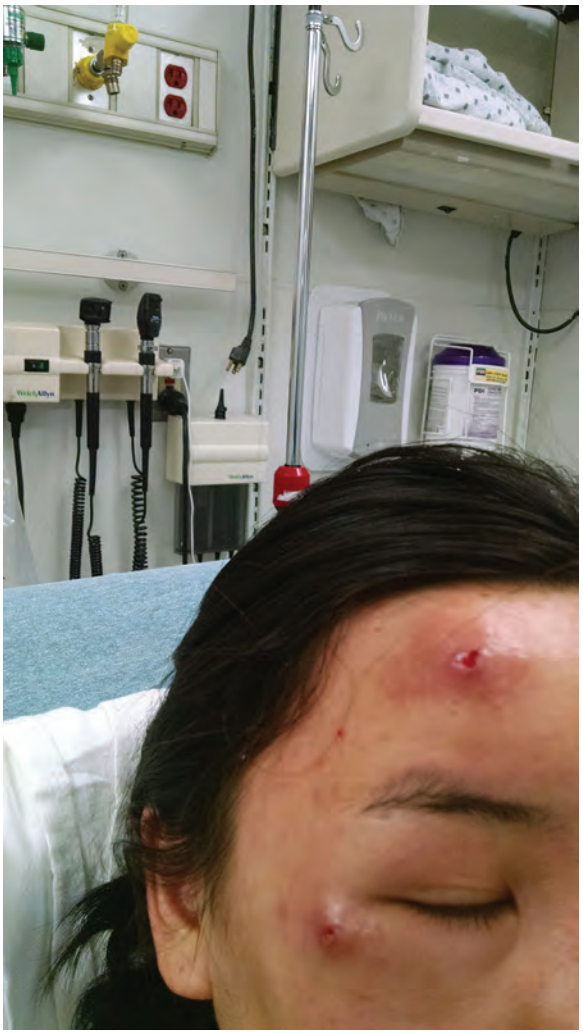

IMAGE 1. Patient presenting with two nodules located on forehead and right infra-orbital region.

Presentation: Patients present with a serpiginous and migrating rash associated with intense pruritis. Vesiculobullous lesions may also be seen in 10-15% of cases. Feet are most frequently affected, followed by the buttocks and thighs. At any given time, 1 to 3 lesions may be present.

Diagnosis: The diagnosis is made clinically upon CLM's characteristic appearance and the patient's travel history.

Treatment: Ivermectin 0.2mg/kg PO, repeated once or twice, or albendazole 400mg PO as single dose, or for three days.

Prognosis: Spontaneous resolution occurs after several weeks (usually 2-8 weeks), however, a single dose of ivermectin is associated with a 94-100% cure rate and significantly reduces duration of symptoms.

Prevention: Wearing shoes.

Cutaneous Leishmaniasis (CL)[1,4,5,8-10]

Epidemiology: Leishmaniasis is caused by a heterogeneous group of intracellular protozoa belonging to the genus *Leishmania*. It is transmitted by the female sand fly and is found in Mexico, Central and South America, Africa, Asia, the Middle East, and Southern Europe. The majority of cutaneous leishmaniasis cases are seen in Afghanistan, Iran, Saudi Arabia, Brazil, and Peru. CL accounts for approximately 3% of skin disease in returning travelers. Males, immunocompromised hosts, and travelers visiting endemic areas for more than two months are at increased risk of acquiring CL.

Incubation: The incubation period is typically a few days to months, with an average incubation period of 9 weeks.

TABLE 1. Top 10 Skin Infections Seen in Travelers Abroad[4]

1.	Cutaneous larva migrans
2.	Soft tissue bacterial infections (pyoderma, abscess)
3.	Arthropod bite
4.	Allergic reaction to urticarial
5	Myiasis
6.	Superficial fungal infection
7.	Injuries (including animal bites)
8.	Scabies
9.	Cutaneous leishmaniasis
10.	Tungiasis

Presentation: The main clinical form of CL is localized CL. Localized CL begins as an erythematous papule at the site of the bite, and enlarges to a nodular plaque with subsequent ulceration. The lesion is typically found on exposed skin and is usually painless. Satellite lesions, nodular lymphangitis, and lymphadenopathy may be present. Most patients will present with 1 to 3 lesions, but rarely will exceed 10 eruptions.

Diagnosis: A full thickness punch biopsy is needed for a definitive diagnosis. The diagnosis can be made by smear, histopathology, culture, or PCR.

Treatment: Many lesions will spontaneously resolve; however, treatment should be given to prevent progression to disseminated leishmaniasis. Local therapy is warranted in uncomplicated CL (cryotherapy, thermotherapy, topical paromomycin, intra-lesional pentavalent antimony), while systemic agents (oral azoles and intravenous amphotericin B, pentamidine, and pentavalent antimonials) should be used in cases of complicated CL. Drug choice is based on species, drug resistance, and geographic location. Expert consultation should be obtained prior to initiation of treatment. Superimposed bacterial infection is common and requires antibiotics.

Prognosis: Cutaneous leishmaniasis is usually self-limiting, but it carries a 3% risk of progression to disseminated leishmaniasis.

Prevention: Repellents, bed nets, and protective clothing.

IMAGE 2. Botfly extracted from right infra-orbital lesion.

Tungiasis[4,5,11-13]

Etiology: Tungiasis is a parasitic skin infection caused by the gravid female sand flea, also known as the jigger flea, *Tunga penetrans*. The sand flea attaches itself when the host walks with bare feet on sand or soil. Risk factors include poor sanitation and personal hygiene. It is found in tropical and sub-tropical climates in South and Central America, Africa, the West Indies, and the Caribbean. Tungiasis can represent 4-6% of diagnoses in returning travelers. A high prevalence (>50%) of infestation is seen in some endemic areas.

Incubation: 1 to 2 weeks after flea skin penetration.

Presentation: About 99% of lesions occur in feet. The lesion is a papule or nodule with a central black point corresponding to the opening used to lay eggs. Extrusion of eggs and feces may be visible. Pain, swelling, and pruritis typically occur with growth of the flea. The flea usually involutes and dies and is sloughed off with the epidermis after 4-6 weeks.

Diagnosis: Identification of sand flea, morphology of skin lesion, and travel history.

Treatment: There is no known drug treatment. Surgical extraction is the most appropriate treatment. Otherwise, the flea is typically sloughed off with normal skin growth after several weeks. Bacterial super-infection is common and requires antibiotics. Tetanus prophylaxis should be given if not up to date.

Prognosis: Infestation is typically self-limiting in travelers. Inhabitants of endemic areas can develop severe and debilitating disease.

Prevention: Wearing closed-toed shoes and applying bug repellents can decrease the risk of transmission.

Myiasis[1,4,5,14-19]

Epidemiology: Myiasis is an infestation of human tissue by the larvae of dipterous (two-winged) flies. Its name is derived from the Greek word myia, meaning fly. The two predominant causative pathogens are *Dermatobia hominis*, the human botfly, which is found in Latin America, and *Cordylobia anthropophaga*, the tumbu fly, found in Africa.

In Latin America, the human botfly lays eggs on the abdomen of ticks, mosquitoes, or other flies, which then deposit the eggs on animals or humans. In Africa, the tumbu fly lays its eggs directly on linen, clothing, and soil (never on humans or animals), which are then transferred to skin upon contact. Worldwide, myiasis affects 2.7-3.5% of returning travelers with skin disease.

Incubation: The incubation period for *D. hominis* is 5-12 weeks. The incubation period for *C. anthropophaga* is much shorter, spanning 8-20 days.

Presentation: Human myiasis is subdivided into furuncular cutaneous myiasis, wound myiasis, migratory cutaneous myiasis, and myiasis of body cavities. Furuncular cutaneous involvement is the most common presentation of myiasis and presents as a nodule or furuncle with a central breathing pore. Serous, serosangenous, and purulent discharge may be expressed from the lesion. Patients may report pain, pruritus, and sensation of movement inside of the lesion. Patients returning from Latin America typically have 1 to 3 lesions that are found on exposed skin, while patients returning from Africa may have multiple lesions that are found on areas covered by clothing.

Diagnosis: Identifying the specific larva makes the diagnosis.

Treatment: Extracting larva with forceps or manual pressure. Occluding the central punctum with a sealing ointment (petroleum jelly, bacitracin, paraffin) will facilitate the removal of the larva by causing asphyxiation, forcing the larva to exit the pore for oxygenation. Surgical excision may be required if the larva is unable to be extracted. Secondary bacterial infection is very uncommon because of bacteriostatic substances produced in the gut of the larva, but should be treated if present. Oral ivermectin can be used in cases of extensive disease or failed extraction. The patient's tetanus status should be brought up to date.

Prognosis: Usually self-limiting and benign, though may require surgical treatment.

Prevention: In Latin America, use mosquito repellents and nets. In Africa, avoid drying laundry outside, and iron any clothing that was left to dry outside.

Case Resolution

Initial attempts to remove the larva with forceps are unsuccessful, as the parasite would quickly retract with any nearby movement. Petroleum jelly is applied over the lesion, and after several minutes the larva begins to emerge from the aperture. It is then easily removed with forceps. No larva is visualized within the forehead lesions, so the patient is referred to plastic surgery for debridement. The removed larva is sent to pathology, and the diagnosis of botfly is confirmed. ✶

Bleeding BRAIN

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Management of Post-tPA Intracerebral Hemorrhage

On your next shift, you find yourself evaluating a 58-year-old-male with acute onset of left upper and lower extremity weakness and a facial droop that started 2 hours ago. Naturally you get a CT, which shows no bleeding, but displays a dense right MCA (Image 1). With the patient's significant deficits, you decide to unsheathe the double-edged sword of tissue plasminogen activator (tPA). About an hour into treatment, the patient becomes significantly less responsive. A repeat CT shows the most feared complication of tPA: an intracerebral hemorrhage (ICH) (Image 2). Now what do you do? Call the chaplain?

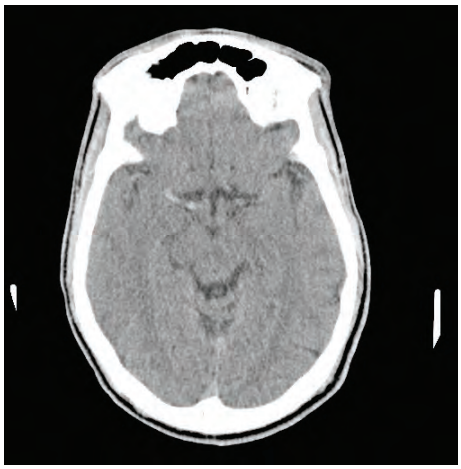

Image 1. Head CT showing dense right MCA

Is there anything else we can do to reverse the effects of tPA?

Since being approved by the FDA in 1996, tPA has been quite controversial in the stroke literature. Finding that balance between improving outcomes in acute ischemic stroke, while seeking to limit adverse effects, has been quite difficult. In select patient populations the benefit of this therapy exceeds the risk. Although it occurs in a minority of patients, ICH post administration of tPA can be quite catastrophic. Knowing the next steps in these time-sensitive moments is a cornerstone of management.

Preparing for the Bleed

The first step in treating a post-tPA hemorrhage starts before stroke treatment: tPA should be avoided in high-risk scenarios, and each patient should be risk stratified prior to tPA infusion. High risk factors include an elevated glucose or a history of diabetes, a high National Institutes of Health Stroke Scale (NIHSS) score, advanced age, elevated blood pressure, thrombocytopenia, and any history of congestive heart failure.[1-3] Increased time to treatment and early infarct signs on CT have also been identified as risks and further stress the need for administration of tPA as early as possible within the 3- to 4.5-hour window.[4]

An article by Saver, et al in *Stroke* in 2007 defined the number needed to harm with tPA. Provided that a patient is selected that is consistent with the NINDS trial, for every 100 people treated with tPA, there would be about 2.5-3.4 people harmed. Harm was defined as an increase in at least one point on the modified Rankin scale. On the other side, about 16 people per hundred will benefit from treatment.[4] Other **reports explain the benefits and risks as a 12% absolute increase in favorable outcome with tPA, but a 6% increase in symptomatic hemorrhage**.[5]

What if a hemorrhage does occur? In 2013 in the journal *Neurocritical Care*, Norby, et al looked at that very question in regard to prognosis.[6] The results showed that about 30% (14 of 38 patients) still went on to have favorable outcomes, defined as modified Rankin scores of 3 or less at 1 year. Those with an NIHSS >20, or those that increased their NIHSS greater than 4 points in 7-10 days after the bleed, fell in the poor outcome group of modified Rankin scores greater than 4.[6] Although we hope to treat and save every patient, counseling families on prognosis and expectations in some of these unfavorable bleeds is sometimes more important than blindly throwing the kitchen sink of therapies at any one individual.

Management of Post Thrombolysis Hemorrhage

Unfortunately for patients with symptomatic intracerebral hemorrhage (sICH) after receiving tPA, **there is a paucity of data to support any one therapeutic intervention**. We are limited to case reports and theoretical

recommendations from experts. The American Heart Association and American Stroke Association guidelines for management of ischemic stroke note there is no standardized protocol or guideline for managing these patients. On a retrospective review of the Get With The Guidelines stroke database, it was found that nearly half (45%) of the patients with sICH after tPA didn't receive any treatment for their coagulopathy.[7] Furthermore, the interventions that were used were quite varied, highlighting the need for a consensus on treatment.[8]

Anti-fibrinolytics

Based on their mechanism of action, **tranexamic acid (TXA) and epsilon-aminocaproic acid (EACA) lend themselves to being a potential therapy for patients with sICH after tPA**. Tissue plasminogen activator works by converting plasminogen to plasmin, which subsequently degrades fibrin. Anti-fibrinolytics work in the opposite manner by competitively inhibiting the activation of plasminogen to plasmin. In one of its largest trials, TXA was shown to reduce the risk of all-cause mortality in bleeding trauma patients.[9] A randomized, controlled trial nested within the CRASH-2 cohort focused on TXA used in trauma patients who also had traumatic brain injuries. This study showed neither a benefit nor detrimental effect on ICH.[10] Looking into non-traumatic, spontaneous ICH, Sorimachi, et al showed that patients who received TXA and had tight blood pressure control (SBP < 150mmHg) had hematoma enlargement only 4.3% of the time.[11] To the best of our knowledge, there is only one case report where TXA was used in a sICH after administration of tPA.[12] In that patient, a repeat head CT showed a hemorrhagic conversion, and he was given 1g of IV TXA, followed by another 675mg infused over the next hour. A head CT obtained 3 hours later revealed no further expansion of the bleeding. Unfortunately, in addition to his significant stroke, this patient also had subacute bacterial endocarditis, and ultimately care was withdrawn.

Epsilon-aminocaproic acid works via a mechanism nearly identical to TXA. In the cardiac surgery literature, it appears to reduce post-operative bleeding and blood product use.[13] It also has been shown to boost fibrinogen levels, which are often decreased in sICH due to fibrinogenolysis.[14] EACA may increase fibrinogen, but other therapies are needed to address coagulation factor replenishment.

Blood Products and Coagulation Factors

There are suggestions from the literature that indicate **a potential role for prothrombin complex concentrates** (PCCs) in these patients. PCCs generally contain factors II, VII, IX, and X, along with proteins C and S. They activate both the intrinsic and extrinsic coagulation cascades and have been shown to correct an INR in less than 30 minutes, though this INR reduction does not appear to improve clinical outcomes in most patients. When compared to fresh frozen plasma, they do allow for a much smaller volume of administration, thereby avoiding many of the adverse effects of large-volume infusions.[15]

Platelets may serve as another hemostatic therapy in a post-tPA hemorrhage. **The AHA advocates for the use of platelets** based on low-quality evidence. Plasmin initially activates platelets, which are later inhibited by adenosine diphosphate. Although very little is known about the platelet dysfunction that exists in this specific clinical context, the AHA recommends administration of 6 to 8 units of platelets to possibly halt hemorrhage.[16]

In addition to platelets, the **AHA recommends giving 10U of cryoprecipitate**. Cryoprecipitate has a quick onset of action and provides fibrinogen, factor VIII, and von Willebrand factor, which may replace decreased levels of fibrinogen while also activating the intrinsic coagulation pathway.[16] During a post thrombolysis hemorrhage, evolving evidence has shown that a significant decrease in fibrinogen levels may occur, and that these patients may be more likely to experience hemorrhagic conversion.[17] Those with higher baseline fibrinogen levels are at higher risk, which is due to an overall large delta change in fibrinogen post-tPA. Higher quality studies evaluating fibrinogen levels both pre and post-tPA will help to help risk stratify who is more likely to bleed from tPA, and clarify who may benefit the most from cryoprecipitate during an active bleed.[18]

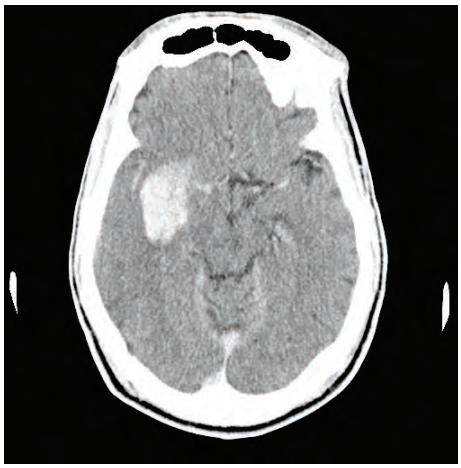

Image 2. Repeat CT showing intracerebral hemorrhage – the most feared complication of tPA

Conclusion

Even with the best preparation and careful selection of those most likely to benefit from tPA, emergency physicians will face the inevitable post-tPA bleed. Serum fibrinogen levels may be a way to identify the patients at highest risk for hemorrhagic conversion and may provide physicians with an early marker to warrant hemostatic agents. That being said, each hemorrhage must be evaluated as a distinct entity. A small petechial hemorrhage with no increase in NIHSS holds a different prognosis than the large hemorrhage with a significant space occupying effect. Some of the above interventions can be cautiously administered, as they have some therapeutic potential, but have no proven benefit on outcomes. One current limitation of therapy is time, as hours may elapse before a hemorrhagic conversion is noted.

