“Our successes should prove to you that we, as emergency medicine residents, can force change in our healthcare system. This is our time to mold our future.”

Three...two...one...BLASTOFF!

Hamad Huisany, DO, Speaker of the Council, St. Joseph Medical Center, Tacoma, WA

As winter finishes and spring looms, most of us cheer, unless you live in a climate that won’t defrost until June. Meanwhile, on the emergency medicine front, there are several exciting events this spring that will give you something to look forward to. As your Speaker of the Representative Council, I hope that you get interested, get motivated, and join me in support of our organization and in improving emergency medicine.

Our first opportunity to get involved is the Society of Academic Emergency Medicine (SAEM) Annual Meeting, May 9-12, 2012. The Windy City (Chicago, which does warm up) will be our host – it is sure to be a great meeting! To point out a few conference highlights and reasons I should see you there – EMRA has taken a lead role in offering programming specifically for residents. This year we will be joining our colleagues at SAEM/AEUS and co-sponsoring the first SonoGames. This is a spinoff from EMRA Resident SimWars Competition, which means that it’s guaranteed to be fun and educational. On top of that, there will be the obligatory fierce National Annual Emergency Medicine Jeopardy competition.

However, as your Speaker, I must say that the most important aspect of our time in Chicago will be our Representative Council Meeting. This is a forum where each program representative hears about the resolutions and policy changes affecting everyone in the emergency medicine world. In recent years, issues like safety in the emergency department and time off prior to conference have been submitted by EMRA members, presented to the EMRA Board of Directors, and approved as a resolution. Your input

continued on page 14
Emergency Medical Services
Diplomates of any American Board of Medical Specialties Member Board can now become board certified in Emergency Medical Services (EMS). The first certification examination will be administered in the fall of 2013. Eligible diplomates have three application pathways to certification: a practice pathway, practice-plus-training pathway, and a training pathway. ABEM will accept applications between October 1, 2012 and June 30, 2013.

Hospice and Palliative Medicine
The American Board of Internal Medicine (ABIM) will administer the certifying examination in Hospice and Palliative Medicine on October 4, 2012. Physicians may apply through one of four pathways – ACGME-accredited fellowship training in Hospice and Palliative Medicine, unaccredited fellowship training in Hospice and Palliative Medicine, practice- plus-training, and past certification with the American Board of Hospice and Palliative Medicine (ABHPM). Application pathways through unaccredited fellowship training, practice-plus-training, or past certification with ABHPM will end June 1, 2012.

Internal Medicine-Critical Care Medicine
Diplomates of the American Board of Emergency Medicine (ABEM) now have the ability to become board certified in Critical Care Medicine (CCM). On September 21, 2011, at the General Assembly meeting of the American Board of Medical Specialties (ABMS), a joint program between the American Board of Internal Medicine (ABIM) and ABEM was unanimously approved. Emergency physicians can now supplement their Emergency Medicine residency training by participating in Internal Medicine-sponsored Critical Care Medicine (CCM) fellowships. Upon completion of CCM training, these individuals would be eligible to seek board certification. ABEM will issue the CCM certificate to its diplomates, but the certificate would indicate that the standards are the same as those of ABIM.

The ABIM will administer the certifying examination in Critical Care Medicine on November 14, 2012. ABEM will accept applications between March 1 and June 1, 2012.

Medical Toxicology
ABEM will administer the certifying examination in Medical Toxicology on November 12, 2012. ABEM diplomates and diplomates of ABMS boards other than the American Board of Pediatrics (ABP) and the American Board of Preventive Medicine (ABPM) may apply to ABEM if they have completed an ACGME-accredited two-year fellowship program in Medical Toxicology. ABEM will accept applications between January 16 and April 16, 2012. Diplomates of ABP or ABPM must submit their applications through ABP and ABPM, respectively.

Sports Medicine
The American Board of Family Medicine (ABFM) will administer the certifying examination in Sports Medicine July 19 – 21, 2012. ABFM will also administer the examination to specifically designated candidates November 7 through 12, 2012. Contact ABEM for additional information on the November examination. ABEM diplomates who have completed ACGME-accredited fellowship training in Sports Medicine must submit their Sports Medicine applications to ABEM between February 1 and June 1, 2012, if they wish to take the examination in July.

Undersea and Hyperbaric Medicine
The American Board of Preventive Medicine (ABPM) will administer the certifying examination in Undersea and Hyperbaric Medicine October 1 through 12, 2012. ABEM diplomates who have completed ACGME-accredited fellowship training in Undersea and Hyperbaric Medicine must submit their Undersea and Hyperbaric Medicine applications to ABEM between March 1 and July 2, 2012.

To request a certification application for one of these subspecialties, please write or call the ABEM office. Eligibility criteria for ABEM diplomates are available on the ABEM website, www.abem.org.
Thank you very much for your interest in advertising with EM Resident. As the largest organization to represent the needs of the emergency medicine resident, we are able to reach a unique and important niche of our specialty.

EMRA’s mission statement is to promote excellence in patient care through the education and development of emergency medicine residency-trained physicians. It is our belief that this provides the best patient care in an emergency department setting.

To support our mission and provide the greatest advantage to our residency-trained members searching for jobs, we welcome you to advertise in EM Resident, but require that all positions advertised in our publication be addressed only to board-certified/board-prepared, residency-trained emergency physicians.

For the sake of consistency, the use of the terms “ED,” “emergency department,” and “emergency physicians” are preferable to using “ER” or any such derivation.

Your support is very important to us, and we appreciate your compliance with these guidelines. Please respect this policy and reflect its sentiment in your advertisements. EM Resident has the right to refuse any advertisement that does not meet these guidelines.

Thank you again for advertising in EM Resident.

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EM Resident is published six times per year. Advertisements received by May 1 will appear in the June/July issue.

EM Resident subscriptions are available only to individuals and institutions that are not considered eligible for EMRA membership as per the EMRA bylaws. For information on how to subscribe please contact Leah Stefanini, 866-566-2492 ext. 3298 or email lstefanini@emra.org.

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Upcoming events

April 15, 2012  
**EMRA Committee Volunteer Application**  
Deadline

April 20-24, 2012  
**Student National Medical Association (SNMA)**  
Annual Medical Education Conference  
Indianapolis, IN

April 23, 2012  
**Pre-SAEM EMRA Representative Council Conference Call**  
Required for EMRA Program Reps

April 27, 2012  
**ACEP Scientific Assembly Abstract Submission**  
Deadline

April 28-30, 2012  
**ABEM Spring Oral Certification Exam**  
Nationwide

May 2, 2012  
**Late Resolutions for EMRA Representative Council Spring Meeting**  
Deadline

May 9-12, 2012  
**SAEM Annual Conference**  
Chicago, IL

May 12, 2012  
**EMRA Representative Council Meeting**  
Chicago, IL

May 16, 2012  
**EMRA Reps to ACEP Committees Application**  
Deadline

May 20-23, 2012  
**ACEP Leadership and Advocacy Conference**  
Washington, DC

May 20-26, 2012  
**EMS Week**  
Nationwide

June 16-20, 2012  
**AMA MSS / YPS / RFS and House of Delegates Meeting**  
Chicago, IL

July 11, 2012  
**Annals of Emergency Medicine Resident Editorial Board Fellowship Application**  
Deadline

July 15, 2012  
**EMRA/ACEP Health Policy Mini-Fellowship Application**  
Deadline

August 13-19, 2012  
**ACEP Teaching Fellowship**  
Dallas, TX

August 15, 2012  
**EMRA Travel Scholarships to ACEP Scientific Assembly**  
Deadline

August 15, 2012  
**EMRA Fall Awards**  
Deadline
President’s message

Do you, resident, take emergency medicine to be your lawful wedded bride?

“Weddings and spring seem to go together, much like End-Stage-Renal-Disease and Hyperkalemia.” This amusing comment from one of my attendings highlights a perennial truth. In fact, this spring two residents in my own program have tied the knot in joyous celebrations – surrounded by friends, family, and fellow residents – enhanced by generous portions of champagne. Much merriment was made, a lifelong bond between loving people was forged, and fortunately for all, there were no episodes of hyperkalemic arrest.

Marriage is the most significant commitment a person makes during the course of their lives. As physicians, our commitment to our patients, our craft and our profession is often a close second. Indeed, many physicians joke about being married to their jobs – and for us as residents, this often rings true.

The parallels between actual marriage and residency marriage are numerous. There is a dating period before one finds their eventual partner (interview season). There is a wedding ceremony (match day envelope = paper “I do”). Marriage is an expensive process that oft incurs debt (college and medical school). Marriage is legally binding (as is residency, yikes!) You immediately double your family size with in-laws (co-residents become your second family). There is a lifelong relationship with your significant other (How I love you so, sweet Emergency Medicine).

Like any relationship, there are inevitable ups and downs; residency is full of them. In any given shift, you can oscillate between the hero who resuscitated someone from death’s brink… To the idiot who intubated an esophagus and ventilated a stomach. Our jobs have the potential to fulfill or frustrate and tend to do both simultaneously.

However, I like to think that our marriages to emergency medicine and residency are happy ones. I certainly hope that you find years of joy together.

External forces will test our residencies, specialty, and the relationships we cherish therein – in the last year alone, both local and federal government have sought to cut GME funding on multiple occasions. They’re still trying to gut support to Medicaid and Medicare – the lifelines for our most vulnerable patients. The Accreditation Council for Graduate Medical Education (ACGME) has moved to limit the access of osteopathic-trained physicians to residencies and fellowships. All around us the agents of change are active; and if we are to protect our specialty we must be active as well.

The ACEP’s Leadership and Advocacy Conference (May 20-23, 2012) in Washington, DC, is a tremendous opportunity for you to learn the issues confronting our specialty and become an advocate! Few residents have explored that aspect of emergency medicine, but it is one that is becoming increasingly important. Moreover, funding opportunities abound with EMRA’s Chair’s Challenge (visit emra.org) – we encourage you to approach your department chair or your local ACEP chapter for sponsorship.

Even if you cannot make the conference, get involved with the opportunities provided through EMRA! As an organization, together we have worked tirelessly to protect our interests as emergency medicine residents – sending letters to ACGME; meeting with members of congress and senate; and (generously) contributing to ventures such as the Emergency Medicine Action Fund (Fact: EMRA has contributed twice the amount that SAEM and AAEM have over the past two years).

Just as many of us are married to our jobs (or, in some cases, to actual spouses), EMRA pledges its loyalty to you. We are here to provide you with the opportunity to represent your interests and protect the significant investment you’ve made to become an emergency physician. As the only independent resident-run organization in the nation, your membership matters. Thank you for being an EMRA member. More importantly, thank you for the compassionate care you provide to patients.
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EMRA plans for an action packed May: Are you ready for the SAEM Annual Meeting (May 9th – 13th) and ACEP’s Leadership and Advocacy Conference (May 21st to 24th)? EMRA certainly is, if you are attending either or both conferences EMRA has many exciting opportunities and events – from EMRA Resident Sim Wars Competition to EMRA’s Annual EM Jeopardy Contest to Advocacy Meetings on the Hill to EMRA’s new venture with SAEM/AEUS for SonoGames! Be sure to take advantage of these events as they are designed by and made for you, the resident!

EMRA and EMAF fight cuts: Unprecedented attacks on Medicaid are occurring in multiple states from Washington to Tennessee to Florida – limiting access to healthcare for our nation’s most vulnerable patient population! EMRA on behalf of its residents and the patients we serve has been a vocal opponent to these deleterious and misguided attempts to cut Medicaid spending. Join EMRA in fighting for our patients and specialty by attending the ACEP Leadership and Advocacy Conference in Washington, D.C. Need funds? Approach your chair and ask them if they are a participant in EMRA’s Chair’s Challenge, visit emra.org to register today.

EMRA celebrates promotion of Executive Director: Michele Byers, CAE, CMP, EMRA’s Executive Director for the past seven years has recently been promoted to the position of Senior Director, Membership and Education. Michele has been stalwart of our organization and has presided over an unprecedented period of growth, success and accomplishment for EMRA. Please join us in wishing Michele the best in her new role and in thanking her for her years of hard work and dedication to our organization.
Stephanie Krema, MD
Secretary/EM Resident Editor-in-Chief
University of Louisville
Louisville, KY

Symbiosis

Yesterday, I overheard an intern announce, “It’s so nice not having medical students here today!” “Hmm,” thought I, “a puzzling statement, coming from a former medical student.” Since she’d been proclaiming tasteless opinions all morning, it seemed like fun to call her out.

First, we were all medical students once. All of us. Sure, now it’s easy to pretend we swaggered into the hospital on day one of a rotation. Or that we didn’t get lost (several) times trying to find the resident meeting point at 4:30 a.m. Yet there we were, trying to appear interested while constantly scooting out of someone’s way.

Second, they remember stuff we’ve long since recorded over. When the attending asks, for no particular reason, “You! Resident! Which embryonic layer are the kidneys derived from?” you can see the exact page in First Aid for Step One displaying your answer... except the words are fuzzy. It’s the medical student who quietly hints “mesoderm.” They’re also helpful for remembering cancer markers, antibiotic mechanisms, and the names of arteries. Even better, that fact (no matter its actual value) is pulled forward in your memory’s Rolodex.

Third, they’re our teaching experiments. Residents must teach the junior folk in the hierarchy; it’s literally part of the job description. Conveniently, the students’ job is to learn. For residents, this benefit is really two-fold: We learn how to teach through trial-and-error (few are naturally gifted at teaching without invoking boredom); while the act of teaching forces us to summon dusty factoids of yore or learn a sparkly new one.

On a macro scale, if you back up and get a bit philosophical, people have always communicated history’s lessons through storytelling. Books are all well and good, but the real lessons are told aloud.

Our attendings were taught by a generation with their own practice style and knowledge base. Then our attendings took that ball of wisdom, tacked on their own, deleted the obsolete stuff, and passed that ball down to us. Granted, scientific facts may differ between generations, such as the case of Nut/Seed vs. Diverticulum. Nonetheless, the culture of medicine cannot be communicated without an oral history of graphic anecdotes of missed diagnoses and accidental successes.

Then there are the mini-generations – PGY3s teach the 2s, who teach the 1s, who teach the MSIV, who teach the MSIIIs, who teach the MSIs, who (sometimes) teach the MSIs. Each class conveys to their successors how to survive the year. It may come in the form of tips for managing an increasingly heavy load of patients, or how to keep a relationship alive when you always return home in a sleep-deprived stupor.

This was, of course, an expanded version of my actual retort to the aforementioned cranky intern. By no means am I an over-emotional sap, I just give respect where it’s due. Medical students chose the same rough path we did, just one year later. They’ll be residents soon enough, poor things.

Speaking of! To the newly-matched – welcome to the wild and woolly world of emergency medicine! ■

Article ideas? Questions? Comments? Email EMResidentEditor@emra.org
The Editorial Committee is undergoing remodeling

To assure *EM Resident* is the magazine EMRA members want and need, the EM Resident Editorial Advisory Committee will adopt the structure of the other EMRA committees.

Though applications for membership in all EMRA committees are due April 15, 2012 – these new opportunities within the Editorial Committee will be open until May 15, 2012.

Why join the Editorial Committee?
- You enjoy writing – be it articles, interviews, reports, news
- You enjoy editing and can help review articles submitted to *EM Resident* for quality and relevance
- You would like to recruit new and interesting contributors

**Editor-in-Chief** (Committee Chair) – the *EM Resident* Editor-in-Chief fulfills this position.

**Managing Editor** (Committee Vice-Chair) – Vice Chair will be chosen by the Editor-in-Chief based upon application (appointed 1-year position). *Note that the position for the 2012-2013 year is filled.*

**Copy Editors** (Committee Members) – Members will serve a one-year term beginning May 1. Committee members must be members of EMRA and should plan to attend the two in-person committee meetings each year, held during the SAEM Annual Meeting and at ACEP’s Scientific Assembly. If you are interested in serving, please complete the online application and forward your letter of interest and current CV by either fax, mail, or email.

