"If Medicare is over-budget, physicians get reimbursed less..."

The Medicare SGR problem – A primer

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Medicare financing. Hold on – don’t turn the page yet. Health policy is a topic that many would rather ignore. Similar to calculus, it’s a subject that evokes groans and causes people to tune out. Yet as one moves through residency, it’s important to be aware of who is going to pay your attending salary – how much (or how little) they’re going to pay you and where that money comes from. Currently, Medicare pays for roughly 20 percent of emergency department visits; this number will only grow as the 78 million baby boomers retire. Thus, Medicare payments are an important facet of emergency department operations and revenue.

How does Medicare pay doctors?
In 1992, Congress established the Resource-Based Relative Value Scale (RBRVS), which assigns a relative value unit (RVU) to every physician service paid by Medicare. In fact some emergency medicine groups base part of a physician’s salary on RVUs and use it to measure productivity (you may have heard attendings chat about RVUs when talking shop).

The RVU is based on three factors for each service: physician work, practice expenses, and professional liability insurance. These factors are adjusted based on geographic differences in costs.

To calculate the actual reimbursement value, the RVU is multiplied by a conversion factor – which assigns a dollar value to each RVU. In other words, a physician service worth three RVUs has a dollar value based only on the conversion factor. If the conversion factor is $40/RVU, the service is reimbursed as $120. If the conversion factor changes to $30/RVU, the reimbursement is $90. The 2011 conversion factor was $33.98.

What is the sustainable growth rate?
In 1997, Congress passed the Balanced Budget Act. One component of this law was the creation of the Medicare Sustainable Growth Rate (SGR). Each year, the SGR equation calculates a limit on that year’s Medicare expenditures; this equation is based on growth in the nation’s gross domestic product (GDP). If total
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.

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A Resident Appreciation Day thanks

It’s one of those socially awkward situations I always dread – when a former patient sees you out in the real world. In this particular case, I was in a coffee shop when an elderly lady in her late 70s came in, flanked by her daughters, seeking the joys of an afternoon cup of joe. I recognized her as soon as she came in; as she walked to the counter I marveled about how far she’d come and how healthy she looked.

For the sake of this article we’ll call this patient “Mrs. Smith.” The last time I saw her she was in extremis – dyspnea, impressive pulmonary edema, and in afib with RVR secondary to severe aortic stenosis. Our eyes met and she stopped what she was doing and stared – her brain doubtlessly scanning her memories to place me. As her eyes lit with recognition, I knew that my street clothes and laptop computer screen camouflage had failed miserably. As she spoke with her daughters and pointed in my direction I knew that this exchange would not simply end in an acknowledging smile and nod of the head.

As she began to hobble toward my table I reflected on my most recent encounter with a patient outside the hospital walls. It involved a lady in her early 40s who had come in to the emergency department after an impromptu pillow fight with her girlfriends had gone awry. During the goose feather pillow-armed melee, the patient – one of the heroic and intrepid combatants – sustained an injury to the bronchus as a “wisp of pillow” came loose and accidentally inhaled. The patient coughed for a minute, could not expel the wisp, and called her PCP’s office. Being the weekend, the office was closed, but a helpful nurse answering service fielded the call.

Shortness of breath? No. Gagging or coughing? No. Foreign body feeling? No. Any symptoms at all? No. At this point the nurse made the critical (and/or default) decision to advise the patient to seek emergent evaluation in the emergency department. The patient was as confused as I was and a quick 10-minute history, physical exam, and conversation later…was discharged without intervention. While the wisp never caused any pain or complication, the hospital bill did. As fate brought our two paths back together months later – in the middle of a crowded restaurant – the patient politely reintroduced herself and proceeded to give me a colorful and profanity-laced piece of her mind. An unfortunate situation for all involved.

You can understand why I was a bit apprehensive as I stood to speak with Mrs. Smith in the coffee shop.

“Do you remember me?” she said. “Yes. How are feeling?”