If there were a better way to determine when bleeding begins, interventions could be undertaken more quickly and may prove to be more efficacious. Withdrawal of care continues to be a leading cause of death in patients with hemorrhagic strokes, and as such, there is enormous opportunity for further investigation regarding this topic. For now, prevention remains the primary means by which we can prevent morbidity. ✶

USING ULTRASOUND TO COMBAT FOURNIER'S

Finding the Invisible

Case

A 77-year-old male with coronary artery disease, diabetes, and a recent left femoral neck fracture is sent to the ED for non-resolving decubitus ulcers despite antibiotic treatment and wound care. He complains of severe pain to his lower back and scrotum. He is afebrile, but tachycardic. He is found to have a large stage 4 sacral decubitus ulcer with an eschar near the anus, but a swollen, erythematous, and foul-smelling scrotum with streaking gray necrotic tissue.

Questions to consider:

1. What is the differential diagnosis?
2. What diagnostic studies would you perform?
3. Would point-of-care bedside ultrasound help in this case and if so, what are you looking for?

A bedside ultrasound reveals gas in the soft tissues of the scrotal wall (Image 1). He is immediately started on fluids and broad-spectrum antibiotics, and within the hour is taken to the OR for debridement. After several bouts with septic shock and return trips to the OR, he is transferred to a long term nursing facility.

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Discussion

This patient presented with necrotizing fasciitis of the scrotum, also known as Fournier's gangrene. The clinical suspicion was heightened by visualization of gas on ultrasound.[1] **Fournier's gangrene is primarily a clinical diagnosis**, with the gold standard being direct evaluation of affected tissues in the operating room. Risk factors that predispose patients to necrotizing soft tissue infections typically include immunocompromised states (including alcoholism), chronic heart disease, old age, diabetes, malignancy, and pre-existing decubitus ulcers.[2]

Dr. Fournier, a French venereologist, first described Fournier's gangrene in 1883 as an idiopathic process, but it has since been understood to be a synergistic polymicrobial infection of the subcutaneous tissue and deep fascia involving the genitalia and perineum.[3,4] Fournier's gangrene carries a high mortality rate of 33-40%, with fascial necrosis spreading as rapidly as 2-3 cm per hour, making this a highly time-sensitive diagnosis.[4,5] **Salient features that differentiate this life-threatening necrotizing soft tissue infection from cellulitis include pain out of proportion to exam, rapidly spreading infection, and malodorous discharge.** But above all, the pathognomonic factor is gas within the tissue.[3]

Palpation of crepitus on exam is very specific, but neither sensitive nor reliable, with its presence ranging from 19-64% of

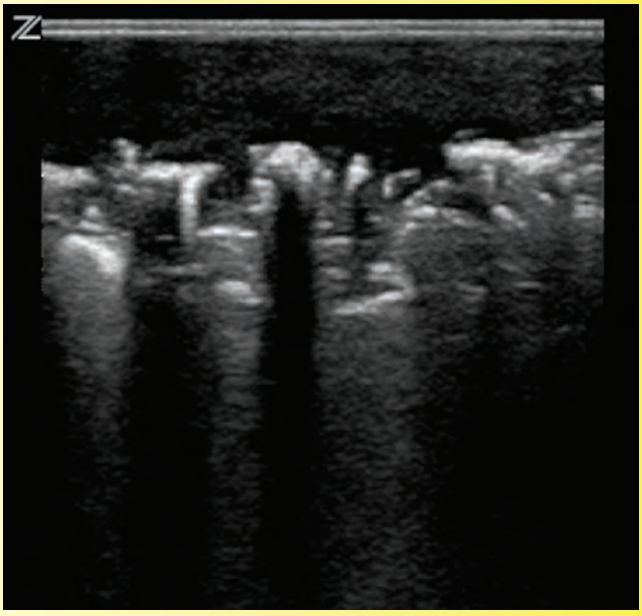

Figure 1. Subcutaneous air (Fournier's gangrene) seen as bright foci with posterior scattered shadowing.

Figure 2. High-frequency linear probe.

cases.[3,5,6] X-ray evaluation of gas within the tissue is more sensitive than clinical exam, but still suboptimal with sensitivity up to 89%.[3-4,6] CT/MRI of the soft tissue is much more sensitive in detecting gas but is time consuming, requires the patient to leave the clinical care area, and requires administration of intravenous contrast. As patients presenting with symptoms consistent with Fournier's gangrene are often unstable and have concomitant acute kidney injury from systemic disease, having the patient leave the resuscitation area and delaying time to definitive treatment in order to obtain CT or MRI is not ideal. Further, administration of IV contrast can worsen pre-existing renal insufficiency that is often seen in these patients with multiple co-morbidities.[5]

Bedside ultrasound allows patients to stay in the clinical care area, which is more convenient for resuscitation. It is rapidly performed at the patient's bedside, yields immediate results, and is more sensitive than X-ray.[3,4] Of note, Kane, et al detected gas in soft tissue using ultrasound in all studied patients without crepitus, and Butcher, et al also found a 100% sensitivity of ultrasound to detect soft tissue air.[1,3]

A high-frequency (7-12 mhz) linear probe should be used to evaluate the skin and subcutaneous tissue *(Image 2)*.[7] In normal tissue, the epidermis and dermis appear as thin hyperchoic linear structures superficial and parallel to the subcutaneous tissue, which contains hypoechoic adipose tissue banded by hyperechoic linear connective tissue septa. In cellulitis, subcutaneous tissue becomes edematous, creating increased hypoechoic spaces between fat globules. More advanced cellulitis has increased fluid accumulation between islands of adipose tissue, creating the classic "cobblestone" appearance *(Image 3)*.

Necrotizing gangrene commonly contains gas produced from by-products of bacterial metabolism.[3] The scrotal wall will be thickened from edema with scattered foci of gas. The testis and epididymis, if visualized, are generally normal in appearance. **Gas on ultrasound appears as high amplitude, bright, hyperechoic beams with posterior scattered acoustic shadowing and can often obscure underlying structures such as the testis** *(Image 1)*.[1-7]

Not all gas found in the scrotal sac indicates Fournier's gangrene.[7] Air found deep to the subcutaneous tissue layer could be from loops of trapped bowel.[7] **It is important to discern the origin of air foci in order to avoid diagnostic error.**

Once Fournier's gangrene is diagnosed or highly suspected, the patient should be started on broad spectrum antibiotics covering gram positive organisms (including MRSA), gram negatives, and anaerobic bacteria. Consultation with surgery should occur immediately, as definitive treatment of Fournier's gangrene and other necrotizing soft tissue infections is expedited surgical debridement. ✶

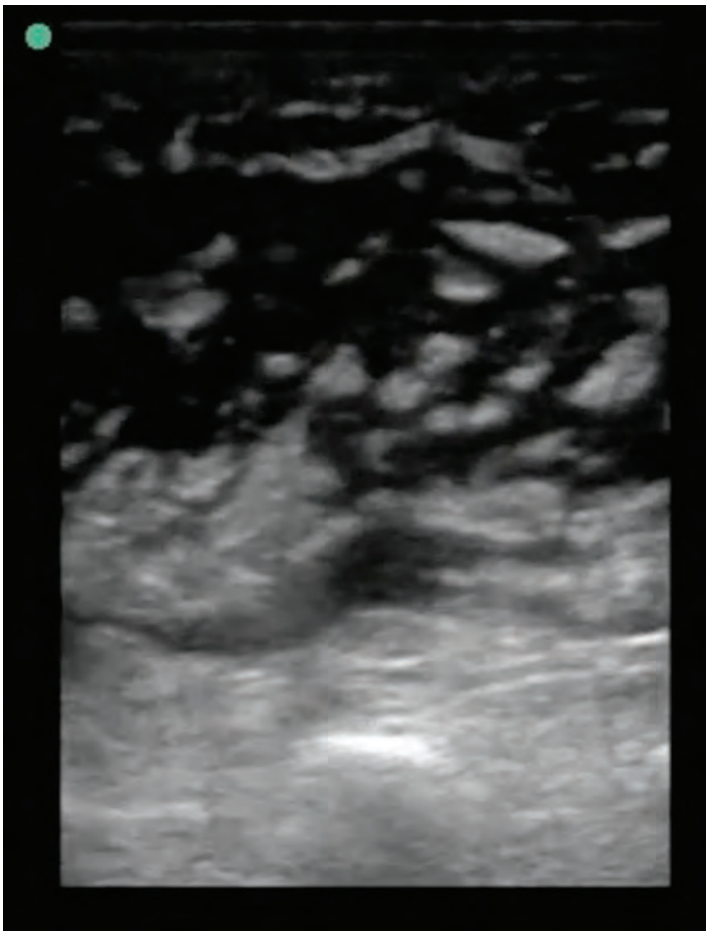

Figure 3. Typical appearance of cellulitis with cobblestoning.

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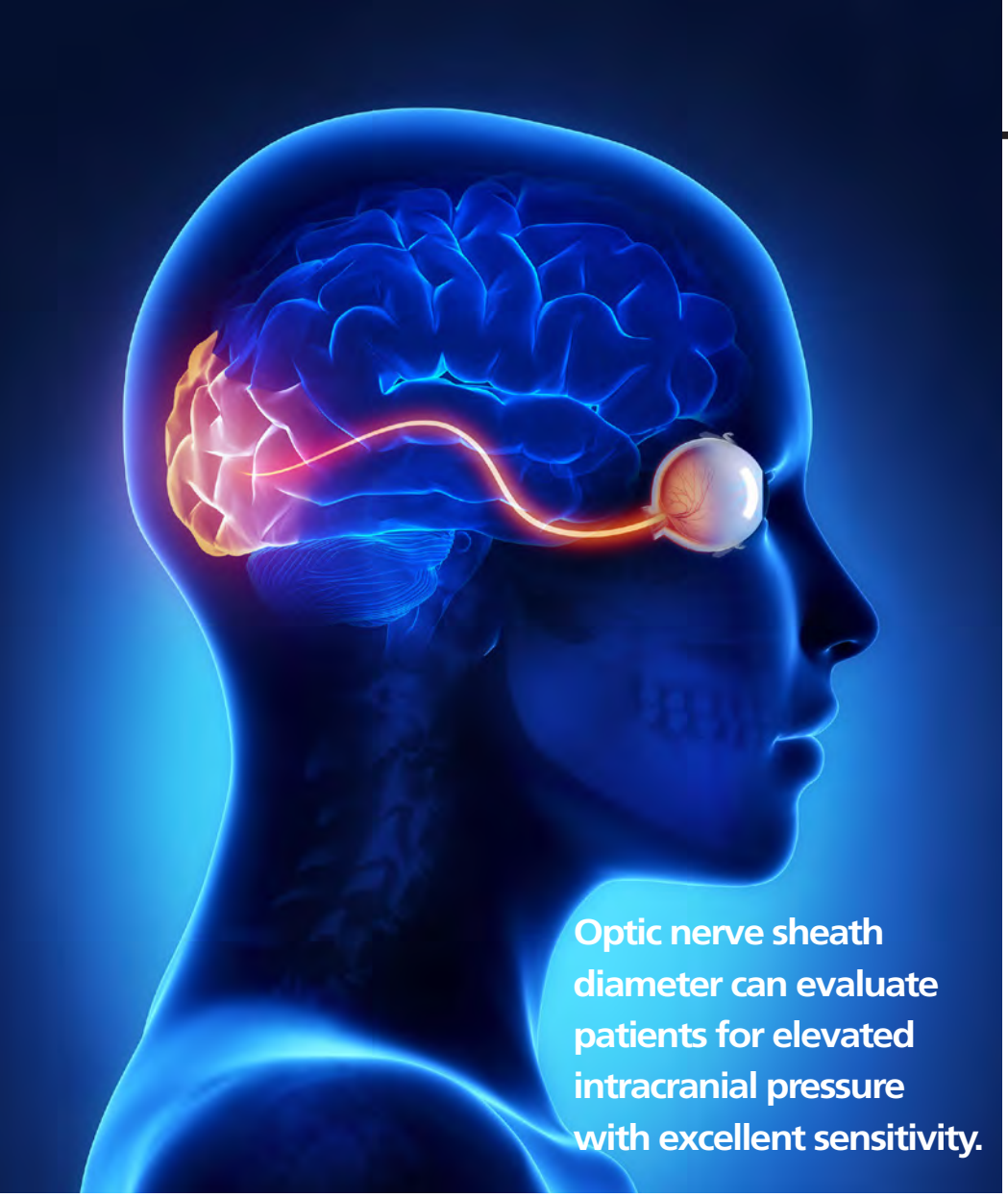

Sheath & Sound

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A Literature Review and Discussion

Case

You are working in Central America doing emergency development work, when a 7-year-old girl presents in status epilepticus. She has no seizure history or medical problems, though has been feeling ill for a few days with subjective fevers and headaches. She is febrile, unresponsive, without nuchal rigidity, equal and sluggish pupils, and has right-sided focal tonic-clonic movements. She is treated with benzodiazepines and is intubated. Her seizure activity slowly abates. The PICU attending is at the bedside and requests a lumbar puncture to rule out meningitis. You agree that a CSF sample would be ideal, however a focal seizure is very concerning for bleeding, mass, or brain abscess. If this patient has elevated intracranial pressure, a lumbar puncture may precipitate brain herniation. The PICU attending disagrees and says the hospital CT scanner is currently out of service anyway. If only there were another way to allay your concerns...

Discussion

The optic nerve is surrounded by cerebrospinal fluid (CSF) and dura mater forming the optic nerve sheath. The diameter of this sheath is measured as the optic nerve sheath diameter (ONSD) and is influenced by CSF pressure variations because it communicates with the subarachnoid space. Neuroimaging and direct invasive pressure measurement have long been used to measure intracranial pressure, with invasive intracranial devices being the gold standard for ICP measurement. Neuroimaging is not universally available and can lead to patient safety issues given time sensitive pathologic processes. Direct measurement has several disadvantages including its invasiveness, requirement of subspecialty training, infection, bleeding, and malfunction. As a rapid, non-invasive, readily available approach to evaluate elevated intracranial pressure, ultrasonography has been studied to reliably measure ONSD. A normal ONSD can rule out elevated intracranial pressure (ICP), though the exact cut off value for ONSD is not universally agreed upon.

The Evidence

Amini, et al. studied 50 non-trauma patients who were to receive lumbar puncture with opening pressures. They measured ONSD with ultrasound prior to the procedure. 14 patients were found to have elevated ICPs, and **an ONSD diameter of >5.5 mm had 100% sensitivity and specificity for elevated ICP**.[1]

Frumin, et al. used a prospective analysis with one emergency practitioner who ultrasounded 27 patients within 24 hours of placement of an external ventricular device. They found that **an ONSD of >5.1 mm had a 83.3% sensitivity and 100% specificity for an ICP of >20 mmHg**.[2]

Dubourg, et al. found the pooled sensitivity of ultrasound ONSD measurement for detection of increased ICP from six studies and 231 patients was 90%, with a pooled specificity of 85%. The pooled odds ratio was 51. The thresholds for defining elevated ICP by ONSD varied in these six studies from 5.0 mm to 5.9 mm. They all measured 3 mm from the posterior globe and all used high frequency transducers. The vast majority of patients found to have enlarged ONSD were diagnosed with traumatic brain injury, subarachnoid hemorrhage, or intracranial hemorrhage.[3]

Bauerle, et al. looked at patients with idiopathic intracranial hypertension (IIH), a different kind of population with chronically elevated ICPs. Ten subjects with recent diagnoses of IIH and 25 controls received both ultrasound measured ONSD and lumbar puncture. Using a cutoff value of 5.5 mm resulted in a 100% sensitivity for detecting raised ICP. Additionally, significant decreases in ONSD were observed after lumbar puncture.[4] This study suggests ONSD responds well to real-time intracranial pressures, and that it may have a role for screening of IIH, and in the evaluation of headache.

Strumwasser, et al. studied patients with severe traumatic brain injury, and used invasive ICP monitoring to correlate with ultrasound measured ONSD. These subjects who required invasive ICP monitoring had ultrasound measured ONSDs ranging from 5.8 to 6.6 mm. This correlates well with elevated ICP based on current accepted thresholds. However, the study goal was not to screen for elevated ICP as an emergency physician might, but to evaluate for correlation of intracranial measurements before and after intervention. They found that **ONSD poorly correlates with numerical intracranial pressure measurements**. Therefore, ONSD cannot replace invasive intracranial monitoring.[5]

The Technique

Using a high frequency probe and the "eye," "ocular," or "ophthalmologic" exam setting, place a transparent adhesive dressing bilaterally over the closed eyes. Place ample ultrasound gel in order to interrogate the eye in two planes. Rest a couple fingers on the patient's face for good control and be careful to not apply more than pressure than is required to the eye. Look for a hypoechoic structure extending from the optic disc into the posterior field. The nearly anechoic structure is the optic nerve, and the hypoechoic structure around it is the optic nerve sheath. Measure 3mm back from the optic disc and measure the diameter as demonstrated in Image 1. **A reasonable ONSD value to rule out elevated ICP is 5.5 mm, although many clinicians are more conservative and use 5.0 mm.** The traditional value of 5 mm is for those greater than 4 years old. Moretti, et al. noted from a review of the literature that values between 4 to 4.5 mm captured 83-100% sensitivity for elevated ICP in those less than 4 years old.[6]

Case Resolution

A bedside ultrasound is available. The patient's ONSD measures 7.2 mm on the left and 7.1 mm on the right. The LP is foregone, and the patient is stabilized and sent to another facility for CT imaging which shows a large left-sided brain mass with associated acute hemorrhages. The results are discussed with the family, and the patient is admitted to the PICU where she unfortunately decompensates and is made comfort care before expiring.