*EM Resident* is the bi-monthly magazine of the Emergency Medicine Residents’ Association (EMRA). The opinions herein are those of the authors and not those of EMRA or any institutions, organizations, or federal agencies. EMRA encourages readers to inform themselves fully about all issues presented.

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Emergency Medicine Residents’ Association
The method behind the madness
Examining the tool that states are misusing to limit emergency department visits

Background information

There has been much attention over the past year on Washington State. It started back in mid-2011, when the Washington Health Care Authority (HCA) imposed a three-visit limit for 700 “non-urgent” medical conditions that would apply to Medicaid enrollees. After the three visits, additional care would not be paid for. Multiple groups sprang into action – including the Washington chapter of the American College of Emergency Physicians (WA/ACEP) (ACEP) – and together filed a lawsuit. In November, the superior court put an injunction on the law’s implementation, saying that proper rule making was not followed in creating the new law. In late December, however, the HCA decided that they would not pay for any “non-urgent” visits. The HCA claims that making payment determinations on visits to the emergency department falls under their current powers; they therefore do not have to follow rule-making procedures.

John Billings is Associate Professor of Health Policy and Public Service as well as the director of the New York University Wagner Health Policy and Management Program. In 2000, he developed an algorithm that examined emergency department visits. In a recent ACEP press release, Billings himself states that “the algorithm was developed as a tool to evaluate the performance of the primary care delivery system and to assess the impact of interventions to improve primary care services.” The algorithm was never intended to investigate the appropriateness of emergency department utilization. Yet this algorithm is being misused to keep patients out of the emergency department.

Problems with the algorithm itself

In addition to not being used as intended, the Billings Algorithm also comes with methodological flaws. The algorithm was developed by looking at 5,700 emergency department visits to Bronx hospitals. Several variables were analyzed, and the visits were placed into 4 categories (see Table 1). Then for each diagnosis, they came up with a probability of it falling into one of the four categories (e.g., x percent of abdominal pain is non-emergent; y percent is emergent but primary care treatable, etc.).

With nationwide budget woes, the concept of limiting emergency department visits by Medicaid beneficiaries is spreading – Tennessee has a list, as does a regional Medicaid provider in Kentucky, while New Hampshire is exploring a four-visit limit. But how are these lists of “non-urgent” diagnoses being generated? To answer that question, we have to turn our attention back east to New York City.
“This is the state government’s way of sending the message that the emergency department is often ‘unnecessary’ and almost always ‘expensive.’”

Table 1 – Categories of emergency department visits using Billings Algorithm

<table>
<thead>
<tr>
<th>Category</th>
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</thead>
<tbody>
<tr>
<td>Non-emergent*</td>
</tr>
<tr>
<td>Emergent – Primary Care Treatable</td>
</tr>
<tr>
<td>Emergent – Emergency Medicine Care Required, but Preventable/Avoidable</td>
</tr>
<tr>
<td>Emergent – Emergency Medicine Care Needed</td>
</tr>
</tbody>
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*Defined as requiring care within 12 hours

used the probabilities from their small analysis to determine how many of the visits could be deemed “non-emergent.”

An obvious overarching problem with the Billings Algorithm is that it relies on patient diagnosis, not chief complaint. During the development of the algorithm, chief complaint was only one of several variables taken into account. On top of that, the algorithm excludes admitted patients, thereby selecting for patients with less acute illness from the start. Additionally, there is no consideration given to patient motivation as to what prompted them to seek emergency department care – Were they afraid they were truly dying? Did their PCP send them? Do they not have a PCP? Is their PCP’s office closed?

Problems with the application of the algorithm

The next set of issues arises when the algorithm is utilized to determine if emergency department care is “appropriate.” The original paper includes the following statements: “The algorithm is not intended as a triage tool or a mechanism to determine whether emergency department use is appropriate for required reimbursement by a managed care plan... Nor was it intended to assess appropriateness of emergency department utilization. Use of the emergency department for minor conditions may well be rational and appropriate if a patient has no other source of care. Moreover, assessment of urgency by patients can be problematic, and labeling emergency department use for primary care treatable conditions as inappropriate may misallocate responsibility to the patients themselves.”

Furthermore, relying on the final diagnosis – and completely ignoring the patient’s chief complaint – flies in the face of the prudent layperson standard, which now applies to nearly all health plans as a result of the passage of the Affordable Care Act in 2010. The concept is simple – if an average person believes that their symptoms may be due to a medical emergency, they should be free to seek care in an emergency department; that care will then be paid for by their health plan. Veering from this standard sends the message that patients are expected to diagnose themselves.

This constitutes a tremendous threat to our patients. The patients in question are Medicaid beneficiaries – who are a vulnerable portion of the population. If that doesn’t provoke public outcry and sympathy, then people need to think about the likely future – when Medicare and private health insurers follow suit and refuse to pay for their emergency department visits if their final diagnosis is found on one of their lists. Patients have a right to seek care in the emergency department – they should not be deterred by the fear that their symptoms may not be something serious.

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3. Health Plans and State Medicaid Officials are Misapplying a Research Tool to Deny Coverage of Emergency Care, Says Formula Author. ACEP Press Release, February 2012.
TechTalk

Take one tablet daily

A little over two years ago, in a conference room filled by technology enthusiasts and reporters, the world bore witness to one of the biggest technological innovations in decades. The late Steve Jobs unveiled what everyone had been speculating—a tablet computer that worked like an oversized iPhone.

While tablet computing was made ubiquitous by Jobs, it had already existed in several incarnations. There was the Apple MessagePad, plus other platforms requiring a stylus and a Microsoft Windows operating system. Yet these technologies never really took off until the iPad.

Since the iPad’s unveiling, the technology landscape has shifted dramatically as laptops are replaced by tablets. Sources report that 13.5 million iPads were sold in the fourth quarter of 2011, and that a projected 48 million will be sold in 2012. That’s just iPad statistics; it doesn’t even include the rivals.

The success of tablet computers has been due to the combination of portability, intuitive interface, extensive content library, functionality, and (relatively) inexpensive entrance price. Tablets are irresistible to the masses—it’s the size of a small notepad. It can access Internet and email. It even has games, plays video, and can pretend it’s a book.

While the justification for purchasing a tablet varies from, “a tablet will make me more productive!” to “I’ll be able to carry all my textbooks around in this tiny computer!” What really ends up happening is Facebook updates, Double Rainbow videos, and “oxyphenbutazone” being played on Words with Friends.

Entertainment aside, there’s a growing role of tablet technology in medicine as well. Depending on the hospital system and software, some emergency department tracking software is already accessible on tablets. They allow physicians a great deal of mobility, with access to real-time labs and imaging during patient interaction. Time is saved avoiding the often-frustrating search for an available computer. Likewise, the communication of management-altering results can occur at any given spot in the hospital.

Some emergency department tracking software is linked to the electronic health record (EHR) and computerized physician ordering entry (CPOE). Physicians can easily see a patient’s previous visits, notes, lab work, and imaging…and then order any diagnostic test or therapeutic intervention with a few taps and swipes of the finger. If speech-recognition software became robust and widely available for tablets, EM physicians would never need to sit down. We would be able to jet from room to room armed with only a tablet and a stethoscope.

While there are certainly operational advantages to tablet usage in the emergency department, patient education benefits as well. An image pulled from the Internet can teach patients medical concepts better than a confusing overload of medical speak. To display the dire need for a procedure, we could show a diagram of the damage a common bile duct stone can do. It’s easier for the provider. It facilitates patient understanding. It facilitates patient-centered care.

The educational components extend beyond patients—tablet technology allows for immediate access to references, clinical guides, and instructional videos. It is beyond the scope of this article to talk about the myriad apps and websites for evidence-based decision support…but yes, they do exist.

Tablet technology continues to evolve while demand swells. As emergency physicians who pride ourselves on using any tools available to provide for our patients—we should continue exploring the potential of this captivating technology.
We are the 15 percent

As another residency review committee (RRC) meeting came to a close, I became aware of a statistic that once again reminded me of how vital residents are to the physician workforce in the U.S. As debate continues over duty hour standards, education requirements, and graduate medical education (GME) funding, we must remember that residents comprise 15 percent of the U.S. physician workforce! Residents deliver high quality care to frequently underserved patient populations. Thus we must continue to find solutions to expand well-needed GME slots during an era of shrinking budgets.

During the recent RRC-EM meeting, multiple issues were discussed as we embark upon a new era with the ACGME. First, congratulations to the University of Texas Southwestern Medical School (Austin) for attaining accreditation for a new emergency medicine residency! We also welcome New York Methodist Hospital’s new Peds EM program. Cheers to the other emergency medicine residencies, EM Peds, and Med Tox fellowships that earned continued accreditation.

The first draft of the emergency medicine milestones (outcome-based assessment) has been completed. The milestone working group was comprised of representatives from six emergency medicine stakeholder organizations, including EMRA. The first draft has been approved by the RRC and the American Board of Emergency Medicine (ABEM). The next step will be a field test this spring.

As a reminder, the purpose of the milestones is to help refocus efforts on demonstrating the outcome of training competent physicians – rather than focusing on the administrative process of running a residency.

The annual reporting of data will include performance indicators based on the identification of existing or development of new outcome assessment tools. The site visit will be extended to multiple days with a team of visitors whose primary role will be to look at the educational environment rather than the summative data, and be reviewed annually. Emergency medicine is one of seven specialties invited to join the system early, beginning July 2013, with the remaining specialties joining July 2014.

The program requirements for EMS subspecialty training are undergoing final revision and should soon be released for public comment. Following final approval of these new program requirements, the RRC will begin the process of accrediting programs in the new subspecialty of EMS. (The practice track pathway to certification – the grandfather pathway – is available on the ABEM website, as is the pathway for certification in critical care medicine through internal medicine.)

The RRC-EM has been working hard on the numerous changes that are occurring within the ACGME. As residents, we are fortunate to have the opportunity for an EMRA representative to be a member of the RRC. If you are interested in becoming the next EMRA representative to the RRC or have any other questions, please email me at rrcemrep@emra.org.

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http://www.acgme.org/acWebsite/home/home.asp
http://www.acgme-nas.org/
Approach to penicillin allergies: Unpacking the check box

Case

Your first patient on a slow Sunday morning is a three-year-old male with a fever and earache for two days. You quickly diagnose otitis media. While reviewing his past medical history, you note a penicillin allergy. Your staff attending, a 30-year veteran of the pediatric emergency department (who is known for dropping black pearls) tells you to give him cefdinir. You recall from medical school that ten percent of penicillin allergic patients have cross-reactions to cephalosporins. Should you argue with your attending? Is it safe to give a cephalosporin to this patient?

Does the patient really have a penicillin allergy?

Historically, immunologically mediated drug reactions have been divided by into four types.¹ Only the immediate Type I (IgE-mediated) reactions are associated with anaphylaxis. In fact, several studies report that the incidence of true penicillin allergy among patients who self-report one is ≤10 percent.² As usual, your history is the key to sorting this out.

When a patient reports an allergy, your first step should be to inquire about the specific nature of the reaction. Many patients confuse common adverse reactions, such as diarrhea or vomiting, with allergies. Urticaria, angioedema, wheezing, laryngeal edema, and hypotension suggest a true IgE-mediated allergy. What was the timing of the reaction? Type I allergic reactions generally occur within 1 hour of receiving the medication. Reactions beyond 72 hours are not real allergies.

If a rash was present, what did it look like? About four percent of patients receiving a penicillin or cephalosporin experience a morbilliform or maculopapular rash that does not itch – these reactions are not allergies.³ The rash will likely resolve — while still taking the antibiotic — and may or may not recur with future courses. Another non-allergic rash occurs in patients infected with Epstein-Barr virus who receive amoxicillin. They can develop a maculopapular rash, which may be pruritic.

It is also useful to ask about and document route of administration, other medications being taken simultaneously, the response when the medication was discontinued, and the results of any past skin testing for allergies.

Is it safe to give a cephalosporin in the presence of a true penicillin allergy?

The classically cited ten percent risk of cross-sensitivity between penicillins and cephalosporins derives principally from studies by Dash and Petz in the 1970s.³,⁴ However, these early studies compared cephalosporins and penicillin produced by the same manufacturer in the same mold, thus leading to contamination and overestimation of cross-reactions.⁵,⁶ Reviews of more recent evidence suggest that the cephalosporin crossover rate is actually about one percent.⁷ Be sure to note that the risk is greatest with first generation cephalosporins.

The American Academy of Pediatrics practice guidelines for the management of penicillin allergies recommend a skin test for patients with a documented allergy. However, this test is not always reliable, and its use is controversial. Therefore, a careful history and physical examination remain the cornerstone of the evaluation.
of otitis media and sinusitis recommend second or third generation cephalosporins for patients with penicillin allergies. However, cephalosporins such as cephalothin and cefoxitin should be used with extreme caution in patients allergic to penicillin due to side-chain similarity. Likewise, cefazolin, cepalexin, or cefadroxil should be used very carefully in patients allergic to ampicillin or amoxicillin.

Now vice versa – can you give penicillin with a documented cephalosporin allergy?

Cross-reactivity rates for penicillins in patients who are primarily allergic to cephalosporins have ranged from eight to 50 percent in small studies. A recent prospective trial found that approximately 25 percent of patients with cephalosporin allergies had cross-reactivity with penicillins on skin testing. Skin testing did not consistently predict clinical symptoms, but given the high incidence of cross-reactivity, penicillins should be avoided in patients allergic to cephalosporins. What about skin testing?

Obviously, skin testing is impractical in the emergency department; however, if prior results are available, they can help guide management. If the history is concerning for a true penicillin allergy, yet penicillin skin testing was negative, a cephalosporin can be safely administered. In one series, less than two percent of such patients develop an allergic reaction to cephalosporins. In fact, 98 percent of these patients can even tolerate penicillin itself.

The positive and negative predictive values of skin testing for cephalosporins are unfortunately not well established. They should generally not be relied upon to guide management.

Case conclusion

On further questioning, you discover that your patient’s “allergy” was a non-pruritic, macular rash that lasted two days after stopping antibiotics. For your own comfort you give the first dose of cefdinir in the department. After one hour of observation you note no adverse events. You warn Mom that the medication may turn his stools red and discuss that it is neither an allergic reaction nor blood. At the patient’s primary care follow up the next day, his fevers have resolved and he is doing well.

References

continued from cover

will direct your leaders to address and take action on those issues you find important!

To continue with the example of safety in the emergency department, EMRA first passed the Safety Resolution two years ago. It was then forwarded to the American College of Emergency Physicians Council (ACEP Council), who similarly voted for adoption. (For more about the work of the ACEP Council, look to Dr. Moody’s article in this issue of EM Resident.)

The safety resolution continued to move up in the ranks – the next level was the American Medical Association (AMA). Ultimately, members of ACEP and EMRA presented compelling arguments to U.S. Congress on the importance of safety in the emergency department. Our successes should prove to you that we, as emergency medicine residents, can force change in our healthcare system. This is our time to mold our future. Please make attending SAEM a priority.

The second opportunity is in Washington, D.C., May 20-23, 2012 at ACEP’s Leadership and Advocacy Conference (LAC). Though I am rather biased towards the EMRA Representative Council, truth be told – LAC is the most powerful and informative conference I have attended since beginning residency. If you are a resident who wants to get involved legislatively or want to stay up-to-date on the issues ACEP is advocating – this is the conference for you. Last year, our cohorts at ACEP scheduled several hundred meetings with congressman from almost every state. This experience was incredible and invaluable.

After leaving last year’s LAC, I graduated from residency and accepted at job at St. Joseph’s Medical Center in Tacoma, WA. Little did I know that two months after starting my first job as an attending, the State of Washington Healthcare Authority (HCA) would make a controversial move. HCA decided to trim their budget by not paying for “non-emergent” Medicaid patient visits to the emergency department, retrospectively.

As a member of WA-ACEP, I was contacted and became one of six members of the Legislative Committee. Three months after graduating, I found myself in Olympia, WA, across the desk from several state legislatures and congressmen advocating for our patients and profession. It was LAC that prepared me to get involved with such a monumental event. This is but one example of how LAC is a unique opportunity to take your interests to the big stage.