“I’m feeling great. I got my valve repaired and got just got out of rehab last week.”

We spoke, I met her family, and at the end of our conversation she took my hand, looked me in the eye and said “Thank you.”

“Thank you” is not a phrase we hear often in the emergency department, for a variety of reasons. Patients are frequently intubated, in shock, or too sick to say it; belligerent, angry, or too drunk to say it; dyspneic, altered, or in too much pain to say it; or in the case of my pillow wisp patient, have other choice messages to pass along. Tragically, when a patient or colleague takes the time to thank us, we are often too occupied managing other patients and our departments to truly acknowledge it.

Our jobs and lives during residency are fast-paced and stressful. But as EMRA’s Resident Appreciation Day approaches on Wednesday, March 7th – I hope that you can pause for a moment and accept my most sincere thanks.

What you do as a resident, medical student, or alumni EMRA member matters – be it in the management of a critically ill patient, the provision of compassion and care to a homeless patron, or in the many acts of goodness you do inside the hospital walls and out in your communities.

I encourage you to also take the time to thank those around you – your fellow residents who provide you friendship and companionship, your attendings who invest time in your education, your family who provides you with encouragement and support, and our patients who fill our work meaning and purpose. On behalf of EMRA, I hope that you have a happy Resident Appreciation Day!
EMRA Board maps future of organization: Biannually, the EMRA board holds a strategic planning session during which the objectives for the next two years are planned. After a productive January meeting, the board has come up with an ambitious plan to advance our organization that includes an expansion of our technological presence, increased participation in regional conferences, new initiatives in education, strengthened efforts in advocacy and more efforts to empower you the resident! Visit www.emra.org to review the strategic plan.

Awards bonanza! Every year EMRA gives over $30,000 dollars to residents in the forms of awards, grants and travel scholarships. This January, the EMRA board has approved an additional $10,000 annually, bringing that total to $40,000. Know someone deserving of an award or grant? Please encourage them to apply at www.emra.org!

You can make a difference in advocacy: ACEP’s Leadership and Advocacy Conference is the premier conference in emergency medicine advocacy and EMRA has a special resident tract to inform you of the issues and empower you as an advocate. Considering the coming cuts to Medicare, Medicaid and GME funding – now is the time to learn the issues and lend your voice in the defense of our specialty and our patients. Sign up at http://www.acep.org/meetings/leadership/ and join us from May 20th-23rd, 2012 in Washington DC!

Are you a future EMRA Committee Chair? EMRA has seven standing committees the Critical Care, Education, Health Policy, International EM, Research, Technology, and EM Resident Advisory – our committees are leaders in resident innovation and work closely with the board. Want to lead a committee and champion the resident cause in one of the aforementioned areas? Strongly consider applying at www.emra.org.
When doctors duel

I was ready to go home. A tad over-cheerily, I waved at the nurses and techs, and gave the nearest ultrasound a loving pat. This was a happy day, happier than the previous 31. Off-service rotations, like summer camp, can make one homesick.

The necessity of rotations is self-evident and I actually enjoy learning new things. (It’s nice coming off an OB rotation and knowing what to do besides boil water.) Getting out of the emergency department provides a different perspective, both clinically and socially. Luckily, patients don’t see the social side – especially when doctors duel.

As an example: A woman with ESRD and a newly-found bileaflet aortic valve just broke her femur in a car wreck. She crashed due to missing one-too-many doses of her anti-seizure meds. Right. So is trauma surgery the primary team due to mechanism? They say “No, try ortho since the femur is poking the bedrail...” Then, as the patient is inevitably transferred to a non-surgical specialty when surgical stuff is done, who takes over? Medicine? Cardiology? Neurology?

Negotiating which team admits the patient can be emotionally exhausting. I used to imagine that the teams would gather for a polite yet passionate pow-wow over which service could provide the best treatment. They’d come to an educated decision and agree upon the necessary consults. Then perhaps they’d conclude negotiations with a high-five before carrying on with their day.