Conclusion

ONSDs have been correlated with elevated ICPs in multiple studies confirmed by invasive ICP monitoring, neuroimaging, and opening pressures on lumbar puncture. ONSD can evaluate patients for elevated intracranial pressure with excellent sensitivity, as demonstrated above. The technique is easy to perform and in the right clinical setting it can change clinical management. Furthermore, studies demonstrate that ultrasound can be used by expert practitioners to measure ONSD at the bedside with reasonable accuracy. Performance of ONSD measurement is well within the grasp of novice and seasoned emergency practitioners, and should be considered in the initial work-up of suspected increased ICP. Its ease of use, reliability, and non-invasiveness are significant advantages over the other methods of ICP acquisition. Along with fundoscopic exam, lumbar puncture, and advanced imaging, **ONSD should make its way into the emergency medical provider's repertoire in evaluating a patient for elevated ICP**. In the right clinical scenario, it might be the most appropriate modality available. ✶

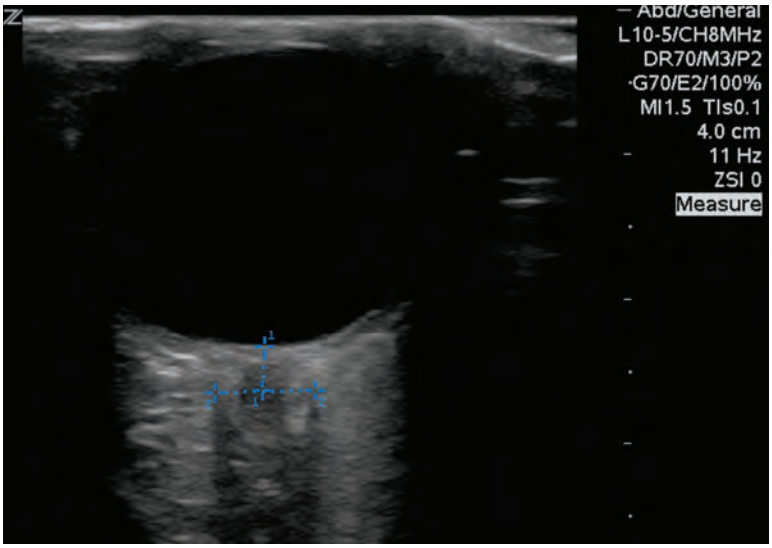

Image 1. High frequency ocular ultrasound demonstrating the measurement of the optic nerve sheath diameter.

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It happens in late fall and accelerates into spring: Graduating residents start to stress about the move into practice. Not the medical or professional transition; that is relatively easy. The stress starts with the EMRA Job & Fellowship Fair, progresses through opportunity and contract negotiation, and continues through the transition into practice. How much house can we afford? How much should we contribute to retirement? Do we need this supplemental insurance? What do all of these retirement booklets mean? You need a framework for making informed, effective, and confident decisions.

Preface

There is a logical progression of decisions that need to be made, and they start with confirming your new practice. Until you know what that looks like in terms of location, type of practice, compensation, and benefits, it is difficult to plan the transition. Here are some guidelines for mapping this out, particularly for those attending ACEP15 and the EMRA Job & Fellowship Fair:

Practice Type

- **Independent Contractor (IC).** As an IC, you will have significant flexibility, as well as the responsibility of being self-employed. You need to understand self-employment income, be able to structure your business and personal expenses so that they can easily be identified, set up an additional account to maintain tax payments, and plan a forward-looking budget. Based on your hourly rate and expected shifts, determine your gross monthly income; develop a ratio that includes three things: 1. Taxes; 2. Retirement Contributions; 3. Excess. This will enable you to be well-organized and to make prudent use of your earnings. It is often more effective to hire someone to provide this guidance.
- **Private or Democratic Group.** Consider that you will commonly work 1-3 years as an employee before making partner and becoming self-employed. During the employee period, you will likely have fixed income, minimal business expenses, a limited ability to contribute to retirement, and you will not have to think like a businessperson. Your budget should be well-defined. As you transition into a partner role, it is often beneficial to have an accountant, attorney, and other financial advisers guide you in navigating the changes in taxation, retirement eligibility, medical benefit limitations, and other concerns.
- **Hospital Employee.** A W-2 employment position with a hospital provides financial stability, diverse resources, and often competitive scheduling. In exchange for security in these areas, employees typically do not earn as much as private practitioners, and they have less flexibility in designating money to retirement and other important programs. For many, a significant advantage of hospital work is the ability to do research, train residents, and be involved in the collaborative, educational side of medicine.

Goals

It is important to articulate what you want to accomplish and when. A common set of goals are:

- Buy a new home within the next 12 months
- Pay down student loans aggressively
- Develop sufficient retirement income beginning at a defined age
- Put your children through four years of undergraduate education
- Minimize income taxes
- Eat, live, and enjoy a reasonable standard of living

Puzzle Pieces

With a set of goals and some numbers, it comes down to developing an actual plan. This is equivalent to putting together a financial puzzle: setting up bank accounts, obtaining insurance, starting investment programs, developing a portfolio, etc. These are all pieces that need to be identified and fit into your plan, based on your timeline and objectives.

Action Plan

The rubber meets the road when you confirm your objectives and have specific next steps to take. **The greatest plans fall victim to inaction when they are in the hands of the wrong people.** Identify the goals, agree on the steps to get there, and delegate the implementation to someone who can and will get it done.

The Confident Transition Plan

Literally thousands of residents have benefited from financial direction at the transition between training and practice. Appropriate direction can enable you to reduce debt faster, build wealth more rapidly, have confidence, and enjoy the freedom and flexibility that you have worked so incredibly hard to attain. ✶

*M. Shayne Ruffing, CLU, ChFC, AEP is the creator of the **Confident** Transition Plan™ for medical residents, the Physician Disability Income Analyzer™ and the Physician's Financial Navigator™. Shayne is the Managing Director of Integrated WealthCare, Collaborative Wealth Management for the medical community. He can be reached at 866.694.6292, or via e-mail at shayne@iwcglobal.net or www.iwcglobal.net.*

It's What We Do

Social Emergency Medicine

"One thing I know: The only ones among you who will be really happy are those who will have sought and found how to serve."
— Albert Schweitzer

Charles Justin Hall, DO
University of Nebraska Medical Center
Omaha, NE

The role of the emergency department has evolved over the years with the shifting climate of our society and the changes that have occurred within the American health care system. Developments in national health policies, new local regulations, a growing disparity between socioeconomic groups, and even global epidemics all seem to manifest first in our local emergency departments. As a result, **the emergency department has become a sociological microcosm of modern society** – a "moment in time" glimpse into the current state of American health care issues and the repercussions of the changes that have been made.

In addition, emergency departments, which have always provided care for the acutely ill, now serve a new role as the safety net for the entire health care system. The ED is frequently viewed as a safe haven or a sanctuary – similar, in a sense, to the role that churches have played throughout history. At all hours of the day, without a set appointment, void of insurance or other means to pay for care, and through every spectrum of disease severity, **the emergency department is the place people turn to when in need**. These discernments have become more prevalent in recent years and have helped to form a new sector within our specialty, appropriately known as "social" emergency medicine.

Our emergency departments have become a lens showing the effects of our ever-evolving health care system. We can observe the effects of societal shifts, whether positive or negative, by noting what occurs within the walls of our departments. We continue to note an increase in the number of patients seeking primary care in the emergency department while we see a decline of private insurance coverage. Many emergency departments have reported an increase in the number of ED visits after the implementation of the Affordable Care Act. When fears arose over the Ebola virus, it was often the emergency departments that implemented protocols and disseminated educational information to quell public fears; **the ED is the quickest access point when it comes to findings answers**.

Since we are at the forefront of this concept and observing firsthand the effects of change in a real-world application, we are also, therefore, tasked with providing notice to the public. We are called to brainstorm solutions and enact change. As research continues to grow in this realm of emergency medicine, more and more will be expected of us to become the advocates for addressing the problems we encounter through our practice.

In effect, we have chosen a specialty where service is at the core of what we do. We cater to not only the medical but also the social needs of many of the patients within our communities. Patients visit us seeking refuges from unsafe or abusive environments or in states of psychological crisis when they may even feel unsafe from themselves. Patients come to the ED when they have no other place to go.

Undoubtedly, there are those who view this as a failure of the health care structure and an indication that the entire system may be plummeting into inevitable chaos. **There are those who are routinely frustrated by the countless "non-emergencies" and "social catastrophes" who seek the answer to life's problems by visiting the ED.** They may have held tightly to the idea that in emergency medicine, we only provide life-saving intervention in an awe-inspiring, *Grey's Anatomy*-like hospital setting. But with any dichotomous view on a subject, there is an opportunity for collaboration, conversation, and change. Social support in times of crisis is essential for maintaining physical and psychological health, and it may also confer resilience to stress. Even the most subtle and positive interventions can have substantial effects on a patient's well-being and state of mind, which in turn can help a patient on the road to recovery. Since the stage is being set within the walls of our departments, **it is our job to lead the charge and utilize our unique position in the medical community to positively impact the patients we encounter**.

> We can observe the effects of societal shifts, whether positive or negative, by noting what occurs within the walls of our departments.

Tiny subsets of our world and society are crammed into the rooms and hallways of emergency departments around the country: the poor and the destitute seated next to the CEOs and the professionals, all seeking someone to come to their aid. It might be dry socks to cover their feet, reassurance that the chest pain is not another heart attack, a lifesaving imaging study that catches the tumor early, or simply a few sutures to close the wound. "Social" emergency medicine is another unique and respectable aspect of our field of medicine, and we should embrace it. We have the ability to reach patients on an entirely different level; helping vulnerable subsets of the population to rebuild from the ground up. In effect, **we provide service to absolutely everyone – even those who are underserved, forgotten, brushed aside, or scorned by the general public**.

We should be invigorated to be a part of a specialty where we can observe the effects of societal changes at large, and use that information to implement change and provide intervention in real-time on a day-to-day basis. Our job is, in fact, truly unique. ✶

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Sharing Our Stories

Your Time, Your Legacy

Rich Levitan, MD, FACEP

How many frequent flier miles have you racked up this year? It's a safe bet Rich Levitan has at least doubled you. Between clinical shifts in Colorado, airway cadaver courses in Baltimore, seminars in Wyoming, and lectures in Australia – not to mention home base in New Hampshire – he spends a great deal of time on airplanes.

And this year, much of that time in the air was dedicated to writing a new edition of his popular intubation pocket guide, debuting this fall. We caught up with Dr. Levitan to find out what's on his mind when he's not helping set global policy on airway management.

EMR: Tell us a crazy medicine story.

RL: The other day I was taking care of a patient who had a wire bristle embedded in his airway from a grill brush. He'd been cleaning his grill and there was a wire about 1 inch long stuck in the back of his tonsil. I could see it but was having a hard time getting it out. I had to go take care of an acute MI, and when I got back he had picked up the forceps and taken care of it himself. I was pretty impressed.

EMR: If you had time to binge-watch a Netflix series, what would it be and why?

RL: I kind of got serious on Breaking Bad – it was incredible.

EMR: What's the best life advice you've ever gotten (or given)?

RL: I like this line from Breaker Morant, the movie: "Live each day as though it were your last, for one day you are sure to be correct."

Rich Levitan (right) and his airway course faculty members (from left) Ken Butler, DO, Jorge Cabrera, DO, and Jim Pisaturo, EMT-P, are on a mission to spread the lessons of the larynx.

EMR: Last song that stuck in your head?

RL: Grateful Dead – "Touch of Grey"

EMR: Winter, spring, summer, or fall – which is your favorite, and why?

RL: I live in northern New England now, so I'm gonna go with fall. ✶

Medical Students

Don't Miss AMA President Steve Stack in Boston!

What can medical students gain from EMRA events at ACEP15 in Boston? For one thing, you get to hear from AMA President Steve Stack, MD, FACEP, our keynote speaker at the EMRA Medical Student Forum on Sunday, Oct. 25.

Don't miss this 4-hour forum (8 am-Noon) – it will help prepare for the speed-dating lunch with program directors (Noon-2 pm) and the EMRA Residency Program Fair (3-5 pm). This day provides a networking opportunity like no other. Be sure to join us! Learn more at emra.org/events/ACEP15/Med-Student-Events.

New Resident Fellow Announced

Each year, *Annals of Emergency Medicine* selects a Resident Fellow (formerly the Resident Editor) to serve on the Editorial Board. We are pleased to announce that Nupur Garg, MD, of Mount Sinai Hospital, New York, NY, has been selected to serve as the new Editorial Board Resident Fellow for the coming year. Dr. Garg received her MD from Yale University School of Medicine. Sara Crager, MD, of UCLA/Olive View Medical Center, Los Angeles, CA, is the immediate past Resident Fellow for the journal.

UPCOMING EVENTS

- Oct 23–25 — Hackathon 2015, Boston, MA
- Oct 24 — EMRA Medical Student Meet-Up, Boston, MA
- Oct 25 — EMRA Residency Program Fair, Boston, MA
- Oct 26 — EMRA Job & Fellowship Fair, Boston, MA
- Oct 26–29 — ACEP15, Boston, MA
- Feb 15 — EMRA Medical Student Council, Applications due
- Feb 15 — EMRA Spring Awards, Deadline
- Mar 2 — Emergency Medicine Residents' Appreciation Day

Be the Change Project Addresses ICU Boarders

Editor's Note: *In 2014, a team from Advocate Christ Medical Center in Oak Lawn, Illinois, was awarded the EMRA Be the Change Grant for their "ICU Boarders" proposal. Resolving to address the quality and safety of ICU-level care in the ED, the team put its Be the Change Grant award to use during the past year.*

Like many emergency departments, the ED at Advocate Christ Medical Center has been plagued with overcrowding, compounded by a shortage of available inpatient critical care beds. As a result, in years past, it was not atypical for critically ill patients to spend hours or even days in the ED, waiting for transfer to the medical intensive care unit (MICU). These patients became, in essence, "ICU boarders" who warranted dedicated ICU-level critical care, but remained under the care of emergency department physicians who were simultaneously managing dozens of other patients. Transfer delays of this scale are not unique. In emergency departments across the country, critically ill patients often wait 18 hours or longer for ICU beds.[1] These patients experience poorer outcomes than those who are promptly transferred to the ICU; some reports show patients with more than a 6-hour delay in transfer from the ED to the ICU incur increases in both hospital length of stay and mortality.[2] As interns in the ED at Advocate Christ Medical Center, we observed countless areas for improvement in our management of critically ill patients and were inspired to tackle this problem.

Under the guidance of experienced faculty, we directed our efforts to implementing solutions at the institutional level. In May 2014, we formed a team of leaders from emergency medicine, internal medicine, critical care medicine, emergency department nursing, intensive care nursing, pharmacy, respiratory therapy, information technology, and eICU. This team instituted the ICU Boarders Project, a resident-driven, hospital-wide effort to improve the quality of critical care in the ED.

The main objective of the ICU Boarders Project is to deliver the same level of intensive care to critically ill patients waiting in our ED as that received by patients who are already in the MICU. After months of strategizing, designing and planning, as well as conducting hospital-wide training sessions for ED and ICU physicians, residents, nurses, administration, and other staff, the ICU Boarders Project team implemented the following new protocols:

eICU monitoring: Integration of the eICU into the ED has been the key to the success of this project. Four ED rooms are now equipped with fully capable, two-way, audiovisual eICU towers by which remotely-based eICU intensivists can monitor and manage patients at the same level currently done in the MICU. When these ED rooms are used for this purpose, they are considered to be virtual MICU beds.

Immediate transition to inpatient: When initial ED stabilization is completed, a critically ill patient is accepted by an intensivist and is immediately converted to inpatient status, rather than waiting for transport to an ICU to initiate inpatient status. The new "inpatient" is then assigned to one of the virtual MICU beds, and eICU monitoring is initiated.

Immediate ICU-level critical care management: When a patient has inpatient status and a virtual MICU bed assignment, the intensivist can set the inpatient ICU orders with the bedside nurse and plan management with the eICU intensivist. The bedside nurse and two intensivists work together to manage the patient in the same fashion as currently done in the MICU.

ED staff intervention: MICU and eICU intensivists actively manage the patients in virtual MICU rooms, but ED physicians remain available to assist at the request of the intensivists/nursing team.

(l to r): *Adam J. Bonder, MD, MBA, Advocate Christ Medical Center, Oak Lawn, IL; Rachel Burt Kadar, MD, Advocate Christ Medical Center, Oak Lawn, IL; Katherine Blossfield Iannitelli, MD, MS, Advocate Christ Medical Center, Oak Lawn, IL.*

ICU-level nursing: Critical care nurses from the MICU are assigned to the bedside of patients in virtual MICU beds in the ED. Their responsibilities are essentially the same as nurses assigned to patients physically located in the MICU.

Information technology (IT) and electronic medical record (EMR) integration: Newly designed IT and EMR tools allow for seamless transition of care, simplified order entry, streamlined information channels, and minimized duplications.

Medication orders: New EMR order sets and protocols were designed that support conversion of ED orders to inpatient orders, and designated roles were established for medication entry. These elements have resulted in zero medication errors for all eICU enrolled patients so far.

Implementation

The ICU Boarders Project kicked off in February. Not surprisingly, unforeseen issues have continued to arise, almost on a weekly basis. Our processes and protocols have already undergone dozens of revisions.