Last year, topics of discussion with Congress included SGR reform and liability protection for EMTALA-mandated care. This year, I hope to see you with the topics of 2012. In the meantime, feel free to email me at speaker@emra.org with any questions regarding SAEM or LAC.

Quoting the (now famous) words from one Dr. Mel Herbert, “What you do matters.” I encourage you to attend both SAEM and LAC. It will be well worth your time and will undoubtedly ignite your career within organized medicine. The entire EMRA Board of Directors will be present – don’t hesitate to approach any one of us to ask how to get involved! We were in your shoes once…then asked a few questions, attended a few great conferences…and are now leaders within the best specialty in medicine.
EMRA Representative Council
Schedule at SAEM

Monday, April 23
7:00 pm (CST)
Pre-SAEM EMRA Representative Council Conference Call
REQUIRED FOR EMRA PROGRAM REPS

Wednesday, May 9
1:30 pm – 2:30 pm
EMRA Regional Representative Meeting
Parlor A

Friday, May 11
2:30 pm – 3:00 pm
EMRA Representative Council Conference Committee Orientation
Superior Rooms A-B
This is a mandatory meeting for those individuals who are serving on the Conference Committees. This includes Reference Committee, Sergeant at Arms and Tellers/Credentialors.

3:00 pm – 4:00 pm
EMRA Reference Committee Public Hearing
Superior Rooms A-B
REQUIRED FOR EMRA PROGRAM REPS
During this meeting, the Reference Committee hears testimony from the authors of resolutions being brought forth from the Council and from anyone who would like to speak for or against the resolutions. This is your opportunity to understand more completely the reasoning and history behind the business being brought before the Representative Council. A great way to learn, understand and participate in the Representative Council the following day.

4:00 pm – 5:00 pm
EMRA Reference Committee Work Meeting
Superior Rooms A-B
This work meeting is a closed session for the Reference Committee to prepare reports to be presented to the full Representative Council the following day.

Saturday, May 12
8:00 am – 8:30 am
EMRA Representative Council Welcome Breakfast
Michigan Rooms A-B
REQUIRED FOR EMRA PROGRAM REPS
This is an informal breakfast meeting for all Representative Council members where you can meet other program representatives, the EMRA Board of Directors, Representative Council officers, and Regional Reps.

8:00 am – 8:30 am
EMRA Representative Council Registration
Michigan Rooms A-B
REQUIRED FOR EMRA PROGRAM REPS
All Program Reps are required to register to receive their voting credentials for the Representative Council meeting. Be prompt, registration closes at 8:30 a.m. sharp.

8:30 am – 12:00 pm
EMRA Representative Council Meeting and Town Hall
Michigan Rooms A-B
REQUIRED FOR EMRA PROGRAM REPS
This is a formal business meeting where elections and resolution votes will take place. The Town Hall Forum is an open discussion forum following the business session. This mandatory meeting is your chance to shape the organization and the specialty. Don’t miss it!

SAEM Interest Group Networking Events
May 11, 2012
A networking event specifically geared towards residents, medical students and young physicians.

On Friday, May 11 at 11:00 am, the chairs or leaders of the SAEM Interest Groups and Academies will be available to network with young physicians who are interested in developing niches within EM, or just looking to get more involved.

For questions, please contact Chadd Krause, DO, MPH at academicaffairsrep@emra.org
Lean operations: A guide for residents

This is the first in a two-part series to introduce emergency medicine residents to the concept of lean operations and its application to the emergency department. In Part I, we’ll give a little background on why lean is important and discuss some of the broad concepts. Part II will give concrete examples and practical tools for residents.

“**How can a hospital work to systemically improve its quality, while at the same time reducing cost? The answer is to go lean.**”

**“W**e provide the highest quality healthcare.” How many times did you hear that on the interview trail? But did you ever stop to ask yourself *what exactly does it mean?*

“**Quality care**” encompasses not only providing appropriate treatment; it also reduces errors, wait times, and costs, while increasing safety, coordination, and patient satisfaction. This definition was heralded by the 1999 Institute of Medicine publication, *To Err is Human*, which highlighted that nearly 100,000 deaths occur every year from preventable medical errors. One major factor contributing to the high error rate was complexity of the medical system — so when errors occurred, it was often the *system* that failed, not the physician.

In response to the report, many in government and healthcare called for improvement. They subsequently developed **metrics to measure quality** and **incentives to promote changes** within healthcare. The Centers for Medicare & Medicaid Services (CMS) launched initiatives to tie hospital and physician reimbursement to *quality measure reporting*, with so-called “pay-for-performance programs.” The Joint Commission (the independent, not-for-profit organization that accredits hospitals) began tying that accreditation to mandatory reporting of a set of “accountability measures,” designed to reflect quality of care.

How can a hospital work to systemically improve its quality, while at the same time reducing cost? The answer is to go lean.

The Toyota Production System, better known as “**lean manufacturing**,” is a set of tools and concepts developed at the Toyota Motor Corporation. It is a **method for continuous process improvement** and a **framework for the cultivation of future leaders**. Instead of the more traditional “top-down management,” lean is rooted in the idea that *those on the front line know how to best improve workflow*. It teaches teams how to breakdown complex daily tasks; define what is of value; reduce waste; improve the flow of patients, supplies, and equipment; and implement improved standard work practices.

These concepts – **value**, **waste**, **flow**, and **standardization** – are the core of the lean process. Implementation of lean allowed companies like Toyota, Boeing, and McDonald’s become leaders in quality and profitability. The medical industry has also realized the potential for lean to transform the way hospitals and emergency departments function, with many launching lean initiatives. A 2009 survey of hospitals showed that **53 percent of hospitals had implemented lean initiatives**, including a significant number of emergency departments.

To start any lean event, you begin by determining **value**. Lean identifies each element of a process and defines them as either “value-add” or “non-value-add.” A **value-add activity** in medicine meets the following criteria:

- Patients are willing to pay for it
- It directly transforms patient care
- It is done right the first time

Examples of value-add activities include:

- Receiving the right diagnosis
- Getting the appropriate medication
Non-value-add activities are better known as waste. Lean in an emergency department setting looks at eight different types of waste, remembered best by using the mnemonic D.O.W.N.T.I.M.E. (Figure 1). Analyses have shown that up to 90 percent of an activity can be comprised of waste. The goal of a lean initiative is to ultimately identify ways to increase value-add components and remove waste.

Now, let’s look at an example of this concept for the emergency medicine resident. Think of some of the individual tasks involved in something as simple as splinting a presumed fracture. First, the patient waits to be seen (waiting), then you may have to transport them yourself to radiology (a neglect of human talent and transportation), then you may have to go back and forth across the emergency department to collect your supplies (motion)… You get the idea.

Once an individual process is optimized, lean works to improve the overall flow. There are seven flows (Figure 2) that are central to the work of an emergency department. Imagine all of your movements during a shift – count how many steps you take and map out the path you walk in a given shift. In lean, this is called a “spaghetti diagram.”

Using lean techniques, teams then identify ways to make the flows more linear and more efficient. How great would it be to decrease the amount you walk during a shift by miles?! (In the next installment we will show you how unbelievably valuable these examinations of flow can be.)

One of the most important parts of lean is creating standardized ways to work. Once a process has been improved, maximum value has been added and waste has been removed. Thereafter, each time someone performs the activity – from a laceration repair, to triage, to assessing a new patient – the activity is consistently carried out by all team members in the most efficient way. Diagrams of a given new lean process can be posted, demonstrating the standard setup for a specific area, or the steps of an entire process.

After all the work and implementation – the success and continuation of a lean initiative is dependent upon communicating the improvements and new methods to staff. Lean is not a one-time event! It is a continuous process with flexibility for constant reevaluation and improvement. In a fully functional lean environment, it becomes a way of thinking, such that all emergency department employees – from attendings to environmental services – understand and contribute to process design. Many small changes add up to vast improvements in efficiency across the entire department.

References
Just two percent – Part II

In the previous issue of EM Resident, I addressed two statistics that can help us place emergency care in the context of the U.S. healthcare system:
1. Spending on emergency care constitutes only two percent of all U.S. spending on healthcare.
2. Of the patients we see, 92 percent have medical conditions that require treatment within two hours, as deemed by the CDC.

The emergency medicine community knows that the care we provide goes to patients who need help fast, and that the cost of that care is a small part of our nation’s $2.4 trillion healthcare budget. But what value does emergency care add to the healthcare system?

As part of the Delivery System Reform Task Force, we have been discussing the many ways emergency medicine provides a critical service to our patients within the healthcare system. Moreover, we are working to identify additional new ways the emergency department of the future can contribute to the well-coordinated, high-quality care that 21st century patients are demanding.

As emergency physicians, our first function is to provide urgent and emergent care of the acutely ill and injured. There is the patient with multisystem trauma who needs blood and resuscitation; the septic patient who needs early goal-directed therapy; the stroke patient in the tPA window – these patients are the core of emergency medicine.

Patients are unhesitatingly sent to the emergency department when they need this high level of care. As residents, these are the patients that we are training for – when every minute makes a difference. Residency-trained, board-certified emergency providers are the undisputed ideal providers of this type of care. Everyone knows someone who’s been in the emergency department, if not themselves; with first- or secondhand experience, the public understands this part of our job. They want us to provide critical care to them and their community 24/7.

However, our work is much more diverse than this important subset of patients. A second critical function that we provide is to serve as a rapid diagnostic center. When patients have a problem and don’t know why, we transform their chief complaint into a diagnosis in a single visit. We have the unique ability to pool a number of valuable resources – our own specialized clinical knowledge and skills; rapidly available imaging and labs; and on-call specialists. This is one-stop shopping for medical care! For a problem that might require multiple visits over several weeks to a primary care doctor’s office (then to a privately-owned imaging center, an outside lab, or perhaps a follow-up with a specialist), the emergency department can deliver the same care over a matter of hours in a single visit.

This abbreviated workup allows the patient to return to their daily life instead of missing work for multiple appointments. In turn, we give them the comfort of knowing their diagnosis and can begin treatment on the very same day. Patients place a high value on this type of prompt and all-inclusive service.

Another point of interest is our function as stewards of the transition of care. In residency, we often hear this term used in reference to “sign-out” or “checkout” – between the changing shifts within a given service or between emergency medicine residents and inpatient resident services. In the policy world, the transition of care is the decision-making process by which providers decide which patients are discharged to home, become inpatients, or become residents of a longer-term care facility. These transitions are some of the most significant drivers of cost in our healthcare system, as an inpatient hospitalization is an expensive location to receive care.

Emergency physicians frequently serve as the arbiters of this process; we can sometimes prevent admissions through aggressive care in the emergency department. Think of providing serial nebulizer treatments to COPD or asthma...
exacerbation; or diuresing a mild CHF exacerbation; or providing antiemetics and IV fluids to the dehydrated. These critical actions can transition patients to the point where they can further manage their symptoms at home. In each of these common examples, thorough and appropriate emergency care 1) saves thousands of dollars by avoiding hospital admission; and 2) can be more intensive than outpatient care. As restrictions are placed on reimbursement for “preventable” admissions, the function of the emergency department as a gateway to hospital admission will be increasingly emphasized.

In addition to all of the functions listed above, the emergency department serves as a catchall safety net for the larger healthcare system. We are the only health resource that is available 24/7/365 to all patients in need of any variety of medical care. We see patients who are otherwise unable to access healthcare due to income, citizenship, or lack of insurance. Then there are the patients who cannot access care due to near ubiquitous strain on healthcare system resources; increasingly long delays for outpatient appointments drive patients to our doorstep.

In the case of disaster or public health emergency, emergency departments work to maintain the surge capacity to handle an influx of patients – while still treating the standard complaints of a community. This safety net allows the rest of the healthcare system to continue to function despite acute increase in volume.

When the value of emergency medicine is questioned by those looking to cut costs, we must remind them of the functions that make our workplace an invaluable resource to the U.S. healthcare system. During your next shift, take a few moments to remind yourself of the value that you and your emergency department are adding to your community… and think of what might be next in the emergency department of the future!
Call for Applications!

2012-2013
EMRA-ACEP Health Policy Mini-Fellowship

The EMRA/ACEP mini-fellowship provides a four-week experience centered out of ACEP’s Washington, DC office.

This is an intensive, short-term policy curriculum that will provide meaningful advocacy exposure.

Applications for the
2012-2013 Health Policy Mini Fellowship
are due July 15, 2012

For more details and to apply online
visit www.emra.org

ACEP’S 911 Legislative Network

Are you interested in health policy? Do you care about how the latest political developments will affect your career? Would you like to win $250?

Then consider signing up for ACEP’s 911 Legislative Network!

As a Network member, you will receive weekly emails informing you about the latest legislative and regulatory developments. You will also receive notification of critical times to contact your congressman to advocate for the most effective policies to protect emergency patients and emergency physicians. If you are an EMRA member, you are an ACEP member and are qualified to be a member of this grassroots advocacy network.

Enroll between February 1 and May 21, and you will be entered into a drawing for $250 cash prizes! Winners will be announced at the Leadership and Advocacy Conference in Washington, DC.

So join today! Visit emra.org

Questions?
Contact Jeanne Slade, Director, NEMPAC & Grassroots Advocacy at 1-800-320-0610, ext. 3013 or jslade@acep.org
Ireland is proud to host the International Conference on Emergency Medicine (ICEM) in June 2012. The Irish Association of Emergency Medicine (IAEM) would like to invite you to attend this prestigious meeting which will be held at the Convention Centre Dublin (CCD) from 27 – 30 June, 2012.

Scientific Programme

Our scientific programme, Bridging the Gap between Evidence and Practice, will offer you a comprehensive choice of academic symposia and original cutting-edge research presented by world famous researchers, along with practical, hands-on pre-conference workshops of the highest quality.

Keynote Speakers

We are honoured that the George Podgorny Lecture, a centrepiece of the ICEM meeting, will be delivered by Prof. Peter Cameron, Director of Pre-hospital, Emergency and Trauma at Monash University, Melbourne, Australia and current President of IFEM. Other key speakers include:

- Dr. Gautam Bodiwala, UK
- Prof. V. Anantharaman, SINGAPORE
- Prof. Chris Baggoley, AUSTRALIA
- Prof. Matthew Cooke, UK
- Dr. Una Geary, IRELAND
- Prof. Art Kellerman, USA
- Prof. Patrick Croskerry, CANADA
- Prof. Richard Cantor, USA
- Prof. Clifton Callaway, USA
- Prof. Laurie Morrison, CANADA
- Prof. Ian Stiell, CANADA

Host City

Dublin, the famous capital city of Ireland, will offer the ICEM delegates a genuinely warm welcome, a world renowned musical and literary tradition, centuries of history and culture, a vibrant, modern and dynamic atmosphere, the highest standards of hotels, diverse cuisine from all around the world, excellent shopping and so much to see, do and experience that you simply won’t want to leave…

Who Should Attend

- Emergency Physicians
- Emergency Nurses
- Nurse Practitioners
- Junior Doctors
- Medical Students
- Acute Physicians
- General/Primary Care Physicians
- Physician Assistants
- Hospital Administrators
- EMTs/Paramedics
- Other healthcare providers engaged in the practice of Emergency Medicine

For more information please contact us at:

Email: icem2012@mci-group.com
www.icem2012.org
For many of us, medical school is coming to a close. We’re all beginning to transition to the next phase in our education, whether it’s beginning 2nd year, getting ready for 3rd year clinical rotations, putting together our 4th year schedule, or gearing up for internship.

Here are my reflections on (what I believe to be) the most important things to do during our training as medical students:

- **Be interested.** Whatever it is that you are learning, find something about it that interests you. There are so many different things we learn, from biochemical pathways to end-of-life care, and everything in between. It can be hard to motivate yourself to learn about each and every new subject – but if you find at least one piece that is interesting to you, you’ll grasp that subject with ease.

- **Find a mentor.** I can’t stress this point enough. There are many different kinds of mentors in medicine. You could find a life mentor, or a research mentor, or a career mentor, or some other kind of mentor. It could be an attending at your school, a resident mentor through the EMRA mentorship program, or a spiritual mentor. Many people have multiple mentors. But find someone who will listen to you and give you real advice on how to move forward in your education, career, and life.