The perplexing reality is that there are just some doctors who run from new admits. Absolutely, some pushback is to be expected – the high-risk guy with chest pain but no EKG or cardiac enzyme changes – and it’s understandable. Emergency physicians are trained to always presume worst-case scenario. That’s possible explanation #1: Emergency medicine holds an entirely different approach to the patient. While all doctors know that fact, it’s all too easy to forget. So don’t forget it.

Explanation #2: Both sides are composed of extremely intelligent humans who are competent in more aspects of medicine than they realize. It’s possible they don’t trust themselves to manage a sick patient appropriately when there’s another team that specializes in just that illness. An act of avoidance may actually be one of fear – plus or minus some deference.

Explanation #3: Perhaps their service is full to the brim and they don’t have the temporal capacity to stuff another patient in. By referring a patient to another team, they may be acting in the best interests of their collective patient load.

In summary – my knee-jerk reaction was to assume these evasive doctors shirk out of spite (We’ll call that hypothetical explanation #4.) Now I rather doubt it.

Avoiding cynicism is the first step to avoiding doctor-doctor quarrels. Keeping a sense of the other’s perspective is the next. Meanwhile, emergency physicians should say “Yes, this is probably indigestion, but what if it’s atypical chest pain?!” Maybe throw in a few stats for good measure. Play the patient advocate instead of the patient salesman.

Be deferential to the other teams without overt groveling. Condescension has no utility in the workplace; avoid it like a needlestick (Unless it’s to set a chronically disrespectful person in their place; in which case, pepper it on liberally).

Back in the emergency department, life is perfectly hectic. I’ve since admitted many patients to former teammates, thus far without pushback. We learned enough about each other to garner some respect for the other’s knowledge. Plus, I’d promised to admit judiciously when I went back downstairs. My mom did teach me to place nice with others, after all.
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Quality measures – and quality measures gone bad

Quality measures are probably not something that you think about very often (if at all) – yet they are very likely part of your everyday practice in the emergency department. In this article we will review quality measures in general and then discuss a current, controversial quality measure.

Review of quality measures

Who?
Firstly, we need to have an understanding of who is generating quality measures. This is the “alphabet soup” that you hear whenever discussions about healthcare, health policy, and health services occur – indeed you will also see it in the remainder of this article. In order to make this soup digestible, refer to the accompanying tables. For general reference, Table 1 breaks down HHS, Table 2 further breaks down CMS, and Table 3 lists other involved organizations, but is by no means a complete list.

What?
Quality measures are tools used by CMS to measure aspects of healthcare such as processes, systems, outcomes, or patient perceptions. As mentioned at the beginning of the article, you have seen these in action and have almost definitely recorded them yourself. There are PQRS, OPPS, and IPPS measures that affect emergency medicine. PQRS measures that you are probably familiar with include “Aspirin at Arrival for Acute Myocardial Infarction” and “Community-Acquired Pneumonia: Empiric Antibiotic.”

OPPS measures include “Fibrinolytic Therapy Received Within 30 Minutes.” IPPS measures include “Blood Cultures Performed in the emergency department Prior to Initial Antibiotic Received in the Hospital.” While we consider these actions to be part of good care in the emergency department, they are actually reported to CMS.

Why?
Quality measures tie directly into the value equation – where value equals outcome over cost. Quality measures are a method through which outcomes can be quantified. As described in the accompanying table, providers report on PQRS measures, while hospitals report on OPPS and IPPS measures.

PQRS measures are tied to financial incentives as well as penalties for providers; and if hospitals do not meet OPPS and IPPS measures, they receive reduced payments. So in the end, quality measures are aimed to improve outcomes and to incentivize them monetarily.

How?
The groups in Table 3 all play a role in the generation of quality measures (again, the table is by no means a complete list). CMS uses its Measures Management System (developed in collaboration with NQF, AHRQ, NCQA and the AMA-PCPI) to oversee the development, implementation, and maintenance of quality measures.