Our next goal is to collect and analyze data to gain an objective understanding of how our new practices compare to prior, and we are in the process of obtaining IRB approval for a retrospective database review. ✶

2015 Award Recipients Set a High Bar

Congratulations to all of our 2015 award recipients – and thank you to everyone who participates in the process. Your accomplishments reflect the strength of emergency medicine!

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Dennis Hsieh, MD, JD,
Alameda County – Highland Hospital

Steve Tantama, MD, Award for Military Excellence:
Victor Jourdain, MD, Naval Medical Center San Diego

International EM Scholarship:
Vijay Kannan, MD, Maricopa Medical Center

Clinical Excellence Award:
Benjamin Murphy, MD, Denver Health Medical Center

Be the Change Grant:
Stacy Salerno, University of Rochester SOM

FOAM(er) of the Year:
Rory Spiegel, MD, SUNY Stony Brook

Leadership Excellence Award:
Felipe Teran, MD, Icahn School of Medicine at Mount Sinai

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Mentorship Award: Brendon Drew, DO, FACEP, Naval Medical Center San Diego

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Excellence in Teaching Award:
William Woods, MD, FACEP, University of Virginia

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EMRA/ACEP Medical Student Elective in Health Policy

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Eric Burgh, University of North Carolina – Chapel Hill
Jonathan Miller, Mercer University School of Medicine
Jennica Siddle, University of North Carolina – Chapel Hill

EMRA/ACEP DC Health Policy Fellowship

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Patrick Olivieri, MD, Mount Sinai St. Luke's-Roosevelt

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University of Washington
A Damage Control Resuscitation Cocktail for polytrauma with Hemorrhagic Shock and Traumatic Brain Injury

EMF/EMAF Health Policy Research

Arjun Venkatesh, MD, MBA
Yale University
Examining the Evolving Role of the Emergency Department in Acute Ambulatory Services for Medicare Beneficiaries: Implications for Care Coordination

EMF/EMAF Health Policy Research Scholar

Michelle Lin, MD, MPH
Icahn School of Medicine at Mount Sinai
Cost Effectiveness Analysis of ACEP's Choosing Wisely Campaign

EMF Patient-Centered Outcome Research

Mahshid Abir, MD, MSc
The University of Michigan
Investigating Patient-Centered Interventions to Reduce Asthma-Related Pediatric Hospitalizations

EMF Career Development

Stacy A. Trent, MD, MPH
Denver Health Medical Center
Adherence to Clinical Practice Guidelines and the Impact of Audit and Feedback

Courtney M. C. Jones, PhD, MPH
University of Rochester, School of Medicine and Dentistry
Evaluation of Prehospital Decision-Making Practices for Patients with Traumatic Brain Injury

EMF Health Policy Research

Scott Dresden, MD, MS
Northwestern University Feinberg School of Medicine
Changes in Emergency Department Visit and Hospitalization Rates across 88 Illinois Community Areas Associated with Health Insurance Change During Implementation of the Affordable Care Act, 2010–2014

Michael Menchine, MD, MPH
USC Keck School of Medicine—Department of Emergency Medicine
Effectiveness of State Prescription Drug Monitoring—A Comprehensive National Review

EMF/ENA Foundation Team Research

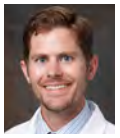
Matthew Lyon, MD, FACEP
Medical College of Georgia at Georgia Regents University

Cheedy Jaja, PhD, MPH, MN, RN
College of Nursing, Academic Health Center, University of Cincinnati
Individualizing Patient Treatment for Sickle Cell Disease through Pharmacogenetics

EMF Basic Science and Clinical Research Innovation

Rakesh Mistry, MD, MS
University of Colorado School of Medicine
Development of a Novel Outpatient Antimicrobial Stewardship Program Through Knowledge Translation and Clinical Decision Support

EMF International Emergency Medicine Outcomes and Efficacy Research



Christopher S. Courtney, MD, FACEP
Nothing to Lose Foundation
Evaluation of a Standardized Education and Treatment Protocol for Acute Fracture Care on Remote Philippine islands

Brian Rice, MDCM, MSc, DTM&H
NYU School of Medicine
Evaluation of the Impact of Emergency Care Training at Masaka Regional Referral Hospital

EMF/EMRA Resident Research

Anuja Trivedi, DO, MPH
Thomas Jefferson University Hospital
A Patient-Centered Approach to Observation Care and Transitions Home

Shih-Chuan Chou, MD, MPH
Department of Emergency Medicine, Yale New Haven Hospital
Access to Primary Care Follow Up after Emergency Department Visits in New Haven in the Era of the Affordable Care Act

Maria Dynin, MD
Georgetown/Washington Hospital Center
Epidemiological Analysis of Drug Facilitated Sexual Assault

EMF/EMRA Critical Care Resident Research

Jasmeet S. Dhaliwal, MD, MPH
Denver Health Residency in Emergency Medicine
Characteristics of Emergency Department Patients with Short Intensive Care Unit Admission for Diabetic Ketoacidosis: Implications for Resource Utilization

EMF/SAEMF Medical Student Research

Tim Xu, MPP
Johns Hopkins School of Medicine
Emergency Department Utilization in Maryland Since the Affordable Care Act

Douglas R. Stayer
Wayne State University School of Medicine
Accelerometer-Based Acoustic Cardiography to Detect Ventricular Unloading in Acute Heart Failure

Emergency Medicine Basic Research Skills (EMBRS) Workshop

Jenna LeRoy, MD
HealthPartners Institution for Medical Education and Research/Regions Hospital
Effect of Methylene Blue on Mortality in a Porcine Model of Amlodipine Toxicity

David Viau, MD
Wayne State University
Effects of Early vs Delayed Oral Antihypertensive Therapy in Hypertensive Acute Heart Failure

2016–2017 Grant Categories

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For questions about EMF Grants, please contact
Cynthia Singh, MS
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Go to emfoundation.org/applyforagrant to download the RFP and apply.
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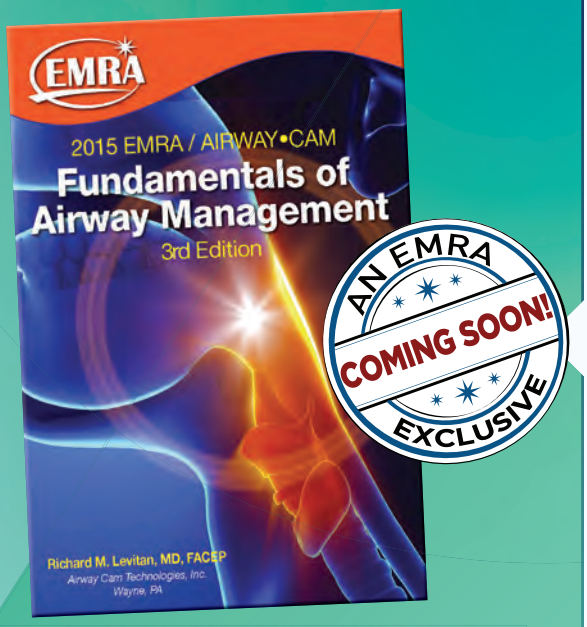

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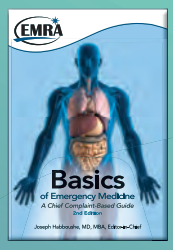

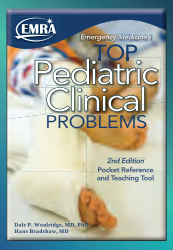

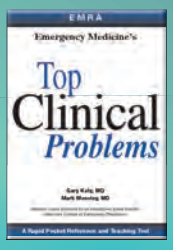

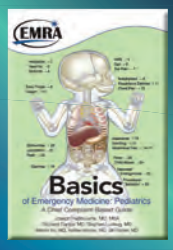

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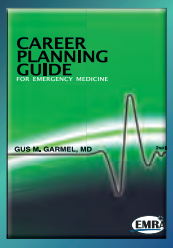
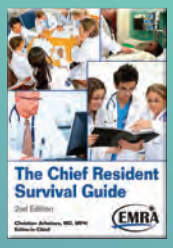
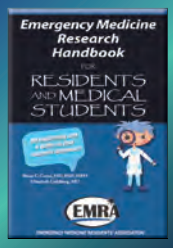
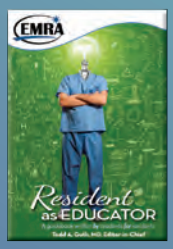
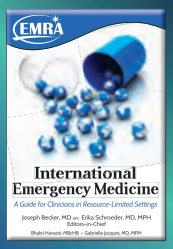


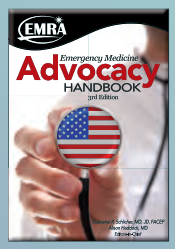


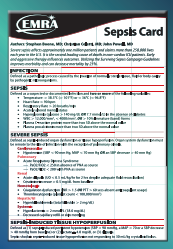


Career-Building Resources









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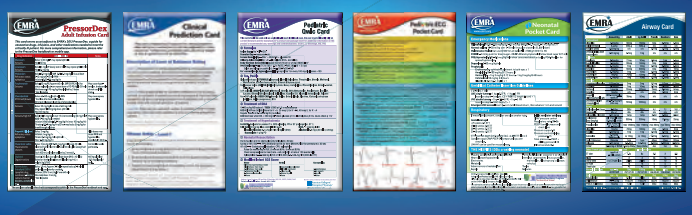

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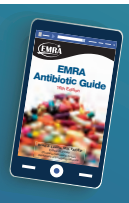

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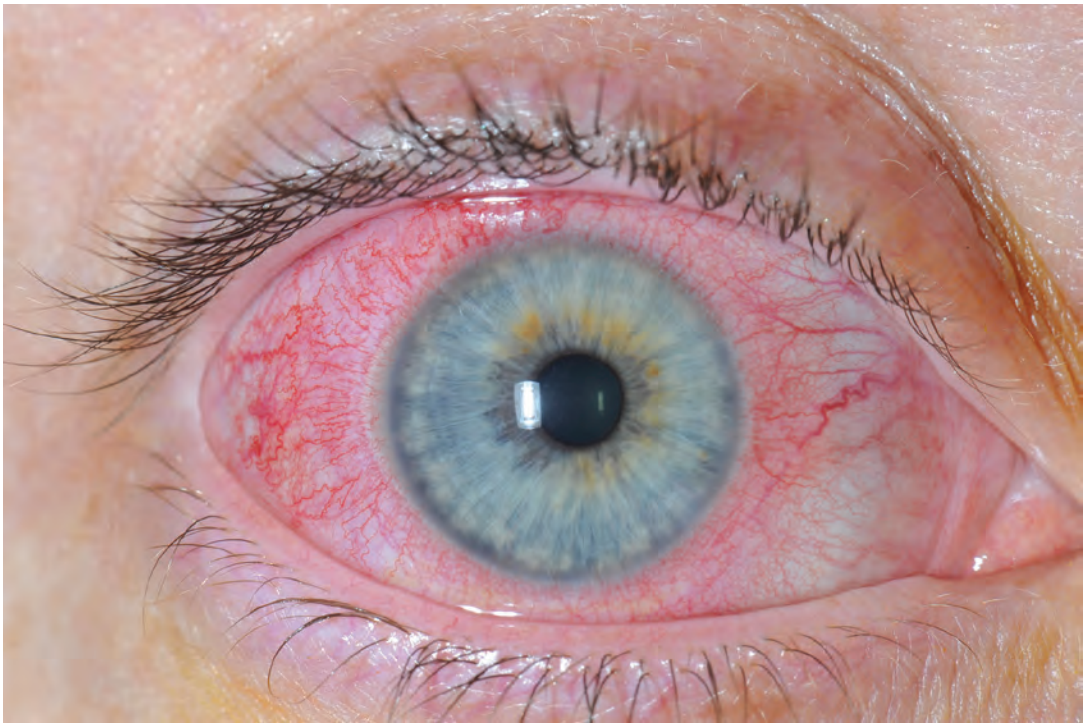

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R. Jason Thurman, MD
TriStar Skyline Hospital
Nashville, TN

Lawrence B. Stack, MD
Vanderbilt University
Nashville, TN

Brittany White, MD
Vanderbilt University
Nashville, TN

The Patient

A 31-year-old female presents to the emergency department with 1 week of right eye pain, redness, excessive tearing, and photophobia. She denies any trauma, chemical exposures, or any change in visual acuity. She does wear contact lenses, but has been using them appropriately. She has no history of autoimmune disorders or inflammatory bowel disease, and has no skin ulcers, joint pain, or back pain. Her visual acuity is 20/20 in both eyes, but she is intensely photophobic on direct and consensual examination. Her extraocular movements are normal, and her gross examination is remarkable for the findings seen in the image provided. Slit lamp examination reveals no corneal fluorescein uptake, but there are 3+ cells in the anterior chamber. Her intraocular pressures are normal.

What is the diagnosis?

See the DIAGNOSIS on page 50

The Diagnosis

This patient has anterior uveitis, which is an acute inflammation of the structures of the anterior chamber of the eye, including the iris. The eye examination reveals the presence of diffuse corneal injection with circumcorneal involvement, also known as a ciliary flush. Ciliary flush occurs because of injection of the episcleral vessels around the cornea, which is not seen in simple conjunctivitis. Patients with acute iritis should be seen by an ophthalmologist within 24 hours, and they are treated with topical cycloplegics and corticosteroids. Extreme caution should be used whenever topical corticosteroids are administered, and generally should only be utilized when recommended by an ophthalmologist. Iritis may represent the first clinical manifestation of systemic inflammatory disease. Primary care follow-up is appropriate for outpatient testing for underlying systemic etiologies.

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Oct. 25 @ 9:30PM
Dr. Joe Heck
(R-NV) for U.S. Senate, Westin Waterfront

Oct. 26 @ 9:30AM
Dr. Raul Ruiz
(D-CA), NEMPAC VIP Lounge

The suggested donation for Residents is $50.

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Residents will receive access to both NEMPAC VIP events at ACEP15 for a donation of $60/annually or $5/month. Resident "Give-a-Shift" Donors ($120 annually or $10/monthly) may bring one guest.

VIP RECEPTION

John F. Kennedy Presidential Library & Museum
Oct. 25, 7:00PM - 9:00PM
Shuttle transportation will be provided from the Westin Waterfront.

VIP DONOR LOUNGE

BCEC, Foyer outside ACEP Exhibit Hall
Oct. 26 – Oct. 28, 8:00AM - 4:00PM
Complimentary breakfast, lunch and snacks available along with professional shoulder/neck massage, and use of computers/printers and television. Resident Give-a-Shift donors will receive a special thank you gift from the NEMPAC Board.

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acep Scientific Assembly 15 BOSTON

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Board Review

QUESTIONS

Provided by *PEER VIII. PEER (Physician's Evaluation and Educational Review in Emergency Medicine)* is ACEP's gold standard in self-assessment and educational review. These questions are from the latest edition of *PEER VIII*. For complete answers and explanations, visit emrresident.org (*Features* section).

To learn more about *PEER VIII*, or to order it, go to www.acep.org/bookstore.

1. Which of the following is a risk factor for the development of cellulitis?
   A. Arterial insufficiency
   B. History of cancer
   C. Lymphedema
   D. Tobacco use

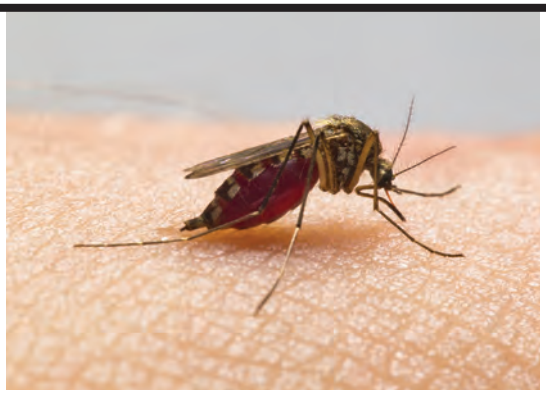
2. Which of the following agents in overdose most closely mimic opioid poisoning?
   A. Clonidine
   B. Diphenhydramine
   C. LSD
   D. Yohimbine

3. A 6-year-old boy is brought in by his father 1 hour after sustaining a head injury. He was riding his bicycle down a hill and fell off after it struck a tree branch; he was not wearing a helmet. Medical history is significant for hemophilia A. Which of the following is the first step in management?
   A. Blood transfusion using O-negative whole blood
   B. CT
   C. Factor VIII therapy to 100% activity
   D. Factor IX therapy to 50% activity

4. An emergent lumbar puncture is performed on a woman with fever, headache, and a stiff neck. Her past medical history is notable only for hypertension and chronic atrial fibrillation. The procedure is successful, with minimal trauma, but later she begins to complain of local back pain at the site of the procedure, lower extremity dysesthesias, and urinary incontinence. What should be the primary concern?
   A. Diabetic neuropathy
   B. Epidural hematoma
   C. Nerve damage
   D. Spine abscess

5. Which of the following patients can be appropriately discharged without imaging after an afebrile first-time seizure?
   A. 18-month-old black child with sickle-cell disease who is now acting normally
   B. 2-year-old white child with a ventriculoperitoneal shunt for hydrocephalus who is now acting normally
   C. 3-year-old Chinese child with a family history of seizure disorder who is now acting normally
   D. 4-year-old Mexican child who recently immigrated to the United States who is now acting normally

ANSWERS
1. C; 2. A; 3. C; 4. B; 5. C



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From the May 2014 issue of *Emergency Medicine Practice*, "Emergency Department Management of Mosquito-Borne Illness: Malaria, Dengue, and West Nile Virus." Reprinted with permission. To access your EMRA member benefit of free online access to all *EM Practice*, *Pediatric EM Practice*, and *EM Practice Guidelines Update* issues, go to www.ebmedicine.net/emra, call 1-800-249-5770, or send e-mail to ebm@ebmedicine.net.