- **Get involved.** One way to go through medical school is to buckle down, open your books, show up, and pass the exams. A more enriching approach is to take full advantage of the incredible opportunities you have as a medical student. And you can do things outside of your medical school! The best education I’ve gotten in medical school is through involvement with organizations and events unrelated to the school itself.

- **Read a lot.** This sounds cliché, and you already hear it from your attendings regularly, so I’ll spare you the reasoning. But the bottom line is, there is an overwhelming amount to learn in medicine; and while the best way to learn something is by doing it or seeing it in a real live patient, you’re never going to see everything. So, go read. A lot.

- **Make friends.** You will make amazing friends during medical school. And they will likely be friends for life. But this point is more about playing nice and making friends everywhere you go. Make friends with your classmates, even if you don’t hang out outside of school. Make friends on the interview trail. Emergency medicine is a field that requires you to work as a team; if you don’t make friends, the team may fall apart. Emergency medicine is a small community! Be nice to people, for you will be remembered.

- **Be passionate.** This is a corollary to being interested. Find something that
“Emergency medicine is a small community! Be nice to people, for you will be remembered.”

you are passionate about and seek it out; this will give you the energy to be successful in medical school. There’s only so much time you can put into studying before you have to find something else to do. It could be academic or non-academic. It could be health policy or legislative advocacy, skiing, research, running, fishing, spending time with your significant other, whatever. But have something outside of medical school that you love to do.

- **Smell the flowers.** This is where the list gets cheesy, but it is important to take the time to smell the flowers. When things are hectic and you are feeling overwhelmed, remember why you went to medical school in the first place. Remember how incredibly fortunate we are to have the opportunity we have to help and heal. There is beauty all around us in the world; find it wherever you go.

- **Be yourself.** Whatever you do, don’t go around masquerading as someone you are not. Don’t do things because you think other people want you to do it. Do things because you are genuinely interested in doing them. Be yourself and people will recognize you as someone honest, intelligent, and hard working.

Medical school is long and incredibly grueling. We all know how much we study, how early we have to get up, and little we feel we know. This list represents a few of the things that helped me get through some of the real challenges and burning hoops we all encounter.

As always, if you have any questions, comments, or suggestions, please don’t hesitate to contact me at: msgcchair@emra.org.

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Congratulations to our MSC/MSGC Members!

- **Daniel Stein**
  Oregon Health Sciences University

- **Benjamin Morrissey**
  Alameda County Medical Center/Highland

- **James Luz**
  UC Davis

- **Michael Lara**
  Carolinas Medical Center

- **Colby Redfield**
  Beth Israel Deaconess Medical Center

- **Steven McGuire**
  Jacobi/Montefiore NYC

- **Paul Bobryshev**
  Cook County – Chicago

- **Revathi Jyothindran**
  Carolinas Medical Center

- **Java Tunson**
  Denver Health

- **John Manning**
  Carilion Clinic

- **Alexandra Rackoff**
  University of Maryland
Presenting patients in the emergency department: Ten tips for medical students

A thorough history and detailed physical examination guides a physician to the accurate diagnosis of an undifferentiated patient. The medical school curriculum focuses on teaching students how to gather the information. Once the how is mastered, the next step is to present that information clearly and properly organized.

There are huge variations in presentation styles across specialties – from the quick, focused summaries of surgery, to the extensive histories of internal medicine. As a medical student interested in emergency medicine, it’s actually advantageous to learn each specialty’s presentation style. Emergency medicine involves all different fields; gleaning skills from each rotation makes for a better communication. This is a guide to build your own thorough yet concise presentation in the emergency department.

1. Sick or not sick?
Quickly decide if your patient is acutely sick. Most of the time, students see low-acuity patients. You still may come across the seriously ill, who can deteriorate quickly. In such a situation, get your attending or senior resident right away. If you think that your patient needs immediate treatment, present this information first.

For example: “Dr. A, my patient looks unstable due to his new hypotension and tachycardia. I think he needs fluids.”

2. History of present illness (HPI)
A core component of the presentation is an HPI customized for the chief complaint. It should include relevant information from past medical history, surgical history, social history, family history, plus pertinent positives and negatives within the review of systems. If done right, you will not go through lists of chronic problems and small surgeries. No one cares about Great Uncle Albert’s nail fungus. Relevance is fundamental to the efficiency of emergency medicine.

A good intro to the HPI might sound like this: “The patient is a 43-year-old gentleman with a past medical history of hypertension, diabetes, and coronary artery disease; status post multiple abdominal surgeries; who’s here today with a chief complaint of abdominal pain…”

3. The rest of the history
The rest of the history may not be high yield in the acute setting. However, medications and allergies are mandatory. Medications might be responsible for some of the symptoms! And then a patient’s allergies can alter an entire treatment plan. The AMPLE history (A – allergies, M – medications, P – past medical history, L – last meal, E – events/what happened) is useful to gather information from paramedics or family members.

4. Physical exam
Start discussion of the physical exam with vital signs and your general impression. Again, the exam should be focused around the chief complaint, just like the HPI. The opening should sound something like: “The patient appears to be stable – he’s afebrile with a normal blood pressure and heart rate, and is alert and oriented.” This will quickly indicate the severity of the patient’s complaint while relaying the urgency of management to your attending.

It’s all too easy to get sidetracked during an exam; to avoid missing something important, establish a systematic (yet efficient) approach. You don’t want to miss a significant observation, for the patient’s sake or your own. Eventually, you will learn from residents and attendings when it’s ok to just say a
“It’s all too easy to get sidetracked during an exam; to avoid missing something important, establish a systematic (yet efficient) approach. You don’t want to miss a significant observation, for the patient’s sake or your own.”

system is unremarkable and when to be more specific.

5. Relevance
Activity in the emergency department can intensify fast. To avoid blocking the flow, you have to be quick, thorough, and clear with your presentation. Present only pertinent information. Don’t get bogged down with details unrelated to your decision-making process. State only the information needed to get to the diagnosis, treatment plan, and disposition.

Note that identifying what’s important is hard, especially, when the definition of “important” is different with every rotation. It gets better with practice!

6. Differential diagnosis
This part always reminds me of Dr. House and his exhaustive, ridiculous lists of diagnoses. Emergency physicians focus on the most deadly etiology first. So should you. When forming a differential diagnosis, always think about it from the most life-threatening to the least life-threatening.

After listing the life-threatening diagnoses, state what you think is the most likely cause of the patient’s symptoms. By doing so, you show that you’ve considered various possible etiologies. Only then are you able to create a sound assessment and plan.

7. Assessment and plan
In terms of your performance evaluation, the assessment and plan is critical! Don’t stop your presentation after the H&P – tell them your workup plan and potential treatments. And always be able to justify the tests you order. (Will a given test result change treatment or disposition?)

If you have a difficult case, ask a resident for help! They leapt through this hurdle once as well. Use the textbooks lying around the emergency department, use online references, and keep a pocket guide handy. The emergency department is no place to sit and memorize information, so learn to digest information quickly.

8. Disposition
This concept is rather unique to emergency medicine. While working in the emergency department, you not only have the privilege of diagnosing the patient first, but you also get to decide if they require admission or discharge. Prior to presenting the patient, decide what you think their ultimate disposition will be.

If a patient requires admission, contact the appropriate consultant or service. Always, always be respectful. Give them a relevant history, test results, treatments, emergency department course, and reasoning admission.

When a patient is discharged, complete all documentation and include prescriptions and school/work notes. Discuss discharge instructions with the patient, including reasons to return to the emergency department and the plan for follow-up.

9. Questions and feedback
Always ask questions. A student who is eager and willing to learn demonstrates that curiosity. If you’re overly silent, you might come across as uninterested.

Ask for feedback about your performance. This will help you fix weaknesses and hone strengths. You can ask about specific items: “Is there anything I can improve about the HPI?” or “How was my differential?” Though potentially painful, take the resulting criticism as an opportunity to learn, not as an insult.

10. Know your people
Get to know your attendings. Find out their preferred presentation style (every attending is different). As always, residents can help you dodge potential landmines.

It will take a couple shifts to figure things out, as with any rotation in medical school or residency. With practice, you can present with ease and show them you know your stuff.

References
Prolonged QT syndrome
An easily forgotten side effect of common medications

Editor’s note: The significance of QT syndrome is well known to readers at this point in our careers. However, Dr. Nguyen’s article is more than didactic – it’s a reminder to pause before automatically giving some of the favored emergency department medications.

Q: What do IV levofloxacin and ondansetron have in common?
A: Their ability to cause prolonged QT syndrome and the ensuing deleterious effects.

Case one: 48-year-old female presents with abdominal pain and vomiting. She is given 8mg IV ondansetron and subsequently becomes unresponsive and pulseless. She is resuscitated for 30 minutes and treated with IV epinephrine, calcium, amiodarone, bicarbonate, and magnesium. She is defibrillated twice for ventricular fibrillation. After return of spontaneous circulation, she is started on hypothermia protocol and placed on an intra-aortic balloon pump. After this event, her EKG demonstrated a prolonged QT interval. She is discharged with normal neurological function after 17 days of hospitalization. Chart review shows an EKG from 11 months prior with prolonged QT.

Case two: 59-year-old female with history of congestive heart failure, myocardial infarction, depression, and biventricular pacemaker presents with cough and shortness of breath for two days. Her EKG shows paced rhythm and a prolonged QT interval. Patient is diagnosed with pneumonia and treated with IV levofloxacin – she subsequently goes into cardiac arrest. Return of spontaneous circulation is achieved after IV epinephrine and two rounds of defibrillation for ventricular fibrillation. The cardiac monitor then shows torsades de pointes, for which 4g of magnesium sulfate is given. During her 14-day hospitalization, an automated implantable cardioverter-defibrillator (AICD) is placed and her antidepressant medications are changed.

The QT interval
The QT interval is the total time of ventricular depolarization (QRS complex) and ventricular repolarization (ST segment and T wave). The length of the QT interval varies inversely with heart rate – QT interval therefore shortens as heart rate increases. The most common formula used to correct QT for heart rate is Bazett’s formula (QT Interval / √ [RR interval]), which computes a corrected QT interval (QTc).

The normal range for QTc is up to 440ms for men and 450 or 460ms in women. When estimating the QT interval on EKG, a general rule is that it should be less than half the preceding R-R interval. Note that this is most accurate for heart rates ranging 60-90bpm.

Long QT syndrome (LQTS)
LQTS may be genetic or acquired. The most common acquired form is drug-induced, which is the focus of this article. Drugs prolong the QT interval.
by blocking the potassium channel IKr—the predominant current responsible for ventricular repolarization.

The danger of LQTS is the development of torsades de pointes (TdP). TdP is a polymorphic ventricular tachycardia characterized by a continuous “twisting” in QRS axis around an imaginary baseline that can progress to ventricular fibrillation and death. The risk of TdP is greatest with a QTc > 500ms.

Medications that cause prolonged QT interval

There are several classes of medications that cause QT prolongation, many of which are non-cardiac (Table 1).

Fluoroquinolones: Fluoroquinolones prolong the QT interval by blocking the IKr. An increase in QTc interval from baseline can be demonstrated in healthy volunteers after single high doses of oral fluoroquinolone regardless of route of administration. In this class, ciprofloxacin has the lowest risk of TdP.

Macrolides: Among antimicrobials, macrolides are associated with the greatest degree of QTc interval prolongation. In addition to blocking the IKr channel, they also inhibit cytochrome P450, producing accumulation of other QT prolonging drugs. Here, the route of administration matters, especially for erythromycin, where oral is safer than IV administration. A study in a rat model lists the rank order of arrhythmogenic potential as – erythromycin > clarithromycin > azithromycin.

Azoles: Like macrolides, these drugs have a dual mechanism of QT prolongation.

Antipsychotics and Antidepressants: Sudden, unexpected death occurs twice as often in patients treated with antipsychotics. Haloperidol is a medication commonly administered in the emergency department; IV administration has been associated with LQTS and TdP. It is unclear whether route of administration affects risk of QT prolongation and TdP.

Ondansetron: Several prospective studies and case reports have shown that ondansetron can cause prolongation of the QT interval—hence the FDA black box warning.

Other risk factors for LQTS and TdP

In addition to medications, other factors are known to potentiate the risk of LQTS (Table 1).

Treatment of TdP

- Non-synchronized electric defibrillation in patients with hemodynamically unstable TdP. Post-shock bradycardia may predispose patients to immediate recurrence.
- Rapid magnesium infusion: 2g bolus of magnesium sulfate over 2-5 minutes; may be repeated, if necessary.
- Increase the heart rate: Isoproterenol, dopamine, or atropine may be useful to increase heart rate and therefore decrease the QT interval.

continued on page 28
Can’t miss ECGs

Table 2. Drug-Induced QT Interval Prolongation

<table>
<thead>
<tr>
<th>Class</th>
<th>Subclass</th>
<th>Specific Drugs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Anesthetics</td>
<td></td>
<td>Enflurane, Isoflurane, Halothane</td>
</tr>
<tr>
<td>Antiarrhythmics</td>
<td>Ia</td>
<td>Quinidine, Disopyramide, Procainamide</td>
</tr>
<tr>
<td></td>
<td>III</td>
<td>Dofetilide, Sotalol, Amiodarone, Ibutilide</td>
</tr>
<tr>
<td>Antiemetics</td>
<td></td>
<td>Droperidol, Ondansetron</td>
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<tr>
<td>Antimicrobials</td>
<td>Azole</td>
<td>Ketoconazole, Itraconazole, Fluconazole, Voriconazole</td>
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<tr>
<td></td>
<td>Fluoroquinolone</td>
<td>Levofoxacin, Ciprofloxacin, Gemifloxacin</td>
</tr>
<tr>
<td></td>
<td>Macrolide</td>
<td>Erythromycin, Clarithromycin</td>
</tr>
<tr>
<td></td>
<td>Antiprimal</td>
<td>Pentamidine</td>
</tr>
<tr>
<td></td>
<td>Other</td>
<td>Trimeprin-Sulfamethoxazole</td>
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<tr>
<td>Antipsychotics</td>
<td>Phentothazine</td>
<td>Thioridazine, Mesoridazine</td>
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<tr>
<td></td>
<td>Butyrophenone</td>
<td>Haloperidol</td>
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<tr>
<td></td>
<td>Atypical</td>
<td>Risperdone, Quetiapine, Ziprasidone, Pimozide</td>
</tr>
<tr>
<td>Cholinergics</td>
<td></td>
<td>Cisapride</td>
</tr>
<tr>
<td>Diuretics</td>
<td></td>
<td>Indapamide</td>
</tr>
<tr>
<td>Other</td>
<td></td>
<td>Ionic Contrast Agents, Organophosphate Insecticides, Arsenic</td>
</tr>
<tr>
<td>Antimalarials</td>
<td></td>
<td>Chloroquine, Halofantriene, Mefloquine</td>
</tr>
<tr>
<td>Antidepressants</td>
<td>Tricyclic</td>
<td>Imipramine, Amitriptyline, Desipramine, Nortriptyline</td>
</tr>
<tr>
<td></td>
<td>Tetracyclic</td>
<td>Doxepin</td>
</tr>
</tbody>
</table>

Adapted and modified from Owens10.

- In refractory cases, temporary transvenous overdrive pacing at 100bpm.
- Lidocaine has also been proven effective in acute treatment of TdP.

References

Reflecting on ACEP Council 2011

Start planning for 2012

Editor’s note: Scientific Assembly 2012 may not be until October – nonetheless it’s never too early to pique one’s interest. It’s also never too early to plan a trip to Denver.

The 2011 ACEP Council Meeting was held in San Francisco at Scientific Assembly last October. I had the honor of serving on this year’s American College of Emergency Physicians (ACEP) Council and came away inspired by the passion of those who represent our specialty.

What is the ACEP council?

As representation for its members, the ACEP Council – in conjunction with the board of directors – initiates policy and shapes strategic planning for the ACEP organization as a whole. The ACEP Council provides a formal environment to debate established policy or new policy under consideration. Through collective advocacy efforts, the council works for the good of ACEP members, emergency medicine, and our patients.