The AMA-PCPI is the main organization that generates PQRS measures. For OPPS and IPPS hospital measures, there are more groups weighing in – individuals, professional societies (such as ACEP), consultants, and academic organizations. Historically, the final step for measure development has involved vetting – and then endorsement by – a consensus organization, such as NQF.

OP-15: When quality measures go bad
You may have heard about one recent measure from the proposed hospital outpatient measure set that has generated controversy and has led ACEP leadership to spring into action. With OP-15 “Use of Brain Computed Tomography for Atraumatic Headache,” CMS wants to calculate the percentage of emergency department brain CTs that Medicare beneficiaries undergo for headache evaluations that do not meet certain criteria – and are therefore considered “inappropriate.”
Stripped down to its simplest form, OP-15 (OP, as in “outpatient”) is a basic math equation that generates a percentage. There is a numerator, a denominator, and the quotient meant to represent the percentage of “inappropriate” brain CT scans. The numerator is the number of emergency department visits for headache that got a CT; and the denominator is the total number of emergency department visits for headache. In order to separate the “appropriate” scans from the “inappropriate,” there are exclusion criteria that remove certain patients from the denominator. These include such things as patients who get diagnosed with a subarachnoid hemorrhage, have HIV, present with a focal neurologic deficit, or undergo an LP as part of their visit. Again, since this is a CMS measure, it is only taking into account visits by Medicare beneficiaries.

One of the main problems with OP-15 is that it is methodologically flawed. The measure relies on ICD-9 billing codes—which do not accurately reflect a patient’s chief complaint, key historical features, physical exam findings, co-morbidities, or risk factors. For the visit to be considered by the quality measure the patient has to receive a primary ICD-9 billing code for headache; but any exclusion criteria that the patient has must also be captured by ICD-9 codes as secondary diagnoses.

For example, a 72-year-old male patient presents with a headache; he has a history of lung cancer; he reports feeling “off-balance.” A brain CT is ordered, it reveals no acute pathology; the patient feels better, follow-up is arranged with his primary care physician; and the patient is ultimately discharged with a primary diagnosis of “headache.” The CT that was ordered would be considered “inappropriate” unless you use the secondary ICD-9 codes that reflect a history of cancer and an abnormal neurologic exam. While this information is almost always recorded in the patient chart, this information is infrequently recorded in the administrative record. There is a study currently under review for publication that looks specifically at the accuracy of OP-15 in its use of administrative data versus actual clinical data obtained via chart review. The results of this study should prove to be very interesting.

In addition, there are other fundamental problems with OP-15; ACEP has been vocal in communicating these to NQF and CMS as well. Firstly, there is a lack of clinical evidence to support this measure. There is no evidence that there is a high number of inappropriate brain CT scans ordered in the emergency department.

Furthermore, OP-15 is supposed to be an outpatient measure, yet it only includes the emergency department in its scope. Obviously, other outpatient practitioners also order brain CTs for their patients; and again, there is a lack of evidence that justifies limiting such a measure to the emergency department.

Conclusion – moving forward
Unfortunately, despite ACEP’s best efforts—as well as NQF’s ultimate rejection of OP-15 after comments were provided by outside organizations—CMS has moved forward with OP-15. The measure has been included for reporting purposes starting January 2012. It is set to be included for payment update purposes in 2014.

So what can be taken away from the experience with OP-15? Now more than ever, ACEP plans to be involved with the generation of future quality measures. ACEP plans to go one step further, though, and work to optimize the development process as well.

There needs to be an ideal quality measure development process, where some basic principles are followed. All concerned specialties should be included in the process, a process that must be evidence-based. Finally, a consensus organization (like NQF) needs to endorse all measures before they are implemented.

References
2. www.hhs.gov
An abundance of technological advances are transforming lives. Nowhere is this more apparent than in the medical field, where new devices and computer programs are changing the way people live and how we practice medicine. With the Affordable Care Act in place, technology will become part of daily practice. This means that it’s important for physicians to be familiar with the technological advancements in medicine – and also feel comfortable – using tablets and smartphones to access information quickly and efficiently.