❶ **"I work at a small community hospital ED, where we don't have infectious disease specialists to consult. I had a sick-appearing patient in whom I suspected a mosquito-related illness. When I called the patient's primary care doctor to get the patient admitted, she asked me for recommendations regarding admission orders."**
When encountering a patient with suspected mosquito-borne illness, professional help is only a phone call away. The CDC has hotlines and dedicated websites for assistance with the management of malaria, dengue, and West Nile virus. There are also on-call experts who can assist in navigating your case and other conditions.

❷ **"I suspected that the patient had dengue, but his fever was resolving. He just came back in severe shock."**
Dengue is a multistage clinical disease. The defervescence of a patient in the first week of the disease can mark the beginning of the "critical phase" of the disease where shock and death are a risk.

❸ **"The tourist from Guatemala I saw 2 days ago who had fever, body aches, abdominal pain, and a rash didn't look that sick. He just came back and is in the intensive care unit with multiorgan failure."**
Be alert for any patient traveling from a dengue-endemic region with symptoms concerning for the disease. In this case, the patient had a dengue warning sign (abdominal pain) and should have been admitted for observation.

❹ **"The patient said he went to a picnic and was bitten by mosquitoes. Now he feels miserable, with headaches and fever."**
West Nile virus is endemic to all 48 contiguous United States. Use of personal preventive measures — especially the use of DEET-containing insect repellents — is highly encouraged to prevent West Nile virus transmission.

❺ **"I just got a call from the local health department. They're upset because I didn't consider West Nile virus in that patient I admitted as having Guillain-Barré last week."**
West Nile virus can cause a demyelinating process similar to Guillain-Barré. Consider West Nile virus testing in any patient with flu-like symptoms and flaccid paralysis. Appropriate monitoring and identification of new cases allows health departments to focus prevention and control efforts.

❻ **"The patient said that when he was in Uganda a couple of weeks ago, the hotel he stayed in didn't provide insect nets. When he asked, they told him not to worry – their mosquitoes didn't have malaria."**
Most savvy travelers carry their own nets. Not only does this assure they are in good repair and treated with insecticide, many guesthouses and hotels don't have nets. Advise patients not to risk a malaria infection because of the lack of nets.

❼ **"I thought about malaria in that patient with fever and recent travel, but he reported taking chemoprophylactic medications, so I didn't think he could have malaria."**
Even travelers prescribed prophylactic medication can be taking the incorrect regimen for resistance patterns in the areas traveled. In addition, patient nonadherence to most regimens is fairly high.

❽ **"I can't believe the patient died at home 3 days after discharge. I sent the laboratory results and asked her to follow up with her primary care provider in a couple of days in case she needed to be treated. She looked well at the time of discharge."**
P falciparum malaria constitutes a medical emergency and patients with a high index of suspicion for it warrant initiation of treatment either as outpatients or inpatients while tests are pending.

❾ **"I was proud of diagnosing complicated *P falciparum* malaria in a patient who had recently returned from a trip to Nigeria with vomiting, but I was confounded to find out that the patient nearly coded while receiving treatment."**
Patients receiving quinidine intravenously need a baseline ECG and cardiac monitoring. Rapid infusion of the drug can cause severe hypotension as well as QT prolongation and arrhythmia.

❿ **"The thick and thin smears I ordered were reported negative by the lab, so malaria was ruled out."**
In nonimmune populations, low-level (<1%) parasitemia can be clinically significant, but it can lead to false negatives with both light microscopy and rapid diagnostic tests. Diagnosis of malaria by light microscopy is technically challenging and, in nonendemic areas, most clinicians' experience is limited. At least 3 slide preparations must be examined to definitively exclude malaria, so ensure that a sufficient amount of blood is sent to the laboratory. ✶

RISK MANAGEMENT PITFALLS
Apparent Life-Threatening Events in Children

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❶ **"The mother's history of the event is unclear. She isn't even sure her baby stopped breathing or changed color. The patient appears well with a normal physical examination, so I am going to discharge them home to follow up with their pediatrician."**
The observer's description of the episode is often skewed due to the frightening nature of ALTEs. If the history is unclear, emergency clinicians should be calming and reassuring, and take the event seriously. Emergency clinicians will need to spend more time with the observer to obtain as much detail as possible about the event. A thorough physical examination is essential in evaluating the infant. Infants may also need to be observed in the ED to provide reassurance to the caregiver if it is felt that this was likely not an ALTEy.

❷ **"The patient has been having upper respiratory infection symptoms for the past several days, so this episode is most likely part of the upper respiratory infection, and he can be discharged."**
Recent data conflict with regard to the risk of upper respiratory infection in patients with ALTEs. Some studies have reported that upper respiratory infection symptoms may put a patient at increased risk for extreme apnea or bradycardia. However, a recent clinical decision rule showed that the absence of upper respiratory infection was associated with an increased risk of an infant with an ALTE requiring an intervention. The presence of upper respiratory infection remains an unclarified risk factor and should not influence the evaluation of an infant with an ALTE.

❸ **"This 4-month-old patient had an ALTE, but she has a normal history and physical examination in the ED. She has no risk factors for an underlying condition. I ordered a screening basal metabolic panel and blood culture, just to be sure."**
Recent studies have shown that screening tests without a history and physical examination that is contributory to a diagnosis are of low yield, and do not always add to the evaluation of an ALTE.

❹ **"The patient has a small bruise on his arm, and his mother said he must have rolled against the bar in his crib. The injury is minor, so I am not really worried about nonaccidental trauma."**
It is important for the emergency clinician to decide whether the injury is consistent with the mechanism reported. Nonaccidental trauma can be a cause for an ALTE, and the clinician needs to have a high index of suspicion in these cases. When nonaccidental trauma is suspected, cranial imaging and skeletal survey may need to be obtained.

❺ **"This patient was reported as having 3 episodes of color change today, but she is completely well-appearing now. We observed her in the ED and decided to discharge her."**
Patients who experience recurrent ALTEs within 24 hours prior to presentation are at increased risk for having serious underlying pathology. Patients presenting with multiple episodes should be admitted to the hospital for observation and possible diagnostic testing.

❻ **"This patient had an episode of limpness and facial cyanosis, but he is 6 months old, so this cannot be an ALTE."**
The definition of an ALTE does not include an age range. ALTEs have been found predominantly in infants aged < 3 months, but there is no set upper limit. ALTEs should be considered in any patient aged <1 year.

❼ **"The infant seems to be having reflux, so I am sending her home with reflux precautions."**
Although GERD may be a cause of an ALTE, there are reports of notable underlying etiologies even in the presence of GERD. Infants with ALTEs and GERD-like symptoms should still be considered for further diagnostic evaluation and monitoring.

❽ **"I decided to admit the patient for an ALTE, but suggested to the hospitalist that the infant should be discharged with a home monitor for safety."**
Home monitoring has been recommended for only a select group of patients, and discussions regarding whether or not a patient needs home monitoring should be initiated by the inpatient team and the clinicians providing follow-up.

❾ **"The patient has a cough, but appears to be stable, so I planned for discharge."**
RSV and pertussis infection can present with minimal symptoms, especially in young infants. Testing for these pathogens should be performed when seasonally appropriate.

❿ **"The patient looked very well after the event, witnessed at home by the mother. The physical examination was normal, so I discharged her with a plan for follow-up with her pediatrician."**
Patients often appear well after an ALTE; however, a normal examination does not rule out all serious pathology. Infants with ALTEs should be considered for admission to the hospital for further monitoring and targeted diagnostic evaluation. ✶

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ULTRASOUND (P. 31)

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All positions advertised in ***EM Resident*** must be limited to board-certified/board-prepared (BC/BP), residency-trained emergency physicians. For the sake of terminology consistency, the terms, "ED," "Emergency Department," and "Emergency Physicians" are preferable over the use of "ER" or any derivation. In addition, board-certified/board-prepared (BC/BP) is required over board certified/board eligible (BC/BE). ***EM Resident*** has the right to refuse an advertisement if such guidelines are not met.

DISPLAY ADS

Placement of all ads other than premium ads, is at the discretion of the publisher. All efforts are made to preserve advertising materials in their original condition; however, the publisher is not responsible for lost or damaged advertising materials after publication. All advertising is subject to the approval of EMRA. Payment must accompany order. All rates are non-commissionable. All cancellations must be in writing. Any cancellations received after space deadline will not be refunded.

CLASSIFIED ADS

Copy for classified ads must be submitted via email; space will not be reserved until payment is received. Classified ads are placed in alphabetical order by state, then city, or under a "Multi-State" heading.

Classified Ad Rates	
1x	
Up to 150 words	$311
Up to 300 words	$554
3x	
Up to 150 words	$260
Up to 300 words	$485
6x	
Up to 150 words	$221
Up to 300 words	$416

Color Block Background	
1x	
Up to 150 words	$402
Up to 300 words	$624
3x	
Up to 150 words	$347
Up to 300 words	$589
6x	
Up to 150 words	$277
Up to 300 words	$485

ADD LOGO ARTWORK TO CLASSFIED
Black & White: $75 or
Color: $100 per listing/per issue

Placement/Size/Color	# of Runs 1x	3x	6x
Covers (4 color only)			
Inside front (IFC) 7.5" x 10"	$3861	$3162	$2359
Inside back (IBC) 7.5" x 10"	3861	3162	2359
Outside back (OBC) 7.5" x 7.5"	4950	3795	2722
Four Color			
2-page spread	$4455	$3795	$3358
Full page 7.5" x 10"	2598	1992	1620
1/2 page vertical 3.5" x 10"	1351	1195	1048
1/2 page horizontal 7.5" x 4.75"	1351	1195	1048
1/3 vertical 2.25" x 10"	1074	895	762
1/4 page 3.5" x 4.75"	796	597	476
Spot Color			
Add 25% to the black-and-white rates for each additional color.			
Black and White			
2-page spread	$2970	$2530	$2238
Full page 7.5" x 10"	1733	1328	1079
1/2 page vertical 3.5" x 10"	901	796	699
1/2 page horizontal 7.5" x 4.75"	901	796	699
1/3 page vertical 2.25" x 10"	693	597	508
1/4 page 3.5" x 4.75"	485	398	317

Notes: Bleeds must be at least 9 points on each bleed side; all sizes are expressed width x length.

PRODUCTION MATERIALS

DIGITAL AD SPECIFICATIONS

High-resolution PDF formatted ads are preferred and may be emailed. If ads were designed in a page layout program, please send an EPS version (FTP available).

Other acceptable formats:

TIF (300 DPI; CMYK)
EPS (300 DPI; CMYK)
JPG (300 DPI at 100% or larger print size)
AI (embed images; text; CMYK)

- If an ad is submitted in its native application program, all images and fonts will also need to be submitted **OR** all text converted to outlines and all images 'embedded.'
- PDF files with embedded fonts and graphics at 300 DPI (resolution) will be accepted.
- All images must be 300 DPI (resolution).
- MS Word files are **not** acceptable as final display ads, however typesetting services are available at an additional charge of $100.
- **Web graphics are unacceptable** (resolution is too low) and will be discarded.
- EMRA is available to assist in the production of your advertisement.

ADVERTISING DEADLINES

Issue	Space	Art
Dec/Jan	11-1	11-10
Feb/Mar	1-1	1-10
Apr/May	3-1	3-10
Jun/Jul	5-1	5-10
Aug/Sept	7-1	7-10
Oct/Nov*	9-1	9-10

ACEP Scientific Assembly issue: deadline subject to change based on meeting schedule.

Questions? Contact Rich Devanna at 201-767-4170 | or email advertising@emra.org

Baylor College of Medicine

Section of Emergency Medicine Fellowship Programs!

The Section of Emergency Medicine at Baylor College of Medicine in Houston, TX is offering fellowship positions beginning July 2016.

Current fellowship offerings include:

- Medical Education
- Ultrasound Education and Administration
- Administration and Operations
- Emergency Medical Services
- Health Policy and Advocacy
- Global Health

Fellows receive a faculty appointment and are eligible for full benefits. Fellows work clinically in all of the sites staffed by the section. Tuition support for various Masters' programs, as well as support for travel and CME, is provided per the specific curriculum. For more information on individual programs, contacts, and the application process, please visit:

http://bit.ly/bcmEMfellow

Emergency Medicine Fellowship Programs

Washington University School of Medicine in St. Louis

Based at two busy, high-acuity, urban tertiary emergency departments —Barnes-Jewish Hospital and St. Louis Children's Hospital — as well as at a smaller community emergency department, the Division of Emergency Medicine at Washington University School of Medicine offers ample opportunity to pursue your career interests in emergency medicine.

One- and two-year fellowships are available in:

Critical Care • Toxicology • Emergency Medical Services
Ultrasound • Research

The Division at a glance:

- Level I Trauma Center • 48 residents
- More than 100 pediatric and adult faculty physicians
- Nationally ranked medical school and academic medical center with a history of innovation and discovery

For more information on specific programs as well as application and contact information, visit:

http://emed.wustl.edu/fellowships

Washington University in St. Louis
School of Medicine

SCHOOL OF MEDICINE
UNIVERSITY of CALIFORNIA • IRVINE
Discover • Teach • Heal

Emergency Medicine Fellowship Opportunities

UC Irvine Department of Emergency Medicine is seeking HS Clinical Instructors for fellowships starting July 1, 2016. UC Irvine Medical Center is rated among the nation's best hospitals by U.S. News & World report 14 years in a row and is a 412-bed tertiary and quaternary care hospital with a nationally recognized three-year EM residency program since 1989. The progressive 35-bed ED sees more than 50,000 patients/year and serves as a Level I adult and Level II Pediatric Trauma Center with more than 3,800 annual trauma runs.

The hospital is also a Comprehensive Stroke & Cerebrovascular Center, Comprehensive Cancer Center, Cardiovascular receiving center and regional Burn centers, with Observation and an After Hours clinic in urban Orange County. Completion of an ACGME accredited EM Residency is required. Salary is commensurate with qualifications and proportion of clinical effort. For more information visit: http://www.emergencymed.uci.edu/fellowships.asp. (To apply: https://recruit.ap.uci.edu).

1. **Disaster Medicine Fellowship (JPF03020)**
2. **EM Education and Faculty Development (JPF03026)**
3. **Medical Simulation Fellowship (JPF03023)**
4. **Multimedia Design Education Technology Fellowship (JPF03051)**
5. **Point-of-Care Ultrasound Fellowship (JPF03018)**

The University of California, Irvine is an Equal Opportunity/Affirmative Action Employer advancing inclusive excellence. All qualified applicants will receive consideration for employment without regard to race, color, religion, sex, sexual orientation, gender identity, national origin, disability, age, protected veteran status, or other protected categories covered by the UC nondiscrimination policy.

MARYLAND >> VIRGINIA >> WASHINGTON, D.C. >> WEST VIRGINIA

EMA, an established sixteen-hospital, regional, democratic, physician-managed group seeks full and part-time BC or BP Emergency physicians to practice in Maryland, Northern Virginia, Washington, D.C. and West Virginia. Since 1971, EMA has offered our physicians an unmatched quality-of-life with the security of our 100% contract stability!

TOP WORK PLACES 2015
The Washington Post

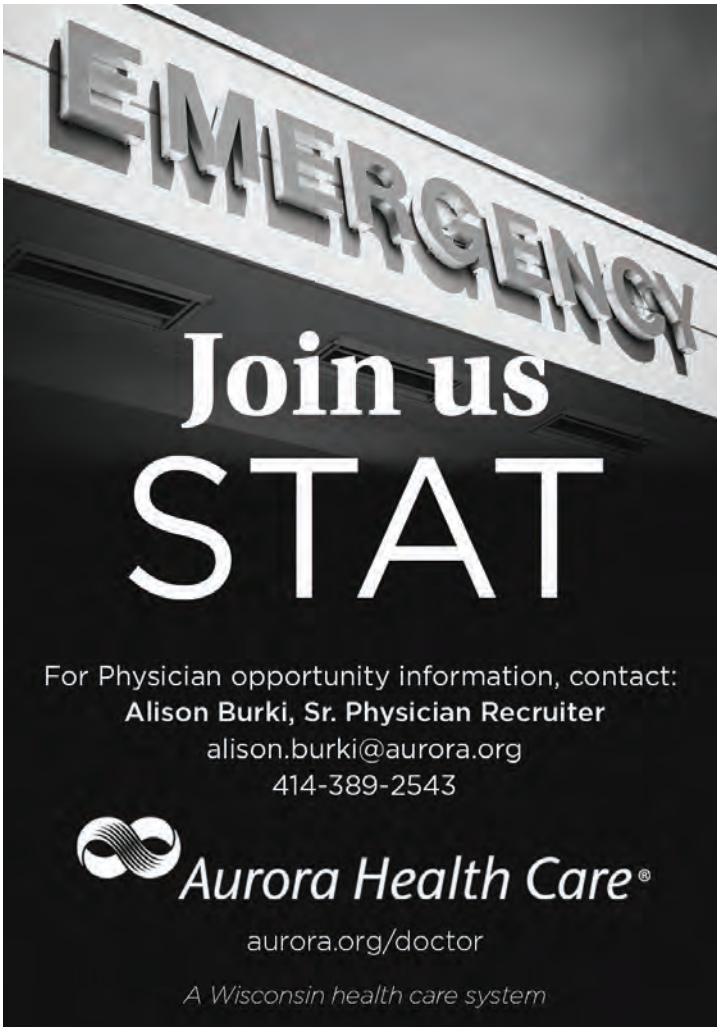
- **Physician-owned/managed group**
- **Democratic partnership structure**
- **Quality-of-life centered practice**
- **Administrative & clinical opportunities**
- **Initially five weeks of paid time off per year**
- **Full benefits package for physicians and family**

Send CV: Emergency Medicine Associates, P.A., P.C.
Phone: 1-800-942-3363
Fax: 240-686-2334
Email: Recruitment@EMAonline.com
www.EMAonline.com

ACEP Booth #816

LIVE, WORK & PLAY WITH US!