The council is composed of representatives from:

- Every state, plus Puerto Rico and D.C.
- The ACEP sections
- The Association of Academic Chairs in Emergency Medicine (AACEM)
- The Council of Emergency Medicine Residency Directors (CORD)
- Your very own EMRA.

In turn, council elects the ACEP Board of Directors. So, as you may have noted, the ACEP Council is akin to the EMRA Representative Council.

How does this affect you?

It is imperative for all residents to understand health policy, now more than ever. There are many new – and controversial – laws being enacted. These new laws will absolutely affect the way we practice medicine.

Realization as a resident on the council

My eyes have been opened to the issues our profession faces, yet it’s reassuring that we have unyielding leadership within ACEP. We have a forum for emergency physicians to voice our struggles and propose solutions for those issues we face daily. Now is not the time to assume that someone else will fight for patient and physician rights. Congressman Joe Heck, an emergency physician, is one of the few lawmakers who understand the realities of medicine as we do.

A call to action

You can tell your congressman your own real life stories and help shape healthy policy. ACEP is working diligently to provide us access to speak face-to-face with lawmakers. Take the time to educate yourself about current health policy. Learn to advocate for positive change within emergency medicine.

How to help

1. Start by learning about the threats to practicing medicine. ACEP.org is an excellent place to start.
2. Sign up for the 911 Legislative Network (www.acep.org/911) to receive email updates on congressional issues affecting emergency medicine.
3. Become an advocate. As residents, we have little money and even less time. The Emergency Medicine Action Fund (EMAF) and the National Emergency Medicine Political Action Committee (NEMPAC) can advocate on your behalf in the meantime. A donation of $5 can turn into $100 with matching donations.

Give back

I’ve learned that you shouldn’t go through life with a catcher’s mitt on both hands; you need to be able to throw something back.

– Maya Angelou

Meet me at Scientific Assembly in Denver
October 6-7, 2012

for the next ACEP Council meeting. Find your voice. Live with passion. Make a difference. See you there!

Questions? Comments?
Email Dr. Moody at moodykar@einstein.edu

Thanks to the Council, PaACEP, ACEP, Dr. Doug McGee, and Dr. Merle Carter for welcoming me as a new ACEP Council member.

K. Kay Moody, DO, MPH
Albert Einstein Medical Center
Philadelphia, PA
Don’t miss the EMRA/SAEM Simulation Academy Resident Sim Wars Competition

May 11, 2012
12:00 p.m. – 5:00 p.m.

Our competitors

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University of Mississippi Medical Center
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Hennepin County Medical Center
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Sponsored by EMRA / Organized by the Academy of Emergency Ultrasound of SAEM

Teams compete in the first ever SonoGames being held at the SAEM Annual Meeting in Chicago, Friday, May 11. The purpose of the competition is to allow residencies to demonstrate their skills and knowledge of point-of-care ultrasound. All aspects of ultrasound competence will be assessed, including image acquisition, image interpretation, and incorporation into clinical practice.

The competition will consist of three rounds. Each team will consist of three residents from the same residency program and a required faculty captain. All team members must be available and willing to compete during the entire session. The faculty sponsor is not required to be present at SAEM.

SonoGames Committee:
Resa Lewiss MD, chair; Andrew Liteplo MD, chair; Fernando Lopez, MD; Teresa Liu, MD; Alice Murray, MBChB

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EMRA Activities at the 2012 SAEM Annual Meeting

May 9-12, 2012

Sheraton Chicago Hotel & Towers
301 East North Water Street
Chicago, Illinois 60611

Wednesday, May 9, 2012
7:00 am – 3:00 pm EMRA Board of Directors Meeting
Parlor A
2:30 pm – 4:30 pm EMRA International Committee
Parlor E
3:00 pm – 4:00 pm EMRA Regional Representative Committee
Parlor A
EMRA Committee Chair/Vice Chair Orientation
Parlor B
4:00 pm – 6:00 pm EMRA Health Policy Committee
Parlor B
EMRA Research Committee
Parlor C
EMRA Critical Care Committee
Parlor D
EMRA Technology Committee
Parlor F
EMRA Education Committee
Parlor G

Thursday, May 10, 2012
8:00 am – 12:00 pm EMRA Board of Directors Meeting & Committee Update
Parlor A
1:00 pm – 5:00 pm EMRA Medical Student Governing Committee
Parlor A
EM Resident Editorial Advisory Committee
TBD
EMRA National EM Jeopardy Contest
Erie Room
9:30 pm – 2:00 am EMRA Party
Cuvée Chicago, 308 West Erie Street

Friday, May 11, 2012
8:00 am – 12:00 pm EMRA/SAEM AEUS Sonolympics
Sheraton 4
12:00 pm – 5:00 pm EMRA/SAEM Simulation Academy SIM WARS
Michigan Rooms A-B
1:00 pm – 3:00 pm EMRA Awards Committee
Parlor F
2:30 pm – 3:00 pm EMRA Conference Committee Orientation
Superior Rooms A-B
3:00 pm – 4:00 pm EMRA Reference Committee Public Hearing
Superior Rooms A-B
4:00 pm – 5:00 pm EMRA Reference Committee Work Meeting
Superior Rooms A-B
5:30 pm – 6:30 pm EMRA Spring Awards Reception
Chicago 8

Saturday, May 12, 2012
8:00 am – 8:30 am EMRA Rep Council Welcome Breakfast
Michigan Rooms A-B
8:00 am – 8:30 am EMRA Rep Council Registration
8:30 am – 12:00 pm EMRA Rep Council Meeting/Town Hall
Michigan Rooms A-B
12:00 pm – 1:00 pm EMRA Board of Directors Meeting
Parlor A
1:30 pm – 2:30 pm EMRA/SAEM Simulation Academy SIM WARS Planning Meeting
Parlor B

Schedule is subject to change, please visit the EMRA website as we near meeting date for any changes.

April/May 2012 33
Reversing warfarin: Prothrombin complex concentrate and warfarin-associated intracerebral hemorrhage

A 57-year-old man on warfarin for atrial fibrillation comes to the emergency department obtunded after falling down ten stairs. The head CT reveals a large subdural hematoma with a 2-cm midline shift. As the patient returns from radiology, you consider your management options.

WAICH: Warfarin-associated intracerebral hemorrhage

An increasing number of patients are maintained on oral anticoagulation therapy (OAT) for prevention of thromboembolic events; warfarin remains the mainstay of treatment. Hemorrhage is a major complication of OAT, with intracerebral hemorrhage (ICH) the most feared complication. Patients on OAT account for up to 14 percent of all cases of ICH. The relative risk of ICH is tenfold higher for patients over age 50 on warfarin. OAT also increases the degree of bleeding, with mortality exceeding 50 percent.

Given the high morbidity and mortality associated with a head bleed on warfarin, there is an urgent need to establish ideal management. Unfortunately, data comparing current reversal options such as fresh frozen plasma (FFP), prothrombin complex concentrate (PCC), factor VIIa, and vitamin K is limited. Despite a lack of robust evidence, PCC has emerged as a popular option worldwide for reversal of OAT in the setting of ICH, often replacing FFP as the preferred treatment.

Prothrombin complex concentrate: What is it and how does it differ from FFP?

PCC is a human-derived plasma product containing inactive vitamin K-dependent coagulation factors (II, IX, X, and variable amounts of factor VII). While not currently FDA-approved for emergent reversal of warfarin, the two commercially available products in the US are Bebulin VH and Profilnine SD. Both are largely three-factor preparations, containing little to no factor VII.

In contrast, European preparations of PCC contain all four factors, trace amounts of heparin, as well as proteins C and S. It is important to note that most studies in the literature looked at four-factor preparations; thus, the current data may not directly translate to products available in the U.S.

PCC has significantly more clotting factors per dose when compared to FFP. For comparison, with an initial dose of 2,000 units of PCC (Profilnine) versus four units of FFP, the respective factor content (in units) is:

- II: 2,900/1,000
- VII: 700/1000
- IX: 2,000/1,000
- X: 1,200/1,000

Four-factor preparations contain higher levels of Factor VII. A typical dose of PCC requires a volume less than 200 mL, while FFP can require up to three liters.

PCC dosing is weight-based, with values adjusted for INR, ranging from 10-50 U/kg. Typical dosing guidelines are:

- 25 U/kg (INR 2-4)
- 35 U/kg (INR 4-6)
- 50 U/kg (INR > 6)

As with treatment with FFP, a dose of vitamin K is required to provide sustained reversal of vitamin K-dependent coagulation factors. A 10 mg IV dose is administered slowly to avoid an anaphylactoid reaction.

PCC has several advantages over FFP – unlike FFP, PCC can be dosed immediately, without the need for thawing or ABO matching. The small volume of PCC reduces the chance of fluid overload in patients with cardiac, pulmonary, or renal dysfunction. The risk of
viral disease transmission, transfusion related acute lung injury (TRALI), and anaphylactoid reactions is much lower with PCC as well. Finally, when total costs are considered, PCC and FFP are generally comparable.

**PCC for reversal of WAICH: What is the evidence?**

**INR reversal**

PCC has been used for reversal of major bleeding events associated with oral anticoagulation for decades, though it has not been well studied. A recent literature review found PCC to be significantly faster in correcting the INR when compared to FFP alone. In one retrospective study looking at the reversal of anticoagulation in patients with major bleeding, complete correction of the INR occurred within 15 minutes in 28 of 29 patients given PCC.

Most studies showed PCC to achieve an INR of less than 1.5 within 10-30 minutes, while correcting to a level significantly lower than that of FFP. This is not unexpected, as the INR of FFP is close to 1.5, thus limiting the ultimate nadir. Most of the literature on PCC and INR reversal, however, consists only of small case series and retrospective studies.

**Clinical outcome and hematoma expansion**

More rapid and effective reversal of the INR is obviously desirable in the setting of WAICH, yet little data exists regarding clinical outcomes. One non-randomized study of PCC versus FFP showed results favoring PCC – they found a significant decrease in hematoma expansion, a reduction in morbidity, plus a reduction in in-hospital mortality – for those patients with ICH and an INR > 2.

Huttner et al also found decreased hematoma expansion in patients treated with PCC compared to FFP (19 percent vs 37 percent). However, this study failed to show a difference in long-term outcomes between the groups.

**Thrombotic risk**

Reversal of anticoagulation comes with inherent risks. Current data suggests a five percent risk of thrombotic events, with both venous and arterial clots reported. Although adverse events related to thrombosis (e.g., myocardial infarction, pulmonary embolism, ischemic stroke, disseminated intravascular coagulation) were reported, no deaths were attributed to PCC in a recent review.

The variable clotting factor content of different PCC preparations should be considered when evaluating for thrombotic risk. Those with higher amounts of factor VII may have an increased risk. Additionally, preparations including heparin have heparin-induced thrombocytopenia as a potential complication.

**Conclusions**

Prothrombin complex concentrate is effective in the management of WAICH. Compared to FFP, PCC corrects the INR more rapidly, requires less volume, and is associated with fewer adverse reactions. Assessing the risk-benefit ratio in this setting remains important, as the mortality benefit of PCC has not been well established in the literature. Nevertheless, in a patient with ICH on warfarin, reversal will often be required – in such a case, the option of PCC should be strongly considered.

**References**

More than 30 years have passed since the first cases of acquired immunodeficiency syndrome (AIDS) were reported in the U.S. At the end of 2008, the Centers for Disease Control and Prevention estimated that more than a million Americans were living with human immunodeficiency virus (HIV) infection, a fifth of whom were unaware that they were infected. About 50,000 new cases of HIV infection are believed to occur each year in the U.S., with African-Americans and men who have sex with men (MSM) bearing a disproportionate burden of the disease.

The advent of combination antiretroviral therapy (ART) in the late 1990s dramatically improved long-term survival and altered the spectrum of diseases encountered in HIV-infected patients able to access care and adhere to daily medication. Today, emergency physicians are as likely to encounter febrile HIV-infected patients with unchecked disease suffering from opportunistic infection as those on stable therapy at risk for all the usual causes of fever, infectious and non-infectious.

The classic approach to fever in the HIV-infected patient revolves around the CD4+ (T-helper lymphocyte) count, a reasonable measure of immune status by which the risk for a number of opportunistic infections can be stratified. With many new HIV infections being identified through rapid testing in the emergency department during acute illness, a CD4+ count may not always be readily available to guide the differential diagnosis of fever in an HIV-infected patient. Obvious findings such as oral thrush clearly signal an increased risk of opportunistic infection (regardless of what the CD4+ count may be).

Fever in the patient with HIV

“Obvious findings such as oral thrush clearly signal an increased risk of opportunistic infection (regardless of what the CD4+ count may be).”

For febrile patients with pulmonary complaints, bacterial infections involving Streptococcus pneumoniae and Haemophilus influenzae remain important players at any CD4+ count. Mycobacterium tuberculosis must also be considered, particularly in immigrants, the homeless, and incarcerated patients, or when practicing in parts of the developing world where tuberculosis remains common. Depending on the season, influenza should never be discounted.

When the CD4+ count drops below 200 cells/mm³, several well-described opportunistic infections become more likely. While fever may be evident, the clinical presentation of an opportunistic pulmonary infection is often subacute and understated. Pneumocystis jiroveci pneumonia is the most common of these, though it can also be seen at higher CD4+ counts!

Pneumonia due to Cryptococcus neoformans and disseminated endemic mycoses (e.g., Histoplasma capsulatum, Coccidioides immitis) with lung involvement are more frequent when the CD4+ count approaches 100 cells/mm³. Severely immunocompromised patients (CD4+ count < 50 cells/mm³) may be prone to pulmonary infections with Aspergillus as well as disseminated viral disease (e.g., herpes simplex virus, HSV; varicella zoster virus, VZV).

Fever with a headache or altered mental status in an HIV-infected patient warrants an evaluation for meningitis and/or encephalitis. Common organisms such as S. pneumoniae and Neisseria meningitidis, as well as less common ones including Listeria monocytogenes and HSV, can strike at any CD4+ count. Below a CD4+ count of 100 cells/mm³, meningitis associated with Cryptococcus neoformans and Toxoplasma gondii encephalitis and cerebral
abscess should be ruled out. Under 50 cells/mm³, cytomegalovirus (CMV) and VZV encephalitis are possible along with JC polyomavirus infection leading to progressive multifocal leukoencephalopathy.

Disseminated Mycobacterium avium-intracellulare (MAI) infection is worth highlighting as it often presents as a fever of unknown origin in HIV-infected patients with a CD4+ cell count less than 50 cells/mm³. Night sweats, weight loss, abdominal pain, and diarrhea that may or may not be accompanied by palpable lymphadenopathy are typical symptoms.

For patients recently started on or transitioned to more active ART, a febrile illness may herald immune reconstitution inflammatory syndrome (IRIS), an inflammatory response to previously dormant infections involving MAI, M. tuberculosis, P. jiroveci, endemic fungi, C. neoformans, CMV, or JC polyomavirus. IRIS typically presents 4-8 weeks after starting ART, although it can be seen later as well.

Aside from infections, HIV-infected patients are at greater risk for malignancies such as non-Hodgkins lymphoma (including systemic lymphoma, central nervous system lymphoma, and primary effusion lymphoma); visceral Kaposi’s sarcoma; and multicentric Castleman’s disease. Such malignancies are particularly more likely at CD4+ counts under 100 cells/mm³. Each can present as a non-specific febrile syndrome – with night sweats, weight loss, and fatigue – and may be aggressive and fatal if not promptly recognized.

Sometimes the very medications used to treat HIV or prevent opportunistic infections can be the cause of fever. In particular, abacavir, a nucleoside reverse transcriptase inhibitor, has been well known to cause a hypersensitivity reaction marked by fever, rash, and constitutional symptoms (with cough and gastrointestinal symptoms to a lesser degree). Similar reactions are possible with nevirapine and efavirenz. Antibiotics including trimethoprim-sulfamethoxazole, dapsone, and sulfadiazine can all cause febrile hypersensitivity and dermatologic reactions including toxic epidermal necrolysis and Stevens-Johnson syndrome.