Medical devices
Ultrasound: Our field is no stranger to this time-honored imaging modality. There are many emergent scenarios where its utility is paramount (e.g., trauma, central lines). But did you know you can use it for difficult peripheral IVs, lumbar punctures, and regional anesthesia?

Ultrasounds are also becoming smaller and cheaper. For instance, those with Toshiba TG01 smartphones can use a USB 2.0 attachment to turn their phone into a portable ultrasound. iPhones and Android devices are not yet supported, but it will be interesting to see if this catches on. This portability suddenly opens up usage in a wide variety of settings like EMS, Wilderness, and International Emergency Medicine.

Bionics: Incredible strides have been made in the way we assist the physically disabled. Bionics are an incredible example of the increasing number of devices augmenting or replacing physiologic functions. The well-known ventricular assist devices are just the beginning – there is now a robotic exoskeleton called “eLegs” that allows some paraplegics to walk again. The “Luke Arm” is a lightweight arm prosthesis with enough fine motor control to pick up a grape without breaking it. PBS has an excellent video demonstrating both devices in their report entitled “Minds, Machines Merge to Offer New Hope for Overcoming Impairments.”

Blood glucose: There are already a number of subcutaneous portable devices that continuously monitor blood glucose – but engineers at Arizona State University and Mayo Clinic are working on a device that detects glucose levels non-invasively via tears. On a separate but related note, scientists at the University of Freiburg in Germany were recently commended for their work on glucose fuel cells, which could power implantable devices by a patient’s own blood glucose.

iOS / Android apps
With the plethora of apps in the Apple Store and Google Market, it’s daunting to sift through them all. I prefer having five amazing apps over 15 decent ones. This is my essential list:

Medscape: If you haven’t tried Medscape yet, I highly recommend it. It’s free; covers a broad range of disease processes and medications; and can be downloaded and accessed offline. Imagine the high-quality drug information of Epocrates with the added bonus of pathophysiology; history and exam pearls; diagnosis; and treatment. The wealth of information makes it an excellent learning tool for medical students and young residents alike. (Other apps that aid with diagnosis and treatment include
Unbound and the new UpToDate – but their use is fee-based.)

Epocrates: Many of you are familiar with Epocrates. Although similar to Medscape in medication coverage, Epocrates provides additional tools and calculators. If you set up a subscription – often available for free to students and residents via their home institution – you can make use of the “Disease Highlights” and “Epocrates Updates” features to keep abreast of the latest in treatment options. (Other more detailed resources – if money is not an issue – are the packages offered by Lexicomp. Their packages are unmatched in terms of quality and depth.)

Pediatrics: Shots by STFM (was Apple only, now available cross-platform as a web app) covers all pediatric and adult immunization schedules. Peds Meds (Apple only) is a promising new app that excels at estimating weight based on age; calculating drug dosages and maintenance fluids; and allows you to customize your own medications.

Miscellaneous: The 2011 EMRA Antibiotic Guide has excellent utility when deciding which antibiotic to start for a given diagnosis. EM Rashes (Apple only) utilizes the rash algorithm in a visual and easy-to-use format – developed by Drs. Murphy-Lavoie and LeGros at Louisiana State University. This app has particular use for those early in their career. Or for anyone who requires some more confidence to discuss common dermatological complaints.

Both medical devices and apps advance at a nearly exponential rate; which means that they frequently change. Those interested in learning more about medical devices should consider visiting technology blogs such as www.medgadget.com. For medical apps, visit www.imedicalapps.com.

Finally, as the American Board of Medical Specialties recently approved Clinical Informatics as a board-certified subspecialty, it is likely that this pace will continue to accelerate over the coming years. It will be exciting to watch new and exciting medical technologies emerge and change the way in which medicine is practiced.