EMA
EMERGENCY MEDICINE ASSOCIATES, P.A., P.C.



CLASSIFIED ADVERTISING

ARIZONA

Casa Grande: Banner Casa Grande Regional Medical Center is a full-service community hospital with an annual volume of 39,000 emergency patients. Excellent back up includes 24-hour hospitalists. Casa Grande is located just south of Phoenix and north of Tucson. Beautiful weather year round, unlimited outdoor activities and major metro areas a short distance away make this an ideal setting. EMP offers democratic governance, open books and equal equity ownership. Compensation package includes comprehensive benefits with funded pension, CME account, and more. Contact Bernhard Beltran directly at 800-359-9117 or e-mail bbeltran@emp.com.

CALIFORNIA

Madera: PEDIATRIC EM — Excellent compensation package ($300K/yr) at Valley Children's Hospital**.** Join an outstanding team of fellowship trained/board certified pediatric emergency medicine physicians, with 100,000 pediatric emergency patients treated annually, excellent back up, PICU, and in-house intensivist coverage. The ED physicians also staff the hospital-wide sedation service. The compensation package includes comprehensive benefits with funded pension, CME account, family medical/dental/prescription/vision coverage, short and long term disability, life insurance, malpractice (occurrence) and more. Contact Bernhard Beltran directly at 800-359-9117 or email bbeltran@emp.com.

NORTHERN CALIFORNIA – Placerville, Marshall Medical Center: Equity partnership position with stable, democratic group at modern community hospital seeing 31,000 emergency pts./yr. New 24 bed ED opened in 2013. Desirable area proximate to the amenities of the Bay Area, Sacramento, Napa Valley, Lake Tahoe and Yosemite. Emergency Medicine Physicians (EMP) is a dynamic, majority clinician-owned, democratic group offering unparalleled career opportunity for our physicians. We offer open books and excellent compensation plus shareholder status. Comprehensive benefits include funded pension, CME account, family medical/dental/prescription/vision coverage, relocation allowance, short and long term disability, life insurance, malpractice (Occurrence) and more. Please contact Bernhard Beltran at 800-359-9117 or email bbeltran@emp.com.

CLINICAL & ACADEMIC EMERGENCY PHYSICIANS

Greenville Health System (GHS) seeks **BC/BP emergency physicians** to become faculty in the newly established **Department of Emergency Medicine**. Successful candidates should be prepared to shape the future Emergency Medicine Residency Program and contribute to the academic output of the department. GHS is the largest healthcare provider in South Carolina and serves as a tertiary referral center for the entire Upstate region. The flagship Greenville academic Department of Emergency Medicine is integral to the patient care services for the:

- **Level 1 Trauma Center**
- **Dedicated Pediatric Emergency Department within the Children's Hospital**
- **Five Community Hospital Emergency Departments**
- **Accredited Chest Pain Center**
- **STEMI and Comprehensive Stroke Center**
- **Emergency Department Observation Center**
- **Regional Ground and Air Emergency Medical Systems**

The campus hosts 15 residency and fellowship programs and one of the nation's newest allopathic medical schools – University of South Carolina School of Medicine Greenville.

Emergency Department Faculty enjoy a flexible work schedule, highly competitive salary, generous benefits, and additional incentives based on clinical, operational and academic productivity.

Stop by booth #368 at ACEP15 in Boston. We look forward to meeting you!

Greenville, South Carolina is a beautiful place to live and work. It is one of the fastest growing areas in the country, and is ideally situated near beautiful mountains, beaches and lakes. We enjoy a diverse and thriving economy, excellent quality of life, and wonderful cultural and educational opportunities.

Public Service Loan Forgiveness (PSLF) Program Qualified Employer

Qualified candidates should submit a letter of interest and CV to:
Kendra Hall, Sr. Physician Recruiter, kbhall@ghs.org, ph: 800-772-6987.
GHS does not offer sponsorship at this time. EOE

GHS GREENVILLE HEALTH SYSTEM

EMERGENCY MEDICINE PHYSICIAN
EXPERIENCE WORK/LIFE BALANCE AT SNHMC

POSITION AVAILABLE IMMEDIATELY

Join a stable group of 16 Board Certified Emergency Medicine Physicians at a Level III trauma center with 44,000 annual visits.

- Excellent subspecialty backup and outstanding nursing, ancillary, radiology, and lab support
- Competitive salary and benefits including:
  - Malpractice insurance
  - Short and long term disability
  - Health and dental insurance
  - Very Competitive Wages

Southern New Hampshire Medical Center is a 188-bed acute care hospital located in Nashua, New Hampshire, which was voted twice by Money Magazine as “Best Place to Live in America,” – 35 miles north of Boston, one hour from the ocean, mountains, and lakes.

Send CV to Dr. Joseph Leahy
Medical Director, Emergency Services
8 Prospect Street
Nashua, NH 03062
603-577-2538
E-mail *Joseph.Leahy@snhhs.org*
Visit our Web site at *www.snhhs.org*

CLASSIFIED ADVERTISING

CALIFORNIA

San Francisco: Chinese Hospital – Located in the heart of San Francisco's Chinatown, Chinese Hospital has served the diverse healthcare needs of this community since 1924. Although the volume of emergency patient visits is low (6,500 per year), the acuity is high with a wide spectrum of interesting and complex medical cases. A brand new state of the art ED is opening in 2016. The supportive medical staff of approximately 250 represents most major specialties. ED shifts are 12 hours in length and provide for a high quality of life through a manageable work schedule. Emergency Medicine Physicians (EMP) is a stable, democratic, clinician owned group that offers true career opportunity and outstanding benefits. We maintain progressive management with our primary commitment to patient care. Compensation includes some of the best benefits in emergency medicine including a pension contribution and a Business Expense Account, medical, dental, vision, prescription coverage and more. Please contact Bernhard Beltran at 800-359-9117 or submit your CV to bbeltran@emp.com.

CONNECTICUT

Meriden, New London and Stamford: MidState Medical Center is a modern community situated between Hartford and New Haven, seeing 57,000 EM pts./yr. Lawrence & Memorial is a Level II Trauma Center on the coast near Mystic seeing 50,000 pts./yr. The Stamford Hospital is a Level II Trauma Center seeing 49,000 ED pts./yr., located 35 miles from New York City near excellent residential areas. Ownership Matters – EMP is a majority physician owned group with equal voting, equal equity ownership, funded pension and comprehensive benefits, plus industry-leading training programs, support services and career development options. Contact Ann Benson (careers@emp.com), Emergency Medicine Physicians, 4535 Dressler Rd. NW, Canton, OH 44718, 800-828-0898 or fax 330-493-8677.

DISTRICT OF COLUMBIA

THE GEORGE WASHINGTON UNIVERSITY

Faculty Positions-Emergency Medicine: The Department of Emergency Medicine of the George Washington University is seeking physicians for our academic practice. Physicians are employed by Medical Faculty Associates, a University-affiliated, not-for-profit multispecialty physician group, and receive regular faculty appointments at the University. The Department provides staffing for the Emergency Units of George Washington University Hospital, the Walter Reed National Military Medical Center, and the DC Veterans' Administration Medical Center. The Department sponsors a four-year residency, ten fellowships and a variety of student programs. We are seeking physicians who will participate in our clinical and educational programs and contribute to the Department's research and consulting activities. Rank and salary are commensurate with experience. **Basic Qualifications:** Physicians must be ABEM or AOBEM certified, or have completed an ACGME or AOA certified Emergency Medicine residency, prior to the date of employment. **Application Procedure:** Complete the online faculty application at gwu.jobs/postings/27537 and upload a CV and cover letter. Review of applications will be ongoing, and will continue until positions are filled. Only complete applications will be considered. Contact Robert Shesser MD, Chair, Department of Emergency Medicine, directly with any questions about the position at: rshesser@mfa.gwu.edu. *The George Washington University and the George Washington University Medical Faculty Associates are an Equal Employment Opportunity/Affirmative Action employer that does not unlawfully discriminate in any of its programs or activities on the basis of race, color, religion, sex, national origin, age, disability, veteran status, sexual orientation, gender identity or expression, or on any other basis prohibited by applicable law.* smhs.gwu.edu/emed.

FLORIDA

EMPROS
emergency medicine professionals,p.a.

Atlantic Coast/East Central (Daytona Beach Area): Seeking Residency-Trained EM Physicians for desirable beachside Central Florida coastal area. Join our fully democratic group and become a partner in 18 months! EMPros serves 4 community hospitals with 170k total visits. Health, life, dental, disability and 401(k) provided. Visit emprosonline.com to learn more and submit your CV.

EPMG
Emergency Physicians Medical Group

EMERGENCY MEDICINE OPPORTUNITIES

Contact EPMG today! (800) 466-3764
Visit us at www.EPMG.com

ILLINOIS

RIVERSIDE MEDICAL CENTER
KANKAKEE, IL

- 41,000 patients annually
- 36 hrs of coverage
- Top 15 Illinois Hospitals by U.S. News & World Report in 2015

LOAN FORGIVENESS AVAILABLE!!

WEST SUBURBAN MEDICAL CENTER
OAK PARK, IL

- 54,000 patients annually
- 42 hrs of physician coverage w/scribes
- Nationally recognized Teaching program

20 min FROM DOWNTOWN CHICAGO

INDIANA

ST. MARY MEDICAL CENTER
HOBART, IN

- 40,000 patients annually
- 52 hrs of physician coverage
- Truven Health Top 50 Health System

MOONLIGHTING AVAILABLE!!

FRANCISCAN ST. ANTHONY HEALTH*
MICHIGAN CITY, IN & CHESTERTON ER

- 35,000 & 10,000 patients annually
- 36 hrs & 24hrs of physician coverage
- Chesterton: Free standing ED opened in 2012

LOAN FORGIVENESS!

ST. CATHERINE HOSPITAL
EAST CHICAGO, IN

- 36,000 patients annually
- 36 hrs of physician coverage w/scribes
- Ranked in Top 5% Hospitals Nationally (Emergency Medicine)

MICHIGAN

MUNSON HEALTHCARE*
GRAYLING HOSPITAL & CADILLAC HOSPITAL, MI

- 20K & 21K patients annually
- 36 hrs of physician coverage
- Advanced Stroke Robot on-site
- Top 2013 Great Community Hospitals

MOONLIGHTING AVAILABLE!!

MIDMICHIGAN HEALTH GRATIOT*
ALMA, MI

- 20,000 patients annually
- 24 hrs physician coverage
- Thomson Reuters Top 10 Health Systems 2011-2009

STURGIS HOSPITAL*
STURGIS, MI

- 15,000 patients annually
- 24 hrs physician coverage
- Award Winning Telestroke Program

MOONLIGHTING AVAILABLE!!

DELAWARE

NANTICOKE MEMORIAL HOSPITAL*
SEAFORD, DE

- 39,000 patients annually
- 30 hrs physician coverage
- Becker's 150 Best Places to Work in Healthcare 2010 - 2015

OHIO

SOUTHERN OHIO MEDICAL CENTER
PORTSMOUTH, OH

- 52,000 patients annually
- 56 hrs of physician coverage
- FORTUNE Best Place to Work in Healthcare 2015 (#5)

LOAN FORGIVENESS AVAILABLE!

(*) J1 Sponsorships Available

OUR COMMITMENT TO OUR PHYSICIANS INCLUDE:

EPMG offers paid family health, prescription, vision, dental, life, LTD, flexible scheduling, 401(k) employer contribution, paid malpractice, signing bonuses, performance & profit sharing bonuses and much more!

ACEP'15 BOOTH #929 PLINKO!!!

MICHIGAN ∿ INDIANA ∿ ILLINOIS ∿ IOWA ∿ OHIO ∿ DELAWARE

Kettering Health Network, a not-for-profit network of eight hospitals serving southwest Ohio, is assisting a highly regarded, regional group in their search for full-time **Board Certified/ Board Prepared Emergency Medicine physicians**. These positions offer competitive salary, sign-on bonus of up to $40,000, a rich benefits package, and moving expense reimbursement.

This group, comprised of 63 physicians and advanced practice providers, currently staffs six of Kettering Health Network's Emergency Departments; four hospital locations (Trauma Level II/III choices); and two freestanding Emergency Centers. Choose your perfect setting!

The network has received numerous awards for excellent clinical care and service. In fact, CareChex named Kettering Medical Center #1 in Ohio for trauma care – a testament to our team and the exceptional care it provides at its level II Trauma Center.

We are scheduling site visits now!
Contact Audrey Barker, Physician Recruitment Manager, at **audrey.barker@khnetwork.org**; **(740) 607-5924** cell; **(937) 558-3476** office; **(937) 522-7331** fax.

Visit ***ketteringdocs.org*** for more information.

KETTERING Health Network

CLASSIFIED ADVERTISING

GEORGIA

Atlanta: EmergiNet, a progressive, well-established physician owned emergency group has positions available for BC/BP, EM residency trained physicians at multiple facilities in the Atlanta area. We work as a team emphasizing quality emergency care, dedicated customer service, professional and personal growth. Fee-for service based compensation, plus benefits, in the $350K range. Malpractice and tail coverage are provided. Flexible scheduling, no non-compete, and much more. E-mail CV to Neil Trabel, ntrabel@emerginet.com; fax 770-994 -4747; or call 770-994-9326, ext. 319.

HAWAII

Pali Momi Medical Center — Emergency Medicine Physicians (EMP) is seeking Emergency Medicine Physicians to join us at Pali Momi Medical Center. Pali Momi Medical Center is a 116 bed facility with an annual volume of 66K patients. If you have ever dreamed of moving to Hawaii, now is your chance. This is your opportunity to practice in a challenging and rewarding setting while enjoying the lifestyle that only this island paradise can offer. EMP offers democratic governance and excellent compensation. Compensation package includes comprehensive benefits, family medical/dental/prescription/vision coverage, short and long term disability, pension contribution, CME allowance, life insurance, malpractice and more. This is a very rare opportunity, for additional information I urge you to contact me Bernhard Beltran at 800-359-9117 or submit your CV via email for immediate consideration bbeltran@emp.com EMP, 4535 Dressler Road NW, Canton, OH 44718.

ILLINOIS

Chicago Heights/Olympia Fields: Franciscan St. James Health (2 campuses seeing 34,000 and 40,000 pts./yr) is affiliated with Midwestern University's emergency medicine residency program. Situated just 30 miles south of Chicago, the location makes for easy access to a variety of desirable residential areas. Ownership Matters – EMP is a majority physician owned group with equal voting, equal equity ownership, funded pension and comprehensive benefits, plus industry-

PICTURE YOURSELF AT QUESTCARE

PHYSICIAN-OWNED AND OPERATED EMERGENCY MEDICINE GROUP

JOIN US AS WE GROW!

EXCITING **EMERGENCY MEDICINE** OPPORTUNITIES AVAILABLE IN **TEXAS** AND **OKLAHOMA**

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- You become an owner of your EM group
- Group decisions are made by you and doctors like you
- You will have scheduling flexibilty to enjoy what moves YOU

Are you interested in an opportunity to join a group of medical professionals who are serious about their work AND play? With Questcare, you will find a company that creates the work/play balance that you have the power to choose.

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EMERGENCY MEDICINE

VISIT US AT ACEP 2015 IN BOSTON - BOOTH 907

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leading training programs, support services and career development options. Contact Ann Benson (careers@emp.com), Emergency Medicine Physicians, 4535 Dressler Rd. NW, Canton, OH 44718, 800-828-0898 or fax 330-493-8677.

Chicago-Joliet: Presence Saint Joseph Medical Center (70,000+ pts./yr.) is a respected hospital SW of Chicago proximate to the Hinsdale and Naperville suburbs. Comprehensive services include a dedicated pediatric ED. Outstanding opportunity to join a dynamic director and supportive staff. Ownership Matters — EMP is a majority physician owned group with equal voting, equal equity ownership, funded pension and comprehensive benefits, plus industry-leading training programs, support services and career development options. Contact Ann Benson (careers@emp.com), Emergency Medicine Physicians, 4535 Dressler Rd. NW, Canton, OH 44718, 800-828-0898 or fax 330-493-8677.

INDIANA

Elkhart: EEPI is a private, democratic EM group in Northern Indiana. We have held contracts at two independent facilities for 46 years. We recently added two new contracts and plan to add residency trained emergency physicians. Our four facilities are new and offer a range of practice choices with volumes of 18k, 35k, 63k and 70k. Layered coverage with physicians and MLP's allows for an efficient and sustainable practice environment. Teaching opportunities are available. Employment includes competitive compensation with RVU pay and profit sharing beginning with partnership after year one. Decision making begins day one. Package includes 401k, medical malpractice, life and disability insurance. Health plan covers premiums and expenses. Northern Indiana offers Midwestern values, low practice expenses and low cost living. We are close to major metropolitan area and 1 hour from the Great Lakes. Our long standing contracts and partner retention speak for itself. Contact: David Van Ryn, President, 574-523-3160.

MAINE

Bangor: St. Joseph Hospital, a 112-bed non-profit acute care community facility with an outstanding reputation is recruiting two E.M. BC/BP physicians to augment its dedicated group. Our work environment is relaxed, collegial and supportive with the latest technology and we just completed an E.D. expansion and

EMA – The Power of Blue

Whether it's a great song or a great EM career, when everything is perfectly aligned, it's music to your ears. Join a passionate group of physicians and partner with a practice powered by amazing support, technology, benefits and compensation, equitable scheduling, and coaching/mentoring for career development and growth. Empowering you to have a voice in the practice while **making healthcare work better**.