A rationale approach to the emergency department evaluation of the HIV-infected patient begins with a thorough physical exam (yes, physical exam) that includes the oropharynx, skin, and lymph nodes in addition to the major systems. Depending on the nature and severity of the patient’s acute illness, lab workup should include blood, urine, and sputum cultures prior to administering any empiric antibiotics. If MAI is being considered, special blood culture medium may be required and should be coordinated with the clinical microbiology lab.

While plain films are a starting point for an evaluation of cough, chest CT may better distinguish the pulmonary pathology seen with many opportunistic infections. Likewise, CT can be invaluable in identifying lymphadenopathy (think MAI and malignancy) or abscess in the severely immunocompromised patient with abdominal pain.

For patients with neurologic complaints and focal deficits, a CT of the brain is indicated. In these cases, there should be a low threshold for obtaining cerebrospinal fluid in sufficient volumes not only for cell count, glucose, protein, and culture, but to facilitate more specialized testing for HSV, EBV, T. gondii, C. neoformans, Treponema pallidum, and other organisms.

Unlike in febrile neutropenic or transplant patients where empiric therapy to blanket a broad range of bacteria and fungi is often necessary, a measured approach targeting suspect organisms (e.g., S. pneumoniae, Staphylococcus aureus, P. jiroveci) is reasonable in the HIV-infected patient. Empiric antifungal therapy in the ED is not indicated unless cryptococcal meningitis is suspected. Likewise, empiric antiviral therapy is only warranted when HSV or VZV infection, particularly meningitis, is of primary concern.

As the HIV epidemic in the US enters a chronic phase, emergency physicians will continue to play a major part in the management and care of this disease. Knowledge of a patient’s CD4⁰ count (true or approximate) and current antiretroviral and prophylactic antibiotic regimens can go a long way towards narrowing the differential diagnosis of fever in the HIV-infected patient.

References
Assassins and saboteurs: The low-risk chest pain patient

A faculty member at my residency program often warns that, as we approach the workday, there are “assassins and saboteurs around every corner.” This reminds residents that we should always expect the unexpected and we must be prepared to manage the unexpected. Perhaps there is no situation that better exemplifies this advice than the patient with low-risk chest pain.

Chest pain is the second most common reason for emergency department visits among adults; in fact, nearly one in ten adult emergency department visits are for chest pain\(^1\). Because chest pain is such a common chief complaint among emergency department patients – and because heart disease remains a leading cause of death and disability in the U.S. – we can become complacent approaching chest pain, especially in patients without strong risk factors.

Low-risk patients include young men and women – we just don’t expect them to have significant coronary artery disease. They present unique diagnostic challenges for the emergency physician\(^2\), which means that evaluation comes at considerable financial cost, often as a result of inpatient admission for additional diagnostic testing.

In 2010, the American Heart Association (AHA) released a statement on managing patients with low-risk chest pain\(^3\). The statement includes recommendations for the use of serial cardiac injury markers and EKGs as well as confirmatory testing (e.g., exercise treadmill test and cardiac imaging).

However, the AHA underscores the importance of clinical suspicion and basic clinical tools such as history, physical exam, and EKG. A dynamic body of research is still trying to create and validate sensitive, specific, and cost-effective tests and algorithms to exclude acute coronary events in low-risk chest pain patients. Furthermore, many hospitals and health systems have developed clinical decision or observation units for the evaluation of these patients to ensure that they receive appropriate diagnostic testing\(^4\).

Recently, my colleagues and I had several significant encounters. Each case reinforced the need to maintain an appropriate level of suspicion for disaster, even in presumably low-risk patients.

The first patient was a man in his mid-20s, with well-controlled diabetes and no
history of cocaine/substance abuse. He presented to the emergency department with chest pain with pre-hospital EKG changes suggesting acute ischemia. He was taken emergently to the cardiac catheterization lab, where stents were placed for his surprisingly significant coronary artery disease.

The second patient was a woman in her early 40s. She had a history of mild depression but no personal or family history of coronary artery disease. She presented with chest pain – and went into V-fib arrest seconds after transfer from the EMS stretcher to the emergency department gurney. Per ACLS guidelines, the patient was successfully resuscitated and taken emergently to the cardiac catheterization lab. She, too, had significant stenosis, though hers was not amenable to stenting. With medical management, the cardiology team discharged her several days later.

These cases highlight the importance of being aware of assassins and saboteurs in the evaluation of patients with low-risk chest pain. Although the prevalence of significant disease in these patients is low, our clinical suspicion should remain high until proven otherwise! As with any presenting complaint, a thorough history and physical, as well as basic diagnostic tools such as EKGs, provide us with a foundation for the appropriate work-up and disposition for these patients.

References

“Although the prevalence of significant disease in these patients is low, our clinical suspicion should remain high until proven otherwise!”
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Jonel Daphnis, MD, MPH – SUNY Downstate / Kings County Hospital Center

Jean Hollister EMS Award
Marlow Macht, MD – Denver Health Medical Center

Dr. Alexandra Greene Medical Student Award
Daniel Kemple – Ross University SOM

EMRA/ACEP Robert J. Doherty Teaching Fellowship
Suzanne K Bently, MD – Mount Sinai SOM

Research Grant
Dylan Carney – Harvard Medical School
Sarah Ashley – UC Davis

Local Action Grant
Kimberly Pringle, MD and Joy Mackey, MD – Brown University

Residency Director of the Year
Allan B Wolfson, MD, FACEP – University of Pittsburgh

Assistant Residency Director of the Year
Christian Jacobus, MD, FACEP – Synergy Medical Education Alliance

Residency Coordinator of the Year
Stephanie Morville – Johns Hopkins University SOM

SAEM Travel Scholarship
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James Dazhe Cao, MD – Carolinas Medical Center
Loren Keith Reed – SIU SOM
Taylor Nicole McCormick, MD – LAC + USC Medical Center
Nocholas Johnson, MD – University of Pennsylvania
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LAC Travel Scholarship
Christopher Peabody, MD – LAC + USC Medical Center
Allison Harritt, MD, MPH – SUNY Downstate / Kings County Hospital Center
Kurtis A Mayz, MD – Stony Brook University Medical Center

Emergency Medicine Residents’ Association
Join Today!

EM Residents & Medical Students

April/May 2012 41
At its winter 2012 meeting, the Board of Directors (BOD) of the American Board of Emergency Medicine (ABEM) elected three new directors from nominees submitted by ABEM sponsor organizations, the American College of Emergency Physicians (ACEP), and the American Medical Association (AMA). The BOD elected Jill M. Baren, MD, Mary Nan S. Mallory, MD, and Robert P. Wahl, MD from the two slates of candidates.

Dr. Baren is a Professor of Emergency Medicine and Pediatrics at the Perelman School of Medicine at the University of Pennsylvania; and Chair, Department of Emergency Medicine and Chief of Emergency Services, University of Pennsylvania Health System, in Philadelphia, Pennsylvania. She has served ABEM as an examiner for the oral certification examination since 2000, and as a member and past Chair on the Pediatric Emergency Medicine Subboard. Dr. Baren is also a past President of the Society for Academic Emergency Medicine. Dr. Baren was elected from a slate of nominees submitted by ACEP.

Dr. Mallory was elected from a slate of nominees submitted by ACEP. Dr. Mallory has served ABEM as an examiner for the oral certification examination since 2002, a senior oral certification examination case reviewer since 2011, and an item writer for the qualifying examination since 2008. Dr. Mallory was elected from a slate of nominees submitted by ACEP.

Dr. Wahl is an Assistant Professor and Residency Director in the Department of Emergency Medicine, Wayne State University School of Medicine; and an emergency medicine staff physician at Detroit Receiving Hospital, Detroit, Michigan. He has served ABEM as an examiner for the oral certification examination since 2007, an item writer for the in-training examination from 2001-2010, and a member of the Enhanced MCQ Advisory Panel since 2011. Dr. Wahl was elected from a slate of nominees submitted by the AMA.

Dr. Baren, Dr. Mallory, and Dr. Wahl will attend the 2012 summer BOD meeting as observers and begin their terms as ABEM directors at the close of that meeting.

The ABEM Board of Directors is comprised solely of board-certified emergency physicians. The Board includes members who were elected from individuals nominated by sponsoring organizations, other emergency medicine organizations, and ABEM diplomats. Officers are chosen from among the Board members.

**ABEM news: Resident reminders!**

**Certification Applications**

The in-training examination is over and results have been sent to your program directors. Once you have successfully completed your EM residency program, the next step in the ABEM certification process is to submit your application for certification. Application materials will be delivered to your program director, who then distributes them to you. Watch the ABEM website for the date on which this material will be delivered. A reminder: **Submit all of your materials by June 30, 2012 to avoid late fees.**

**Examination Security**

You may have seen recent CNN reports about the use of “recalls” to study for board certification examinations. Recalls are questions that physicians taking board examinations reproduce from memory following an examination to assist with future exam preparation, either for themselves or others. ABEM wishes to remind all emergency physicians that they must to adhere to the ABEM Policy on Examination Irregularities when taking the qualifying or oral certification examinations. This policy, as well as the ABEM Policy on In-training Examination Irregularities, prohibits both the creation and use of recalled questions. No ABEM written questions can be reproduced in any form and no oral examination cases can ever be discussed.

You may be unaware, but all ABEM examination materials are copyrighted, and any receipt, possession, or transmission of written or oral examination materials, either before an examination, on-site, or after an examination is cheating. This is a breach of ABEM policy and is strictly forbidden. Unauthorized use of any ABEM examination materials for the purpose of examination preparation or training is also strictly forbidden. Failure to adhere to these policies could lead to permanent de-certification.
Abstract Submissions

October 8-9, 2012
Denver, CO

Abstracts Due
April 27, 2012

This year, the ACEP Research Committee will also present awards for best medical student paper and best resident paper.

The **Best Medical Student Paper Award** will be given to a medical student who is the primary investigator of an outstanding abstract presentation.

The **Best Resident Paper Award** will be given to a resident who is the primary investigator of an outstanding abstract presentation.

Awards will be presented at the 2012 ACEP Research Forum.

Congratulations to the following two new programs in Emergency Medicine:

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Annals of Emergency Medicine

Resident Editorial Board Fellowship Appointment

The Resident Fellow appointment to the Editorial Board of *Annals of Emergency Medicine* is designed to introduce the Fellow to the peer review, editing, and publishing of medical research manuscripts. Its purpose is not only to give the Fellow experience that will enhance his/her career in academic emergency medicine and in scientific publication, but to develop skills that could lead to later participation as a peer reviewer or editor at a scientific journal. It also provides a strong resident voice at *Annals* to reflect the concerns of the next generation of emergency physicians.

Please visit *Annals*’ website at [www.annemergmed.com](http://www.annemergmed.com) for a copy of the complete application.

Due date is July 11, 2012

Questions should be directed to Stephanie Wauson, Editorial Associate, *Annals of Emergency Medicine* at 800-803-1403 x3222, or by e-mail to swauson@acep.org.
Risk management pitfalls to avoid in the treatment of constipation

1. **“Babies and children who do not stool every day are constipated.”**
   Stool pattern among infants and children is highly variable, and the number of bowel movements generally decrease as age increases. Neonates and infants will often grunt and strain as they defecate. This behavior is normal as they learn the process of coordinating their internal and external sphincters. Parental education about normal and abnormal stool patterns is important to help identify children who need therapy and to avoid unnecessary physician visits.

2. **“My child has normal bowel movements every day, so there is no way he can be constipated.”**
   Children with crampy, episodic, and often severe abdominal pain will frequently present without any history of hard or infrequent stool. Parents are often surprised or may even doubt that such a seemingly benign diagnosis could be capable of causing such pain. Further, children often undergo extensive and often unnecessary laboratory and radiological evaluations when a plain abdominal radiograph would have revealed moderate or even severe fecal retention.

3. **“I do not feel a fecal mass on abdominal examination or digital rectal examination, so a fecal impaction is unlikely.”**
   The presence of a fecal mass on abdominal or rectal examination is indeed helpful if it is present. Many constipated children and even those with a fecal impaction will have normal abdominal and rectal examinations. In this case, a plain abdominal radiograph is helpful in identifying the presence and extent of fecal loading.

4. **“There is no way my child can be constipated. He is having diarrhea and vomiting.”**
   Encopresis, or overflow diarrhea, is a result of a combination of factors. A large fecal mass, chronic stretching of the colon, loss of colonic sensation, and propulsive force all work to allow softer, proximal stool to leak around a large stool mass. The presence of vomiting (in this case) mimics acute gastroenteritis. The absence of fever, sick contacts, and the presence of moderate to severe abdominal pain with or without a prior history of constipation should alert the clinician to the possibility of encopresis.

5. **“A fecal impaction must be cleared with an enema.”**
   The initiation of the removal of a fecal impaction is important in the ED, especially if the cause of abdominal pain is uncertain and the clinician needs to assess response to removal of the fecal mass. In this case, enemas are usually fast and effective. In the child who is otherwise stable, has a benign abdominal examination, and lacks red flags that would point to an organic cause of constipation, disimpaction can be performed with either enemas or oral polyethylene glycol. An individualized approach is reasonable in this case. Patients who use enemas are likely to have transient abdominal pain. Patients using oral polyethylene glycol are likely to have episodes of incontinence.
Risk management pitfalls for potassium emergencies

From the February 2012 issue of Emergency Medicine Practice, "Advances In Diagnosis And Management Of Hypokalemic And Hyperkalemic Emergencies." 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 email ebm@ebmedicine.net

1. “The blood sample was obviously hemolyzed, so I didn’t think it was worth repeating the blood draw.”
   Do not wait for the laboratory to repeat the evaluation if there is any clinical suspicion of hyperkalemia. Begin treatment immediately. In a well-appearing patient, it may not be necessary to repeat the study in the case of a hemolyzed sample that indicates an elevated potassium and all other electrolytes within normal limits. However, if there is any question at all, send a new blood sample for evaluation. In some cases, a hemolyzed specimen may be masking hypokalemia.

2. “The ECG looked totally normal, so I assumed that the potassium must be normal.”
   A perfectly normal ECG does not rule out a potassium abnormality. If clinically suspicious, a potassium level should be obtained.

3. “The ED is always packed, and there are not enough monitors to go around; plus I didn’t think there was a reason the patient getting IV potassium needed to be on a monitor.”
   All patients getting IV potassium supplementation, despite the dose, should be on a monitor both during and after treatment to avoid missing the induction of a dysrhythmia.

4. “This patient just had dialysis yesterday and his potassium is already 7.0 mEq/L.”
   The rate of rise in hyperkalemia is just as important as the absolute number.

5. “His potassium level is always elevated when he comes to the ED because he chronically misses his dialysis appointments, so I thought he had developed tolerance.”
   Patients with end-stage renal disease are often considered to be more tolerant of hyperkalemia; however, these patients should be treated with as much caution as a nonrenal patient with hyperkalemia.

6. “She had just of touch of CHF, so I just sent her out with furosemide and potassium supplement and thought she would follow up at the clinic – I didn’t realize they didn’t have any appointments for 3 months. I can’t believe her potassium could go so high.”
   Patients being discharged from the hospital with loop diuretics should have close follow-up to monitor for hypokalemia before starting them on potassium supplementation.

7. “I did my job and started the treatment for hyperkalemia… the medicine team should have continued her treatment while she was waiting for a bed in the hospital.”
   Underlying causes of hyperkalemia should be treated once the initial treatment of hyperkalemia has been initiated. Such treatments might be fluid for hypovolemia or a Foley catheter for urinary obstruction.

8. “The potassium level was 7.5 mEq/L and she was scheduled for dialysis in the morning; I thought the SPS would keep her out of trouble.”
   SPS is not a suitable therapy for the acute management of hyperkalemia and should be avoided due to its potential to cause bowel necrosis.

9. “The serum potassium level was low – do you really think it was due to the albuterol? And why did she become hypokalemic?”
   In cases of hyperventilation, albuterol-treated patients, or in trauma, the hypokalemia is generally from a shifting of potassium rather than a total body depletion. In these situations, treating the underlying cause should take priority over the hypokalemia.

10. “He had missed dialysis and the ECG showed a widened QRS complex – I thought the bicarbonate, insulin, and glucose would fix the problem – I wonder why he went into cardiac arrest?”
    Patients with clinically significant ECG changes concerning for hyperkalemia should be treated with calcium for membrane stabilization prior to other treatments for hyperkalemia.

11. “The patient was in cardiac arrest; I never considered he could be hyperkalemic.”
    Always consider hyperkalemia in patients with cardiac arrest, especially if they have a wide-complex dysrhythmia.
The Basics of Emergency Medicine, A Chief Complaint Based Guide
Joseph Habboushe, MD, MBA
This new pocket reference creates a framework to learn from and provides an easy-to-use resource to make sure the basics aren’t overlooked. Dr. Habboushe compiled patient’s 20 most common chief complaints from head to toe! This practical tool is for interns, medical students, off-service rotating residents, NPs, PAs, and nurses to use on the fly!

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In this expanded 2nd edition of the handbook, Dr. Schlicher and the chapter authors outline the essential and advocacy issues surrounding emergency medicine today. Not just for the politically-minded, this resource is useful for the student, resident, physician, healthcare worker, patient or concerned citizen to help understand the important issues affecting all aspects of emergency care.

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Brian J. Levine, MD
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John D. Anderson, MD and Todd Guth, MD
With contributions from the EMRA Medical Student Council (Tom Becker, Alena Benes, Jordan Criteste, MD; Sarah Dubbs, MD; Brian Geyer; Kevin Jones, MD; and Shane Patyrak). Additional contributions from Chris Scott, MD

A great reminder of commonly-used prediction rules for the ED. Perfect for medical students and interns and an indispensable prompt for these guidelines until they become like second nature: Level of evidence rating; Ottawa Ankle/Foot/Knee; Nexus Criteria/c-spine; Canadian c-spine; Center Criteria for Acute Pharyngitis; Canadian CT Head; Wells Criteria/Pulmonary Embolism; Wells Criteria/DVT; PE Rule-out Criteria; and PORT Score/Pneumonia.

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For a complete reference and answer explanation for the questions below, visit www.emra.org.

1. Which of the following factors has the most prominent role in causing a patient to develop decubitus ulcers?
   A. Diabetes
   B. Immobility
   C. Infection
   D. Neglect

2. After a thorough history and physical examination, what is the most appropriate emergency department management for uncomplicated diverticulitis in a middle-aged patient?
   A. Abdominal and pelvic CT scanning
   B. Lower gastrointestinal barium contrast study
   C. Oral antibiotics
   D. Parenteral antibiotics

3. A 24-year-old woman presents in cardiac arrest after being hit by a car as she crossed a street. She is pregnant; the uterine fundus is 8 cm above the umbilicus. Paramedics performed CPR en route with no return of pulses. Fetal heart tones are still present. The decision is made to perform a perimortem cesarean delivery in an attempt to save the fetus. Which of the following statements regarding this procedure is correct?
   A. A low, horizontal incision should be made with careful attention to avoid injuring the bladder
   B. CPR should be discontinued
   C. If present, the anterior placenta should be incised to improve access
   D. The height of the uterine fundus is not related to predicted outcome

4. A 27-year-old woman with a rapid narrow-complex regular tachycardia continues to have palpitations after vagal maneuvers and adenosine 6 mg. Pulse is 180; other vital signs are normal. She is receiving 2 L oxygen by nasal cannula. What is the next appropriate intervention?
   A. Adenosine 6 mg IV
   B. Adenosine 12 mg IV
   C. Metoprolol 5 mg IV
   D. Synchronized cardioversion

5. A 25-year-old man presents with an asthma exacerbation. Over several hours, he is given oral steroids and nebulized albuterol and ipratropium bromide treatments. Vital signs include pulse 105, respirations 20, and oxygen saturation 95%; PEFR is 250 L/min. He is able to speak in full sentences but is still wheezing. What should be the next step in his treatment?
   A. Administer subcutaneous terbutaline and admit to the ICU
   B. Continue albuterol and consider admission
   C. Discharge on albuterol and steroids
   D. Initiate heliox
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Connecticut, New London: Lawrence & Memorial is on the coast near Mystic and sees 48,000 pts./yr. and an affiliated freestanding ED seeing another 30,000 /+yr. Level II Trauma Center has supportive medical staff/ back up. EMP is an exclusively physician owned/managed group with open books, equal voting, equal profit sharing, equity ownership, funded pension, full benefits and more. 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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Illinois, Chicago area, Joliet and Kankakee: EMP manages EDs at 4 community teaching hospitals seeing 32,000 – 75,000 pts./yr. with trauma center designations and EM residency teaching options. We are an exclusively physician owned/managed group with open books, equal voting, equal profit sharing, equity ownership, funded pension, full benefits and more. 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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• Work and travel with international Medical Toxicology Fellows and Pharmacy Clinical Toxicology Fellows as well as mentor/teach medical students and rotating residents
• Have protected time to moonlight and maintain your primary clinical skills within and/or outside of the Emory system
• Participate in international and domestic chemical-associated outbreak and public health investigations
• Receive formal training in epidemiology, statistics, scientific writing, medical management of both biological and chemical casualties, public health risk assessment, laboratory science, and more
• Have the opportunity to obtain a Masters of Public Health (MPH) degree at Emory in a single year (this adds one additional year to the 2-year fellowship)

For more information please contact: Brent Morgan MD
Director, Emory/CDC Medical Toxicology Fellowship
Georgia Poison Center
50 Hurt Plaza SE, Suite 600
Atlanta, GA 30303
(404) 616-6651
bmorg02@emory.edu
www.emory.edu/em/fellowships_toxicology.html
Emergency Physicians of Tidewater

Emergency Physicians of Tidewater (EPT) is a democratic group of BC/BP (only) EM physicians serving 7 EDs in the Norfolk/VA Beach area for the past 40+ years. We provide coverage to 5 hospitals and 2 free-standing EDs. Facilities range from a Level 1 Trauma, tertiary care referral center to a rural hospital ED. Members serve as faculty for an EM residency and 2 fellowships. All facilities have EMR, PACS, and we utilize MPs. Great opportunities for involvement in ED Administration, EMS, US, Hyperbarics and medical student education. Very competitive financial package leading to full partnership/profit sharing. Outstanding, affordable coastal area to work, live, and play. Visit www.ept911.com to learn more.

Send CV to: EPT, 4092 Foxwood R, Ste 101, Va Beach, VA 23462
Phone (757) 467-4200
Email bestinmed@gmail.com

Lehigh Valley Health Network's Emergency Medicine Department—now managing 5 sites in Pennsylvania—has grown. Our 70+ salaried Emergency Medicine physicians and 30+ PAs and NPs enjoy a collegial atmosphere and evaluate over 200,000 patients annually. Whether you want to work in a large 48-bed ED in a Level 1 trauma center or in a smaller ED with a more community-type setting, we have the fit for you. Credibility, respect, fairness and pride are values that are at the heart of everything we do for our patients and each other. We know that creating a place where the best people want to work is what makes it possible for us to provide the best possible care to our community.

Candidates must be clinically excellent, patient focused, EM Board Prepared or Board Certified. We have a paperless ED, a dually accredited 56-resident Emergency Medicine Residency, the largest Level I Trauma program in Pennsylvania with Primary Angioplasty, a Stroke Alert, and an MI Alert Program, and an 18-bed Burn Center, along with 13 additional accredited programs. We have just opened a new 12-bed Children’s ER—staffed with Pediatric Emergency Medicine fellowship-trained physicians. We offer a competitive salary, wonderful work environment with excellent physician and mid-level coverage, and robust benefits including healthcare with no employee contribution, 3 methods of retirement saving, medical liability coverage, 6 weeks of PTO plus 1 week of CME annually, ACEP/ACOEP boards paid, + more. Opportunity for teaching, research, and career advancement. Our ED locations are in the Lehigh Valley and in Hazleton, PA. All locations are within 1.5 hrs. of NYC and 1-2 hrs. of Philadelphia. Our members find a healthy lifestyle, moderate cost of living, excellent public schools and pleasant neighborhoods. No long commutes.

For 16 years in a row, we've been recognized by U.S. News & World Report as one of the nation’s best hospitals. LVHN's unique culture fosters dedication, communication, respect and teamwork and values the contribution of every physician, nurse and staff member. Our passion for better medicine is what drives us to excel.

Qualified, energetic, and interested candidates should contact Deb D’Angelo at 610-969-0216 or send CVs to:  Debra.D’Angelo@LVHN.org

9-hour physician shifts plus additional MLP coverage. Excellent package includes shareholder opportunity at one year with no buy-in! Also included is guaranteed rate plus additional incentive; as well as family medical plan, employer-funded pension, malpractice, expense account and additional benefits. As Nebraska’s largest city, Omaha provides both metropolitan amenities and friendly, Midwestern charm. Home to several Fortune 500 companies, Omaha is a thriving city with something for everyone including the U.S.’s largest community theatre, 11 colleges and universities and a world famous zoo. With its rich jazz history and reputation as the heart of the Midwest, there is also great cultural appeal. For additional information please contact Rachel Klockow, Premier Physician Services, (800)406-8118, e-mail rklockow@premierdocs.com, fax (954)986-8820.

Nevada, Henderson and Las Vegas: Full and part-time opportunities for Pediatric Emergency Medicine Physician. Join an outstanding team of fellowship trained/board certified pediatric emergency medicine physicians at two sites. University Medical Center is a Level I Trauma Center seeing 31,000 pediatric ED pts./yr. with excellent back up, PICU, and 24-hour in-house intensivist coverage. There is also an associated pediatric residency (36 residents). Time will be split with shifts also at St. Rose Dominican Hospital’s Siena Campus, which is situated in an upscale suburban area. EMP offers democratic governance, open books, and excellent compensation/bonus plus shareholder status after one year. Compensation package includes comprehensive benefits with funded pension (up to $28,175 yr.), CME account ($8,000/yr.), family medical/dental/prescription/vision coverage, short and long term disability, life insurance, malpractice and more. Contact Bernhard Beltran at 800.359.9117, e-mail bbeltran@emp.com.

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Step up to a higher level of emergency medicine

Two of Texas’ primary emergency medicine groups, Dallas-based Questcare and GHEP of Houston, have teamed up to create a higher level of EM services in San Antonio.

Level 5 Healthcare is a joint entity of these two Texas EM groups. We are offering physicians the chance to get in on the ground floor. Ownership opportunities are now available in all 3 groups. Level 5, Questcare, and GHEP are owned and operated by practicing emergency medicine physicians.

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- Exceptional compensation & benefits package

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At TeamHealth, we know how to listen. We believe it’s important to engage our EM candidates and find out exactly what you want out of your career. So help us get to know you. Jot down some thoughts about your career goals and share them with us. Go to myEMcareer.com or call 888.861.4093 and play your way.
OUTSTANDING EM OPPORTUNITIES IN NY

✓ Earn up to $165/hour (depending on the site)
✓ Programs for Residents: availability varies—ask for details
  • Home purchase assistance
  • Early signing stipend
✓ Career development/advancement opportunities
✓ 11 different sites to choose from with volumes ranging from 12K to 40K
✓ Many sites are commutable from the New York City metro area

MedExcel USA, Inc. offers unparalleled opportunities for EM residents looking to practice in the Northeast. From low volume rural EDs to state of the art urban trauma centers MedExcel USA, Inc. provides physicians with a wide variety of potential practice settings. An extremely competitive compensation package includes a base salary, modified RVU and profit sharing.

MedExcel USA, Inc. is a quality-driven physician owned emergency medicine management group. We offer many innovative programs, including a “no-Wait ED” and a “Pain Sensitive ED” as well as unparalleled career opportunities and professional development. We offer a nurturing, physician friendly environment in which to develop your future. Career development opportunities are available for those interested in an administrative career track.

North Carolina, Hickory: We are seeking an EM resident graduating 2012 for a growing, progressive, ED with 50k+ visits/year. Opportunity to earn over $350k with excellent benefits. Well established, democratic group for almost 30 years. Full partnership within 2 years. No “senior partnership”. No “buy in”. Award winning hospital with U/S, PACS, 64 slice CT, fast track, and full dictation all in ED. Our current managing partner is hospital Chief of Medical Staff-elect. Beautiful Hickory, in foothills of NC, voted 3 times an “All-American” city and also voted most desirable city in NC to live and work by Attaché magazine. Enjoy all 4 seasons, less than an hour to NC ski slopes and downtown Charlotte. Early opportunity to become leader with corporation and hospital staff. Area has 3 country clubs, a wonderful lake, home of Lenoir Rhyne University, Hickory Crawdads, and the Hickory Classic—a Senior PGA Tour event. Excellent public schools, low-cost living, and a thriving medical community. Please contact: Lawson Huggins, MD; lhuggins@charter.net; 828-291-1282.

North Carolina, Kinston: Located in the center of eastern North Carolina, Kinston is less than 60 miles to the east are some of the most beautiful beaches of the Carolina coast and 35 miles from Greenville. 200-bed full-service community hospital treats 41,000 ED pts./yr. Outstanding partnership opportunity includes equal profit sharing, equity ownership, funded pension, open books, full benefits and more. 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, New Bern: Respected 313-bed regional medical center located at the intersection of the Trent and Neuse Rivers just off the central coast. 74,000 ED pts./yr. Outstanding partnership opportunity includes equal profit sharing, equity ownership, funded...
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“EMA’s Staffing Support Team enabled me to get a foot in the door with an outstanding company right out of Residency. I would highly recommend the SST position for anyone seeking a sense of adventure and the ability to identify what types of practices you prefer.” — Evan Cohen, MD; EMA SST Physician
Ohio, Cincinnati: Situated in desirable Anderson Township, Mercy Hospital – Anderson sees 48,000 patients per year. Outstanding partnership opportunity includes equal profit sharing, equity ownership, funded pension, open books, full benefits and more. 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, Dayton: BP/BC EM physician sought to join solidly established, equity-ownership group at 40,000 volume ED in north Dayton suburb. Enjoy life & work with the appeal of 9-hour shifts, collegial environment and outstanding physical plant. Excellent package includes guaranteed hourly plus additional incentive, malpractice, employer-funded pension, family medical plan, CME, and shareholder opportunity at one year with no buy-in. Premier’s outstanding record of physician and client retention, plus stable risk management program add to the appeal. For additional information contact Kim Rooney, Premier Physician Services, (800) 726-3627, ext. 3674, e-mail krooney@premierdocs.com, fax CV (937) 312-3675.

Ohio, Findlay: Premier Physician Services announces a new opportunity in 40,000 volume ED. Located 45 minutes south of Toledo, this Level III Trauma Center is a Top 100 Hospital with an appealing environment and excellent support services. Enjoy the benefits of an outstanding model offering equity-ownership at one year with no buy-in; giving you a voice and ownership in your company. Terrific benefits include family medical plan, employer-funded pension, malpractice, expense account & additional benefits including loan repayment opportunity; plus the advantage of guaranteed rate AND additional incentive. For additional information contact Amy Spegal, Premier Physician Services, at (800)726-3627, ext. 3682, e-mail aspegal@premierdocs.com, or fax CV to Premier at (937) 312-3683.

Ohio, Lima: Meet your financial and practice goals. Named among Top 100 Hospitals, this 57,000 volume, level II ED will complete an expansive, state-of-the art renovation in 2012. Excellent coverage and great compensation make this opportunity ideal. Package includes guaranteed hourly plus RVU and additional incentives, malpractice, employer-funded pension, family medical plan CME/expense account, and shareholder opportunity at one year with no buy-in. Contact Kim Rooney, Premier Physician Services, (800)726-3627, ext. 3674, krooney@premierdocs.com, fax (937)312-3675.

Ohio, Medina and Wadsworth: Combined two-site position at a brand new free-standing ED (~11,000 pts/yr) and established community hospital (20,000 pts/yr). Nice communities are near Akron and the area’s most desirable residential communities. Outstanding partnership opportunity includes equal profit sharing, equity ownership, funded pension, open books, full benefits and more. 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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Ohio, Marion: Appealing Columbus area opportunity. Enjoy equity ownership with democratic group in 48,000 volume ED. 45 miles north of Columbus. State-of-the-art ED, excellent coverage of 62 physician & 18 PA hours daily. Terrific package includes guaranteed hourly plus additional incentive and outstanding benefits including employer-funded pension, family medical plan, expense account and malpractice; plus shareholder opportunity at one year with no buy-in. Contact Amy Spegal, Premier Physician Services, (800) 726-3627, ext. 3682, aspegal@premierdocs.com.