Explore **emergency medicine** and **urgent care** opportunities in **NJ, NY, PA, RI, NC and AZ.**

Enter our raffle to WIN your choice of:

- **GUITAR**
- **BOSE BLUETOOTH SPEAKER**
- **ACEP16 CONFERENCE REGISTRATION**

Meet Our Physicians at the **EMRA JOB FAIR**

ACEP15 *Scientific Assembly* in Boston, Oct. 26 – 28

Proud Sponsor of the 2015 EMRA Party.
Visit Booth #1227 – first 500 residents receive a wristband for a COMPLIMENTARY DRINK at the party.

MODERN HEALTHCARE BEST PLACES TO WORK 2014

Emergency Medical Associates

The Sign of Excellence in Emergency Medicine®

www.ema.net | careers@ema.net | 3 Century Drive, Parsippany, NJ 07054 | 866.630.8125

CLASSIFIED ADVERTISING

modernization. We are a group whose members support each another and we (and the hospital administration) know patient satisfaction is best achieved through staff satisfaction. There are many opportunities for leadership development and participation in the Department's policies and direction. Current staffing includes 39 physician hours and 12 mid-level hours per day for 27,000 visits. The Bangor and Penobscot Bay area offers a variety of cultural attractions, including the flagship campus of the University of Maine. We are home to one of the largest collections of natural and organic food producers in the world. The region offers a pleasant pace of life, low crime, friendly people, excellent educational opportunities, great public schools and affordable housing. The Bangor area is widely regarded as a wonderful place to raise a family. This area has become a four-season sports, recreation and tourist destination, with nearby Acadia National Park, Bar Harbor and the many other scenic harbors and towns up and down the Penobscot River and Bay. Sugarloaf USA, one of the premier outdoor, golf and ski resorts in the east, is just two hours away by car. Interstate 95 is adjacent to the city and we are served by Bangor International Airport, with connecting flights to any destination. We offer highly competitive compensation and benefit packages, including relocation, student loan repayment, retirement, signing bonus, plus contracted vacation and CME time. Please contact: Charles F. Pattavina, MD, F.A.C.E.P., Medical Director and Chief, Department of Emergency Medicine, 207.907.3350, cpattavina@sjhhealth.com. MAINE: "The Way Life Should Be."

NEVADA

Las Vegas: Full time opportunities for Pediatric Emergency Medicine Physicians. Children's Hospital of Nevada at UMC is the main teaching hospital of the University of Nevada School of Medicine and serves as the region's only Pediatric Trauma Center and Burn Center. Our 20-bed department cares for 31,000 pediatric patients annually. There is excellent sub-specialty coverage with 24 hour in-house intensivist coverage and a level 3 NICU. EMP is a physician managed group with open books, equal voting, equity ownership, funded pension, comprehensive benefits and more. Please contact Bernhard Beltran at 800-359-9117 or e-mail bbeltran@emp.com.

UMMC
Department of Emergency Medicine

FACULTY — SCHOOL OF MEDICINE,
DEPARTMENT OF EMERGENCY MEDICINE

CLINICIAN EDUCATOR
MEDICAL TOXICOLOGIST
CLINICAL RESEARCHER
EM/CRITICAL CARE CLINICIAN EDUCATOR

The Department of Emergency Medicine at the University of Mississippi Medical Center (UMMC) is seeking full-time candidates at the Assistant Professor, Associate Professor or Professor level. Candidates will be considered if they are well equipped and eager to support the tripartite mission of the medical center (education, research, health care). Applicants must have an MD/DO degree and have graduated or are nearing completion of an accredited Emergency Medicine Residency and will be eligible for unrestricted licensure in the state of Mississippi.

UMMC is located in the capital city of Jackson and is the state's only academic medical center. The Department of Emergency Medicine employs 25 faculty members and is the training setting for 40 Emergency Medicine residents and core rotating medical students and other learners. The department is well-regarded across the nation for its research and involvement in professional organizations. The region boasts the most competitive salaries in the nation, low cost of living, and access to many activities. As the state's only Level-1 trauma center and with approximately 72,000 adult and 40,000 pediatric patient visits annually, the department is one of the busiest, highest-acuity health-care settings in the region.

Interested candidates should submit their CV by email to AEJones@umc.edu or mail to Dr. Alan Jones, UMMC Dept. of Emergency Medicine, Suite 4E, 2500 North State St., Jackson, MS 39216

Rank and salary commensurate with qualifications. The University of Mississippi Medical Center is an Equal Opportunity/Affirmative Action Employer and does not discriminate on the basis of race, color, religion, sex, age, disability, marital status, national origin, or veteran's status.


CHALLENGE YOURSELF AS A U.S. ARMY EMERGENCY MEDICINE PHYSICIAN.
As part of the U.S. Army health care team, you can make a real difference treating the immediate medical needs of Soldiers and their families while also growing in your career:
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NEW YORK

Albany area: Albany Memorial Hospital has a newer ED that sees 44,000 pts/yr. and hosts EM resident rotations. Samaritan Hospital in Troy is a respected community hospital, minutes from Albany, which also treats 45,000 ED pts/yr. Ownership Matters – EMP is a majority physician owned group with equal voting, equal equity ownership, funded pension and comprehensive benefits, plus industry-leading training programs, support services and career development options. Contact Ann Benson, (careers@emp.com), Emergency Medicine Physicians, 4535 Dressler Rd, NW, Canton, OH 44718, 800-828-0898 or fax 330-493-8677.

Cortland: Cortland Regional Medical Center is a modern, full-service facility situated in the Finger Lakes Region between Syracuse and Ithaca. A broad mix of pathology makes up 33,000 ED pts/yr., and there is strong support from medical staff and administration. Ownership Matters — EMP is a majority physician owned group with equal voting, equal equity ownership, funded pension and comprehensive benefits, plus industry-leading training programs, support services and career development options. Contact Ann Benson, (careers@emp.com), Emergency Medicine Physicians, 4535 Dressler Rd, NW, Canton, OH 44718, 800-828-0898 or fax 330-493-8677.

NORTH CAROLINA

Charlotte: EMP is partnered with eight community hospitals and free-standing EDs in Charlotte, Lincolnton, Pineville and Statesville. A variety of opportunities are available in urban, suburban and smaller town settings with EDs seeing 12,000 — 81,000 pts./yr. Ownership Matters — EMP is a majority physician owned group with equal voting, equal equity ownership, funded pension and comprehensive benefits, plus industry-leading training programs, support services and career development options. Contact Ann Benson (careers@emp.com), Emergency Medicine Physicians, 4535 Dressler Rd. NW, Canton, OH 44718, 800-828-0898 or fax 330-493-8677.

Charlotte/Statesville: Iredell Memorial Hospital is a respected community hospital situated north of Charlotte and seeing 41,000 ED pts./yr. Statesville is easily commutable from desirable north-Charlotte suburbs like Mooresville (highly regarded schools), with access to lakeside, small town and rural residential options as well.

So THIS is what ***happiness looks like!***

ED Medical Director **Dr. Ryan Redman** counts on TeamHealth to assist with his professional growth, offer access to informed and peer-driven discussion groups, and provide administrative support so he can enjoy a very rich and full life. He is devoted to the pediatric ED, but cherishes his alter-ego as a motorcycle enthusiast, fisherman, husband and father.

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Ownership Matters — EMP is a majority physician owned group with equal voting, equal equity ownership, funded pension and comprehensive benefits, plus industry-leading training programs, support services and career development options. Contact Ann Benson (careers@emp.com), Emergency Medicine Physicians, 4535 Dressler Rd. NW, Canton, OH 44718, 800-828-0898 or fax 330-493-8677.

Morehead City: Modern community hospital on the Atlantic coast minutes from Atlantic Beach! This 135-bed facility sees 39,000 emergency pts./yr. and is active in EMS. Ownership Matters — EMP is a majority physician owned group with equal voting, equal equity ownership, funded pension and comprehensive benefits, plus industry-leading training programs, support services and career development options. Contact Ann Benson (careers@emp.com), Emergency Medicine Physicians, 4535 Dressler Rd. NW, Canton, OH 44718, 800-828-0898 or fax 330-493-8677.

New Bern: CarolinaEast Medical Center is a respected 313-bed regional medical center located at the intersection of the Trent and Neuse Rivers just off the central coast. 70,000 ED pts./yr. are seen in the ED. Beautiful small city setting. Ownership Matters — EMP is a majority physician owned group with equal voting, equal equity ownership, funded pension and comprehensive benefits, plus industry-leading training programs, support services and career development options. Contact Ann Benson (careers@emp.com), Emergency Medicine Physicians, 4535 Dressler Rd. NW, Canton, OH 44718, 800-828-0898 or fax 330-493-8677.

OHIO

Canton: Unique opportunity to join a top-quality, democratic, well-established and physician-owned group with an opening for an ABEM or AOBEM BC/BP physician. Stark County Emergency Physicians staffs a 65,000+ volume ED and a 30,000+ volume Urgent Care. The ED is nationally recognized as the first-ever accredited chest pain center in the US, is a multi-year recipient of the HealthGrades Emergency Medicine Excellence award, and is also a level II Trauma Center and Stroke Center. Equitable and flexible scheduling. Excellent provider staffing levels. Newly renovated ED. Great work-lifestyle balance. Clearly defined equal-equity partnership track (including equity interest in an independent billing company). Generous benefits

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- One of the oldest Emergency Medicine Residencies
- Robust research with many publications
- Leadership in local EMS
- Press Ganey Guardian of Excellence Award 2013
- Press Ganey Guardian of Excellence Award 2014
- Emergency Nurses Association Lantern Award 2013

To join our team, the successful applicant will be an excellent clinician, interested in resident and medical student education and will develop an area of EM expertise. The applicant must also be fun and a good fit for our emergency care team.

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PRESBYTERIAN

Albuquerque, NM & Ruidoso, NM

Presbyterian Healthcare Services (PHS) is New Mexico's largest, private, non-profit healthcare system and named one of the "Top Ten Healthcare Systems in America." Over 600 providers are employed by PHS and represent almost every specialty. PHS is seeking BP/BC Emergency Medicine trained physicians to work in our Emergency Medicine department in Albuquerque and Ruidoso, NM.

Albuquerque thrives as New Mexico's largest metropolitan center with a population of 700,000. Albuquerque has been listed as one of the best places to live in the United States by Newsweek, U.S. News & World Report, Money and Entrepreneur Magazines! Albuquerque is considered a destination city for most types of outdoor activities with 310 days of sunshine.

Ruidoso is a mountain community at seven thousand feet altitude with snow skiing in the winter and horse racing in the summer. The community is best surveyed from the Chamber website at ruidosonow.com. We currently have six Family Practitioners, one General Surgeon, one Radiologist, two Internists, two Obstetrician/Gynecologists, three Orthopedic Surgeons as part of a group practice with Podiatrists, two inpatient Hospitalists that cover 24/7, four Emergency Room physicians and four nurse practitioners. We are part of the Presbyterian Healthcare Services network and are a twenty-five bed Critical Access Hospital. Emergency Medicine physicians will enjoy a flexible work schedule with 12 hour shifts and midlevel support.

These opportunities offer a very competitive salary, sign on bonus, relocation; CME allowance; 403(b) w/contribution and match; 457(b); health, life, AD&D, disability ins, life; dental; vision; pre-tax health and child care spending accounts, occurrence type malpractice ins, etc.

For more information regarding Albuquerque, contact Kelly Herrera, kherrera@phs.org; 505-923-5662; For more information regarding Ruidoso, contact Tammy Duran, tduran2@phs.org; 505-923-5567.

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North Shore LIJ Emergency Medicine

NJ

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North Shore-LIJ is one of the nation's largest, non-profit, secular health systems, with a network of 20 hospitals serving the greater New York metropolitan area. Our Department of Emergency Medicine Services includes the Emergency Departments of five tertiary care teaching hospitals, a children's hospital, several community hospitals, urgent care centers and our new Lenox Health Greenwich Village Freestanding Emergency Department.

If you're a BC/BP Emergency Medicine-trained physician or Pediatric Emergency Medicine-trained physician with outstanding skills, we want you to join our growing team. Whether you're an experienced physician, a new graduate or an experienced EM leader seeking a Chair or Associate Chair position, there are exciting opportunities throughout the health system for you.

Recent salary increases, along with a generous benefits package, make this a very exciting time to join our EM team. For further information and to apply, please contact:

Andria Daily
EmergencyMedicine@nshs.edu
844-4EM-DOCS (436-3627)

NSLIJEMPhysicians.com

For Advanced Clinical Provider and RN opportunities, please visit: **nslijcareers.com**

Exciting opportunities are available at the following locations:

Tertiary Hospitals

- Lenox Hill Hospital, Manhattan
  652 hospital beds | 55,435 annual ED visits
- Long Island Jewish Medical Center, New Hyde Park
  452 hospital beds | 88,254 annual ED visits
  - » Steven and Alexandra Cohen Children's Medical Center of New York
    202 hospital beds | 60,000+ annual ED visits
- North Shore University Hospital, Manhasset
  812 hospital beds | 87,511 annual ED visits
- Southside Hospital, Bay Shore
  341 hospital beds | 71,710 annual ED visits
- Staten Island University Hospital
  785 hospital beds | 122,913 annual ED visits

Urgent Care Centers

- Bethpage
  7 exam rooms | 8,851 visits
- Rego Park
  10 exam rooms | 8,370 visits

ACGME-Accredited Fellowship Opportunities:

- FDNY EMS
- Pediatric Emergency Medicine
- Sports Medicine
- Toxicology

Community Hospitals

- Forest Hills Hospital, Forest Hills
  222 hospital beds | 51,717 annual ED visits
- Franklin Hospital, Valley Stream
  305 hospital beds | 42,210 annual ED visits
- Glen Cove Hospital, Glen Cove
  265 hospital beds | 18,645 annual ED visits
- Huntington Hospital, Huntington
  408 hospital beds | 50,083 annual ED visits
- Northern Westchester Hospital, Mount Kisco
  245 hospital beds | 30,000 annual ED visits
- Peconic Bay Medical Center, Riverhead
  182 hospital beds; 36,000 annual ED visits
- Phelps Memorial Hospital Center, Sleepy Hollow
  238 hospital beds | 27,000 annual ED visits
- Plainview Hospital, Plainview
  239 hospital beds | 33,356 annual ED visits
- Syosset Hospital, Syosset
  103 hospital beds | 15,669 annual ED visits

Freestanding Emergency Department

- Lenox Health Greenwich Village, NYC
  26 beds | 30,000 visits

Non-Accredited Fellowship Opportunities:

- Critical Care
- Emergency Ultrasound
- International Emergency Medicine
- Research

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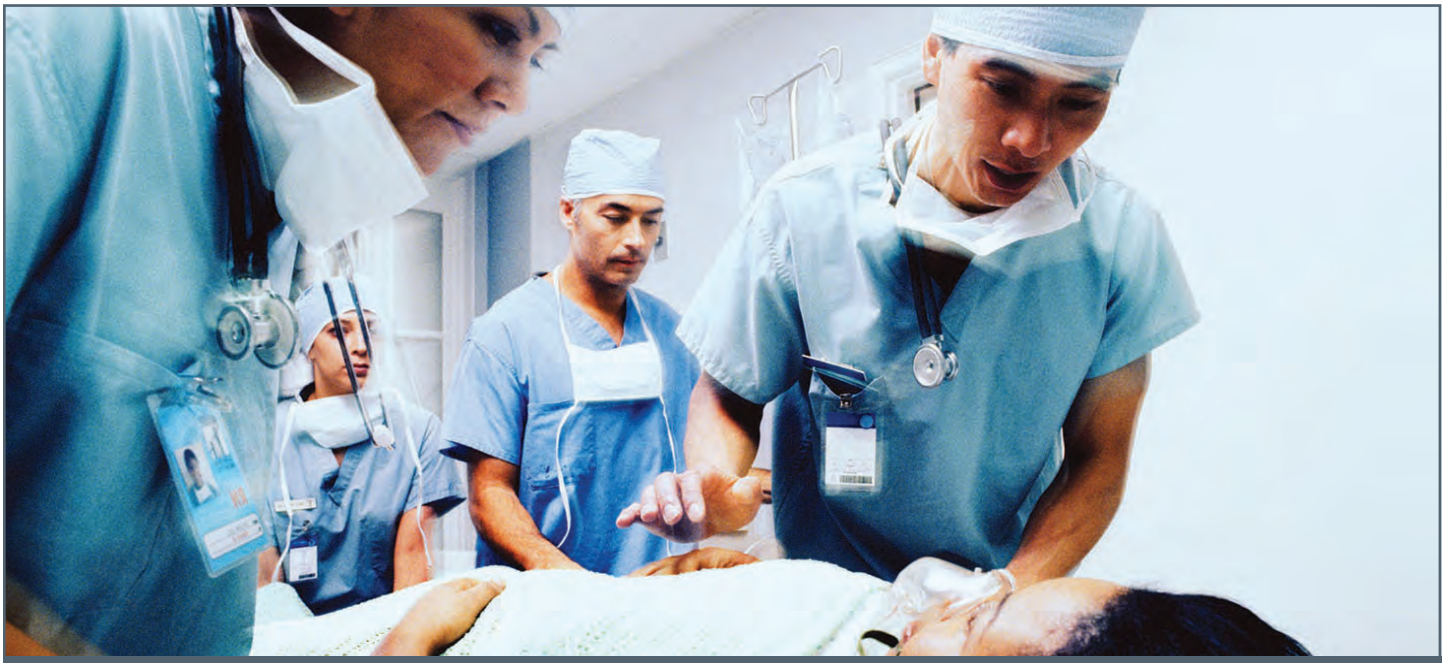
include signing bonus, 100% employer-funded retirement plan, BE/CME account, PLI insurance with corporate tail, and HSA-based health insurance. Contact Frank Kaeberlein, MD at (330)-489-1365 or frank.kaeberlein@cantonmercy.org.