Oklahoma, Tulsa: Modern 971-bed regional tertiary care center sees 84,000 ED patients per year. Broad pathology, high acuity, modern facilities and supportive environment. Outstanding partnership opportunity includes equal profit sharing, equity ownership, funded pension, open books, full benefits and more. Contact Ann Benson (careers@emp.com), Emergency Medicine Physicians, 4535 Dressler Rd. NW, Canton, OH 44718. 800-828-0898 or fax 330-493-8677.


Pennsylvania, Multi Area: Emergency Medicine positions with UPMC Hamot in Erie, Warren, Kane and St. Marys, Pennsylvania. Opportunity in Erie at 412-bed level II trauma center. EM volume over 66,000 patients per year and growing. EM residency onsite. Also rural positions in 30 to 90 bed acute care facilities located in the Allegheny Mountains. Positions in Erie require residency trained Emergency Medicine Physicians. Positions in region will accept experience in other specialties. Excellent compensation and productivity bonus. Contact Sue McCreary at 814-877-3403 or mccrearys@upmc.edu.

Pennsylvania, Johnstown: The largest healthcare provider in west central Pennsylvania, Conemaugh Health System is currently seeking an ABEM or AOBEM Board Certified, ATLS, ACLS, and PALS trained Emergency Medicine Physician to practice and teach highly motivated ED residents at one of its flagship hospitals Memorial Medical Center. Memorial Medical Center is located just 70 miles east of Pittsburgh in Johnstown, an area with cultural, recreational and family-friendly opportunities. Memorial Medical Center, ranked nationally in the top 5% for clinical excellence, is a teaching facility with a Level 1 Trauma Center and a Level 3 Neonatal Intensive Care Unit. This opportunity offers a generous salary with full benefits that include paid malpractice insurance and vacation time. Call Mary Lynn Mahla (814) 534-3221 or email her at mmahla@conemaugh.org with interest.

Pennsylvania, Pittsburgh/Western: Emergency Medicine opportunities throughout Pittsburgh/Western Pennsylvania including our newest location, UPMC East Hospital (Monroeville). Pittsburgh offers a great lifestyle with a low cost of living, great schools, plentiful outdoor activities, and easily accessible amenities. Physician friendly scheduling and work environment averaging < 2 patients/hour. We offer an outstanding compensation/benefit package including: paid occurrence based malpractice insurance, employer-funded retirement plan, paid health insurance, CME allowance, and more. Call Dr. Robert Maha at (888) 647-9077; Fax: (412) 432-7480 or email mahar@upmc.edu.

Pennsylvania, Pittsburgh: Allegheny Valley Hospital in Natrona Heights boasts a brand new ED seeing 36,000 emergency pts/yr. Forbes Regional Hospital is a respected facility in Monroeville seeing 48,000 ED pts/yr. Both sites are proximate to Pittsburgh’s most...

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Florida Partnership Opportunity

Stable, democratic physician group seeks top quality BC/BP Emergency Medicine Physician (ABEM/AOBEM) for Capital Regional Medical Center in Tallahassee, Florida.

- Partnership opportunity
- Excellent compensation to include hourly pay plus productivity bonuses
- Health insurance paid for your entire family
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- No state income tax

Thirty minutes to one hour from the Gulf coast beaches! Experience excellent weather with temperate climate of 79 degrees. Best known as Florida’s capital city, Tallahassee is a fusion of cosmopolitan flair and charming personality. Home to three major universities (including Florida State) and an A+ rated public school system district, Tallahassee is surrounded by State Parks and National Forests which provides excellent biking/hiking trails and plentiful outdoor activities. Cultural arts include the Tallahassee Symphony Orchestra, Ballet and Theatre productions. Deep rooted in history and culture, it is where college town meets cultural center, politics meets performing arts and history meets nature.

For more information contact Alisha Lane at (904) 332-4322 or a.lane@titandoctors.com

www.titandoctors.com
desirable residential communities; areas afford easy access to abundant outdoor recreation and nationally ranked schools. Outstanding partnership opportunity includes equal profit sharing, equity ownership, funded pension, open books, full benefits and more. Contact Ann Benson (careers@emp.com), Emergency Medicine Physicians, 4535 Dressler Rd. NW, Canton, OH 44718. 800-828-0898 or fax 330-493-8677.

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. 35,000 patients treated annually. Small city setting offers beautiful housing and abundant recreation less than an hour from Pittsburgh and Cleveland. Outstanding partnership opportunity includes equal profit sharing, equity ownership, funded pension, open books, full benefits and more. Contact Ann Benson (careers@emp.com), Emergency Medicine Physicians, 4535 Dressler Rd. NW, Canton, OH 44718. 800-828-0898 or fax 330-493-8677.

Pennsylvania, York: Staff and Assistant Director/Assistant Residency Director positions at Memorial Hospital. Sites has new ED, respected osteopathic EM residency, and sees approximately 40,000 ED pts/yr. Outstanding partnership opportunity includes equal profit sharing, equity ownership, funded pension, open books, full benefits and more. Contact Ann Benson (careers@emp.com), Emergency Medicine Physicians, 4535 Dressler Rd. NW, Canton, OH 44718. 800-828-0898 or fax 330-493-8677.

Texas, Odessa: EM Opportunity in Odessa, TX! Wonderful immediate opportunity for a BC ER physician who desires to live in Odessa, Texas and succeed in a busy Emergency Room (24,000 annual visits). This would be a hospital-based employment arrangement. Hospital offers Level IV Trauma, Novarad PAC System, Level III Nursery and 10 Operating Rooms along with an active Hospitalist program. Physician coverage is 24/7 with 12 hours of mid-level coverage outside winter months – 2 mid-levels during peak winter season. Admission rate is low for most ERs (11-15%) including observations. There is a high pediatric volume, although there is a Pediatric After Hours Clinic which attempts to capture non-emergent Pediatric volume. Facility recently obtained Chest Pain Accreditation and should have Stroke Accreditation soon. Intensivist coverage will be added effective September, 2011. The Hospital has earned a 5-star rating from HealthGrades for three straight years. The faculty is located in the beautiful “Open Sky” country of Odessa/Midland in west Texas. Enjoy the great sense of community, excellent schools, and reasonable cost of living in this quality medical community. Area has a wide variety of cultural and sporting events. Odessa is known for its diversity, contrasts and hospitality. Please e-mail CV: ihudson@iasishealthcare.com, fax: 615-467-1293 or call Irene Hudson at 877-844-2747, x1280.
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Texas, Texarkana: Emergency Medicine Opportunity – Wadley Regional Medical Center, Texarkana, TX — A 370-bed hospital with 40,000 emergency room visits per year has an opportunity for two (2) BC Emergency Medicine Physicians desirous of an employment arrangement with HPP. Facility is working to earn Level III Trauma designation in TX and AK. Primary service area has population of 65,000 and secondary has population of 250,000. All specialty physicians available for consult. Very strong hospitalist group with UAMS FP residents rotate in hospital. Experience using CORAL helpful, but not required. Seeking candidates interested in making Texarkana “home.” As the oldest hospital in Texarkana, Wadley Regional Medical Center has a century-long tradition of providing compassionate, high-quality healthcare. As part of its commitment to provide innovative and outcome-based care, the hospital has pioneered many medical firsts for Texarkana. As the area’s first Joint Commission II certified Primary Stroke Center, Wadley also is proud to offer Texarkana’s only hospital-based prenatal clinic and geriatric behavioral health unit, as well as the area’s only da Vinci Si Surgical System. In 2010, Texarkana Independent School District was ranked No. 4 on Forbes magazine “Best Schools for Your Housing Buck” in cities where the median home value is less than $100,000. Its diversified economy is supported by manufacturing, agriculture, medicine, transportation, education and retail. A thriving metro-center serving nineteen counties in four states, it is conveniently situated one hour from Shreveport, two hours from Little Rock and three hours from Dallas. Please e-mail CV: ihudson@iasishealthcare.com, fax: 615-467-1293 or call Irene Hudson at 877-844-2747, x1280.

West Virginia/Virginia Border: Join equity ownership group in picturesque setting – Breathtaking views are commonplace in beautiful Bluefield, WV. Located in the shadow of East River Mountain at the state’s highest elevation, Bluefield is nicknamed “Nature’s Air-Conditioned City” and is the ideal setting for sports/recreation lovers. Residents enjoy hiking, fishing, golf as well as easy access to ski resorts and white water rafting. This 36,000 volume ED has excellent coverage of 36 physician hours plus 20 PA/NP hours daily. Terrific package includes shareholder opportunity at one year with no buy-in; guaranteed rate plus RVU, family medical plan, malpractice, employer funded-pension, expense account and more. For additional information, please contact Rachel Klockow, Premier Physician Services, (800)406-8118, rklockow@premierdocs.com, fax (954)986-8820.

West Virginia, Charleston: BP/BC EM physician opportunity within academic environment. This three-hospital system has 100,000 annual ED visits including a Level 1 facility. There are numerous allopathic & osteopathic residencies including a solidly established Emergency Medicine Residency Program. Equity-ownership group provides outstanding package including family medical, employer-funded pension, CME, malpractice, plus shareholder status at one year with no buy-in. Contact Rachel Klockow, Premier Physician Services, (800) 406-8118, rklockow@premierdocs.com, fax (954) 986-8820.

West Virginia, Wheeling: Ohio Valley Medical Center is a 250-bed community teaching hospital with a brand new-ED under construction. AOA approved Osteopathic EM and EM/IM residency program. Enjoy teaching opportunities, full-specialty back up, active EMS, and two campuses seeing 29,000 and 24,000 pts./yr. Outstanding partnership opportunity includes equal profit sharing, equity ownership, funded pension, open books, full benefits and more. Contact Ann Benson (careers@emp.com), Emergency Medicine Physicians, 4535 Dressler Rd. NW, Canton, OH 44718. 800-828-0898 or fax 330-493-8677.

**Enjoy the best of Maine in Bangor**

Exceptional Emergency Medicine Opportunities

Eastern Maine Medical Center seeks BC/BE emergency medicine physicians to join a hospital-employed department of 21. Inpatient care supported by hospitalist and intensivist services, as well as a multi-specialty trauma surgery group. EMMC is a 411-bed, regional tertiary-care and ACS-verified level II trauma center. Our ED sees more than 40,000 patients per year and serves a population of 500,000 living in the northern 2/3 of the state’s geography. EMMC is a base for LifeFlight of Maine, a critical care air transport service flying nearly 900 missions per year. Opportunities for teaching residents and students. 120 hours considered full-time for benefits, bonus for extra shifts, night-shift differential, work schedule designed to accommodate physician preferences, favorable malpractice environment.

Bangor is an award-winning small city with easy access to Maine’s spectacular coast, mountains, and lakes. Schools rank among New England’s best. Bangor serves as the regional hub for medicine, agriculture, transportation, education and retail. A thriving metro-center serving nineteen counties in four states, it is conveniently situated one hour from Shreveport, two hours from Little Rock and three hours from Dallas. Please e-mail CV: ihudson@iasishealthcare.com, fax: 615-467-1293 or call Irene Hudson at 877-844-2747, x1280.

**Fee for Service ED Opportunities in Southern, Central & Northern California, New Mexico, Ohio, Tennessee & Texas**

Near SF Bay Area, Palm Springs, Sacramento, Mendocino, Los Angeles, San Joaquin & Sonoma Valleys, Redding, Turlock, Lakeport, Crescent City, Merced, Clovis, NM, East Tennessee, Austin, TX.

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Email: recruiter@valleyemergency.com
Phone: (925) Call-VEP (925-225-5837)

**Visit us at www.ValleyEmergency.com**
There are a range of services and options that you can add to a basic move that may make your experience more pleasant — but more expensive. So, follow these tips to save some money!

- **Consider packing yourself.** This may have insurance implications, so check with your mover.
- **Buy your moving supplies online.** Boxes, tape, markers, and bubble-wrap can be much cheaper when bought well in advance and online.
- **Improvise with supplies.** Newspaper makes fine packing cushions, as do towels and clothes. Just be prepared to wash everything when it arrives at your new place.
- **Don’t buy tools, borrow them.** Why buy a tape dispenser that you’ll use once? Borrow one from a friend.
- **If you don’t need it, don’t pay to move it.** A little planning can go a long way – it’s much cheaper to sell it (or dump it) now than it is to sell it (or dump it) when it arrives at the destination.

**Tips to save money on your move**

- **Ask your mover how they’ll be packing your stuff.** We’ve found that some movers try to upsell you to fancy packing materials where a plain moving blanket will work just fine.
- **Ask yourself if you really need extra insurance, or raise the deductible.** Remember that all 400N Tariff moving companies must offer 60 cents of insurance per pound per item as part of the basic package.
- **Don’t forget about moving yourself!** Many hidden costs of a move often involve YOU! How are YOU getting to your new location? Where will you spend the night? What will you eat until your things arrive? If you plan this well, you’ll save a lot of money.

**Fun FREE things to do in Chicago while at the SAEM Annual Meeting**

- Make your way through **Millennium Park**, an extraordinary testament and home to world-class art, music, architecture and landscape design.
- Enjoy one of the world’s greatest art collections at the **Art Institute of Chicago**, especially when free on the first and second Wednesdays of the month.
- Check out **Cloud Gate**, also called “the Bean.” One of Chicago’s leading free attractions, “The Bean” or “Cloud Gate” is British artist Anish Kapoor’s first public outdoor work installed in the United States. The 110-ton elliptical sculpture is forged of a seamless series of perfectly polished stainless steel plates, which reflect the city’s famous skyline and the clouds above.
- Come see all the fishes and more at the world-class **Shedd Aquarium**.
- Visit the trendy boutiques of **Oak Street** or venture to revitalized **State Street** to browse through historic anchor Macys (the old beloved Marshall Field) and other fun shops.
- Visit the original Declaration of Independence, U.S. Constitution and Bill of Rights at the **National Archives**, then stick around to research your own family’s immigration records.
- Test your history knowledge at the **National Portrait Gallery**, where the nation’s only complete collection of presidential portraits outside the White House is located.
- Visit **The Phillips Collection** in Dupont Circle, America’s first museum of modern art, where the permanent collection is free of charge (contributions welcome).

Headed to the ACEP’s Leadership and Advocacy Conference?

Try these FREE (or nearly free) things to do in Washington, D.C.

- Let DC’s green space surprise you with a visit the **National Arboretum**.
- Visit **Arlington National Cemetery** to see the Changing of the Guard ceremony at the Tomb of the Unknowns.
- See the original Declaration of Independence, U.S. Constitution and Bill of Rights at the **National Archives**, then stick around to research your own family’s immigration records.
- Test your history knowledge at the **National Portrait Gallery**, where the nation’s only complete collection of presidential portraits outside the White House is located.
- Visit **The Phillips Collection** in Dupont Circle, America’s first museum of modern art, where the permanent collection is free of charge (contributions welcome).

Read more at **Free Things to Do in Chicago**: [http://chicagofree.info/2010/01/21/fun-things-to-do-in-downtown-chicago/#ixzz1qoFAXRRw](http://chicagofree.info/2010/01/21/fun-things-to-do-in-downtown-chicago/#ixzz1qoFAXRRw)

Visit **http://washington.org/visiting/browse-dc/attractions/100-free-things-to-do**
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It’s fun to look back and celebrate 20 years of amazing EMP milestones. In fact, it tempts us to toot our horn about how we’ve built one of the largest, physician-owned emergency medicine practices in the country. And we can’t help but lay on it when we reflect how the investments we’re making in all aspects of acute care delivery are paying off for our patients, hospital systems and physician partners. But for us, the real fun lies ahead. We don’t have time to idle. We have innovations to create, new partnerships to forge, and lives to save. Healthcare is an exciting ride. Join us for the next 20.