Springfield: Springfield Regional Medical Center is a new, full-service hospital with supportive administration committed to emergency medicine. Situated 45 miles west of Columbus and 25 miles northeast of Dayton, the ED sees 75,000 patients/yr. Ownership Matters — EMP is a majority physician owned group with equal voting, equal equity ownership, funded pension and comprehensive benefits, plus industry-leading training programs, support services and career development options. Contact Ann Benson (careers@emp.com), Emergency Medicine Physicians, 4535 Dressler Rd. NW, Canton, OH 44718, 800-828-0898 or fax 330-493-8677.

Urbana: Mercy Memorial Hospital services the SW Ohio region's residents in Champaign County, the facility treats approximately 18,000 emergency pts./yr. Desirable residential areas in Dayton are easily accessible. Ownership Matters — EMP is a majority physician owned group with equal voting, equal equity ownership, funded pension and comprehensive benefits, plus industry-leading training programs, support services and career development options. Contact Ann Benson (careers@emp.com), Emergency Medicine Physicians, 4535 Dressler Rd. NW, Canton, OH 44718, 800-828-0898 or fax 330-493-8677.

Lancaster: Located 30 minutes SE of Columbus, Fairfield Medical Center sees 55,000 emergency patients per year. Modern facility, excellent back up, and dedicated partners make this a great place to live and work. Ownership Matters — EMP is a majority physician owned group with equal voting, equal equity ownership, funded pension and comprehensive benefits, plus industry-leading training programs, support services and career development options. Contact Ann Benson (careers@emp.com), Emergency Medicine Physicians, 4535 Dressler Rd. NW, Canton, OH 44718, 800-828-0898 or fax 330-493-8677.

Cincinnati: Mercy Hospital-Anderson is located in a desirable suburban community and has been named a "100 Top Hospital" ten times. A great place to work with excellent support, the renovated ED sees 43,000 emergency pts./yr. Ownership Matters — EMP is a majority physician owned group with equal voting,



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Cincinnati Region: We are pleased to announce our newest affiliation with the Mercy Health System in eastern and western Cincinnati. Nine respected community hospitals seeing 14,000-60,000 emergency pts./yr. are in locations are proximate to desirable residential areas. Ownership Matters — EMP is a majority physician owned group with equal voting, equal equity ownership, funded pension and comprehensive benefits, plus industry-leading training programs, support services and career development options. Contact Ann Benson (careers@emp.com), Emergency Medicine Physicians, 4535 Dressler Rd. NW, Canton, OH 44718, 800-828-0898 or fax 330-493-8677.

Concord, Madison and Willoughby: Lake Health is situated in the eastern Cleveland Suburbs. TriPoint Medical Center was built in 2009 and treats 31,000 emergency pts./yr. The Madison Medical Campus hosts a freestanding ED seeing 12,000 pts./yr. West Medical Center is a state-of-the-art acute care hospital serving 37,000 ED pts./yr. Ownership Matters — EMP is a majority physician owned group with equal voting, equal equity ownership, funded pension and comprehensive benefits, plus industry-leading training programs, support services and career development options. Contact Ann Benson (careers@emp.com), Emergency Medicine Physicians, 4535 Dressler Rd. NW, Canton, OH 44718, 800-828-0898 or fax 330-493-8677.

OKLAHOMA

Tulsa: Brand new, state-of-the-art, 85-room ED opened Fall 2014. Saint Francis Hospital is a modern 971-bed regional tertiary care center seeing 96,000 ED patients per year, with broad pathology, high acuity, modern facilities and supportive environment. Ownership Matters – EMP is a majority physician owned group with equal voting, equal equity ownership, funded pension and comprehensive benefits, plus industry-leading training programs, support services and career development options. Contact Ann Benson (careers@emp.com), Emergency Medicine Physicians, 4535 Dressler Rd. NW, Canton, OH 44718, 800-828-0898 or fax 330-493-8677.

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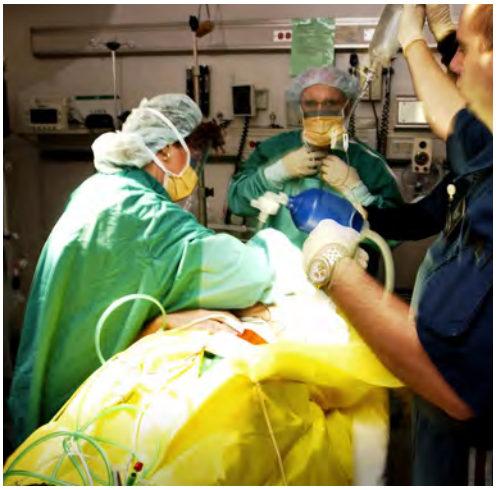

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Huntsville Hospital is a 941-bed hospital that serves as the regional referral center for north Alabama and southern Tennessee. The hospital has 24/7 Hospitalist, Radiology, Cardiology, Trauma, Orthopedic and Neurosurgical coverage. The hospital also has dedicated Adult, Cardiovascular, Neurological and Pediatric ICUs.

For more information contact **Kimberly Salvail**
(256) 265-7073 | kimberly.salvail@hhsys.org

Huntsville, AL

Huntsville is situated in the fastest growing major metropolitan area in Alabama with the highest per capita income in the southeast. With a population of 386,661 in the metro area, Huntsville is a high-tech, family oriented, multi-cultural community with excellent schools, dining and entertainment. It is nestled at the foothills of the Appalachian Mountains with an abundance of indoor and outdoor activities.

- *Named one of the top 30 fastest growing major metros in the country* – U.S. Census
- *Top 10 Places for Innovation* – USA Today
- *Named one of the Top 50 Best Places to Raise Children in the U.S.* — Business Week
- *Ranked in World's Top Ten Smartest Cities* — Forbes Magazine

huntsvillehospital.org

Visit us at EMRA15 (SE, table #525) and ACEP15 (Booth #1502)!

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Salem: Partnership opportunity with independent, democratic, and well established group at 95K annual volume Salem Hospital, Level II trauma center with excellent specialty support. New ED built in 2009, EPIC EMR with scribes, extensive leadership opportunities. Benefits include flexible scheduling, CME stipend, malpractice, medical, 401K, and more. Must be EM BC/BP. Salem is located 45 minutes south of Portland, in the heart of Oregon's wine country. We love it here and you will too. Send CV, cover letter and recent photo to sepspc@salemhealth.org or call us at 503-561-5634.

PENNSYLVANIA

Sharon: Sharon Regional Health System has an extremely supportive administration/medical staff, newer ED, and full service capabilities making this a great place to work with 37,000 patients treated annually. Small city setting offers beautiful housing and abundant recreation less than an hour from Pittsburgh and Cleveland. Ownership Matters — EMP is a majority physician owned group with equal voting, equal equity ownership, funded pension and comprehensive benefits, plus industry-leading training programs, support services and career development options. Contact Ann Benson (careers@emp.com), Emergency Medicine Physicians, 4535 Dressler Rd. NW, Canton, OH 44718, 800-828-0898 or fax 330-493-8677.

Pittsburgh and suburbs, Canonsburg, Connellsville, New Castle and Erie: Allegheny Health Network and Emergency Medicine Physicians have formed Allegheny Health Network Emergency Medicine Management (AHNEMM), which offers a professional arrangement unlike that previously available in the region. Ownership Matters! We are a majority physician owned group with equal voting, equal equity ownership, funded pension and comprehensive benefits, plus industry-leading training programs, support services and career development options are available to the emergency physicians at Allegheny General Hospital in Pittsburgh, Allegheny Valley Hospital in Natrona Heights, Canonsburg Hospital in Canonsburg, Forbes Regional Hospital in Monroeville, Highlands Hospital in Connellsville, Jameson Hospital in New Castle, and Saint Vincent Hospital in Erie. Contact Jim Nicholas (jnicholas@emp.com), Emergency Medicine Physicians, 4535 Dressler Rd. NW, Canton, OH 44718, 800-828-0898 or fax 330-493-8677.

Somerset: Allegheny Health Network Emergency Medicine Management (AHNEMM) is pleased to announce our newest affiliation with Somerset Hospital. A beautiful new ED seeing 19,000 ED pts./yr. will open in late 2015. The facility hosts close-knit and supportive EM and administrative staffs which provides for a great work environment. Located in the Laurel Highlands region, easy access is afforded to the mountains and great ski resorts, biking/hiking and a number of rivers and lakes, as well as the metropolitan amenities of Pittsburgh which are just an hour away. Ownership Matters – we are a majority physician owned group with equal voting, equal equity ownership, funded pension and comprehensive benefits, plus industry-leading training programs, support services and career development options. Contact Jim Nicholas (jnicholas@emp.com), Emergency Medicine Physicians, 4535 Dressler Rd. NW, Canton, OH 44718, 800-828-0898 or fax 330-493-8677.

Indiana: Indiana Regional Medical Center is a full-service community hospital in a college town located 50 miles northeast of Pittsburgh. IRMC sees 45,000 ED pts./yr. and is situated in a nice college town. AHNEMM/EMP offers equal equity ownership/partnership, equal voting and the opportunity to be part of a progressive EM group. Ownership Matters -we are a majority physician owned group with equal voting, equal equity ownership, funded pension and comprehensive benefits, plus industry-leading training programs, support services and career development options. Contact Jim Nicholas (jnicholas@emp.com), Emergency Medicine Physicians, 4535 Dressler Rd. NW, Canton, OH 44718, 800-828-0898 or fax 330-493-8677.

Ellwood City: The Ellwood City Hospital is located less than an hour west of Pittsburgh. The facility sees 12,000 emergency pts./yr. and is in a smaller community that affords easy access the north-Pittsburgh's most desirable suburbs. Allegheny Health Network Emergency Medicine Management (AHNEMM) offers a professional arrangement unlike that previously available in the region. Ownership Matters - we are a majority physician owned group with equal voting, equal equity ownership, funded pension and comprehensive benefits, plus industry-leading training programs, support services and career development options. Contact Jim Nicholas (jnicholas@emp.com), Emergency Medicine Physicians, 4535 Dressler Rd. NW, Canton, OH 44718, 800-828-0898 or fax 330-493-8677.

EMERGENCY MEDICINE PHYSICIAN OPPORTUNITIES

MID-ATLANTIC REGION AND NORTHERN & SOUTHERN CALIFORNIA

Practice opportunities for Emergency Medicine Physicians are available with Kaiser Permanente in various regions across the country. Learn more about our leadership mission and how we inspire good health by visiting us at ACEP15 or the EMRA Job Fair.

At Kaiser Permanente, we believe in promoting a healthier way of life for both our patients and physicians. As a member of our cross-specialty team, we offer a balanced call and work schedule and an integrated health care system emphasizing collaboration.

TO LEARN MORE, STOP BY AND SEE US AT:

American College of Emergency Physicians Scientific Assembly
Boston Convention Center, Booth #744
Boston, MA
October 26th-October 28th

Emergency Medicine Residents' Association Job Fair
Boston Convention Center, Exhibit Hall
Boston, MA
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Westerly: The Westerly Hospital is a 125-bed community hospital situated in a beautiful beach community in SE RI, 45 minutes from Providence and 1.5 hours from Boston. Modern, well-equipped ED sees 26,000 pts./yr. Ownership Matters - EMP is a majority physician owned group with equal voting, equal equity ownership, funded pension and comprehensive benefits, plus industry-leading training programs, support services and career development options. Contact Ann Benson (careers@emp.com), Emergency Medicine Physicians, 4535 Dressler Rd. NW, Canton, OH 44718, 800-828-0898 or fax 330-493-8677.

WEST VIRGINIA

Wheeling: Ohio Valley Medical Center is a 250-bed community teaching hospital with an AOA approved Osteopathic EM and EM/IM residency program. Enjoy teaching opportunities, full-specialty back up, active EMS, and two campuses seeing 27,000 and 20,000 pts./yr. Ownership Matters - EMP is a majority physician owned group with equal voting, equal equity ownership, funded pension and comprehensive benefits, plus industry-leading training programs, support services and career development options. Contact Ann Benson (careers@emp.com), Emergency Medicine Physicians, 4535 Dressler Rd. NW, Canton, OH 44718, 800-828-0898 or fax 330-493-8677.

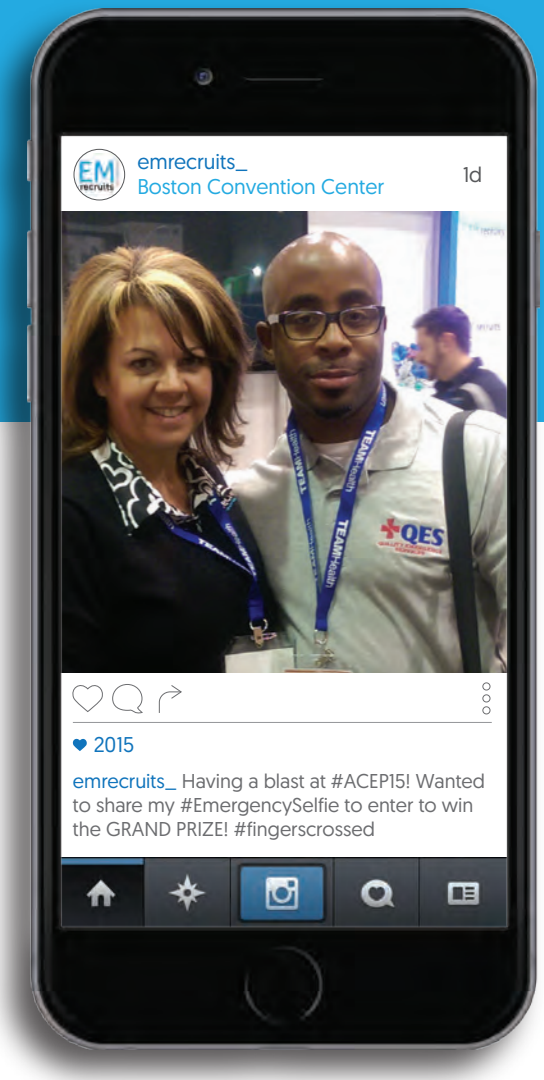
WISCONSIN

MINISTRY HEALTH CARE

Merrill and Westin: Ministry Medical Group, the physician-directed component of Ministry Health Care, invites you to explore an Emergency Medicine opportunity in Northcentral Wisconsin. This is an ideal opportunity for a physician looking to treat a full range of trauma patients while still offering a high-level of personalized care. This physician will provide coverage at both Good Samaritan Hospital in Merrill, WI and at our Ministry Saint Clare's Hospital in Weston, WI (approximately 25 miles from one another). This is a full-time (13 twelve-hour shifts/month — we envision 7 at Good Samaritan and 6 at Saint Clare's) opportunity that offers lucrative compensation and a comprehensive benefit package. Loan repayment options are available. **Ministry Good Samaritan Hospital:** 9-Bed Trauma Level IV; annual volume 12-13,500, Easy access to sub-specialty referrals off site; easy one call transfers, Dynamic team of three physicians and two advanced practice clinicians that boast strong staff/physician relationships as well as low nurse turnover rates, Charming rural setting with opportunity to treat a full range of patients, Ideally located just 15 miles outside of the Wausau/Weston area (pop. est. 55,000), **Ministry Saint Clare's Hospital:** 15-Bed Trauma Level III; annual volume 14,000, Experienced team of 6 physicians and two advanced practice clinicians, State-of-the-art, technologically renown referral center ideally located in the center of the state, Growing metropolitan area — urban amenities coupled with small-town charm and affordability, Physicians who have recently joined Ministry Medical Group indicate that the excellent work/life balance combined with friendly, safe and affordable communities was ultimately what drew them here. Get to know us online at ministryhealth.org/recruitment
For more information, contact: Brad Beranek, 715-342-7998, mmgrecruitment@ministryhealth.org.

Rice Lake: Attractive Midwest Emergency Medicine Opportunity. Marshfield Clinic Rice Lake Center is seeking two Emergency Medicine physicians to join an established ED in Rice Lake, WI. BC/BP in EM. Shift scheduling model: 12 twelve-hour shifts/month, equal approx. 1700 work hours/year. Marshfield Clinic is a nationally recognized physician-led medical group known for providing its more than 700 physicians in 80+ specialties with the most advanced medical equipment and health information technology today. Competitive and guaranteed salary, full benefit package, relocation assistance, opportunities for teaching, research and more! Our Wisconsin communities are safe residential communities with beautiful homes at affordable prices and no long commutes. Plentiful four-season recreation such as bicycling, hiking, skiing, fishing and golf abound. Practice where you play! Contact: Heidi Baka, Physician Recruiter, baka.heidi@marshfieldclinic.org, 715-221-5775, www.marshfieldclinic.org.

Are You Ready?



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*Loan distribution is based on availability per facility. Any educational loan should qualify.

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Don't Miss TeamHealth's Physician Reception

Tuesday, October 27 | 7 pm | Museum of Science, Boston

Enjoy a big-time evening at a world-class museum in Boston! Join TeamHealth for our Annual Physician Reception during ACEP 2015. Explore the interactive exhibits at The Museum of Science, Boston—one of the world's largest science centers and New England's most attended cultural institution. Plus we'll have delicious Boston cuisine, an open bar and dance floor. **It's the formula for fun!**

Please visit our ACEP booth #609 to get your free ticket for this event!

See us at EMRA Job Fair!

Monday, October 26 | 5 – 7 pm | Exhibit Hall B2

Emergency Medicine Residents' Association
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