References
This truly is a historic time for emergency medicine. On September 21, 2011, the American Board of Medical Specialties (ABMS) voted unanimously to approve Critical Care Medicine (CCM) as the 7th subspecialty within EM. The passing of the American Board of Emergency Medicine (ABEM) – American Board of Internal Medicine (ABIM) agreement was the direct result of countless hours of hard work and dedication. While this certainly is a milestone to be celebrated, there is still a large amount of work to be done.

For years there has been a large debate engendered by the primary specialties that sponsor Critical Care boards (Medicine, Surgery, Anesthesia, and Pediatrics) about whether emergency physicians not only should, but could practice CCM. This seems like an unfounded concept given that emergency physicians diagnose and treat critically ill patients every shift. Nonetheless, emergency physicians have been largely excluded from participating in many critical care fellowships. The few exceptions include, most notably, the University of Maryland’s Shock Trauma Center and the University of Pittsburgh. Both are prestigious institutions that have trained a majority of the EM-Critical Care (EM-CC) clinicians today.

Despite these existing hurdles, more than 140 emergency physicians have trained and are practicing today – many have become leaders within the fields of surgical critical care, neurocritical care, and critical care medicine.

Ultimately, there are a few questions to ask when considering a career in CCM. First, is ABMS certification important to you and your career? If so, your fellowship training options may be limited to a handful of programs that meet ABMS’ eligibility criteria.

Second, where do you want to practice? Most hospitals will have a medical, surgical, or mixed ICU. Some may argue that surgical and medical critical care are quite different, and as a result, many surgical ICUs may be hesitant to hire a critical care medicine-trained physician (and vice versa). A few training programs have addressed this dilemma by creating “multidisciplinary” fellowship programs that offer a diverse training curriculum, but there are only a few of these programs currently in the U.S.

The approval of the ABEM-ABIM agreement is a historic victory for the future of EM. Of course, with this new opportunity comes an even larger responsibility. EM-CC physicians must now step up and not only excel in clinical practice, but also take an active role in advocacy, education, research, committee involvement, and to help direct the evolution of CCM. We must strive to become leaders in a new field and prove what we already know that EM-trained physicians have the potential to become excellent critical care physicians.
Emergency medicine stays strong at the AMA

The 65th American Medical Association (AMA) Interim Meeting was held November 12-15, 2011 in New Orleans, Louisiana. This was my sixth year attending the AMA national meeting, but my first time representing EMRA. I was in good company alongside two other EMRA leaders – Hamad Husainy, DO (EMRA’s Speaker of the Council) and Heather Heaton, MD (EMRA Regional Representative from UNC Chapel Hill).

AMAs meetings bring together many different medical specialties and organizations, providing an opportunity to find common ground as we advocate for our patients and profession. Medicine is facing some overwhelming obstacles – working through state and national budget shortages while simultaneously implementing health care reforms of the Affordable Care Act. Now is a critical time to stay engaged in organized medicine, whether you’ve been an AMA member since medical school or are just now getting involved.

Nuts and bolts of the AMA
Describing the full structure of the AMA is well beyond the scope of this article. Just in case you are not familiar with the organizational breakdown of the AMA, the association is composed of many “sections” (for medical students, residents, young physicians, and so forth), as well as state and specialty societies. These groups elect AMA Sectional Delegates who are part of the AMA House of Delegates (HOD) – also known as “The Big House.” The AMA HOD is the equivalent of our EMRA Representative Council, serving as the policy-making body of the AMA. EMRA holds three Resident and Fellows Section (RFS) delegate positions within the AMA.

Emergency medicine in AMA leadership
Emergency physicians have a strong presence in the AMA, representing our specialty on many levels. The AMA Board of Trustees boasts Dr. Steve Stack – an emergency medicine physician – who became Chair-Elect at the AMA annual meeting last June. In New Orleans, EMRA supported the election of several emergency medicine residents as RFS Sectional Delegates and Alternates to the HOD, including Rachelle Klammer, MD, and Carlos Zapata, MD.

Special events at the Interim Meeting
EMRA and ACEP hosted a joint reception with a large turnout of emergency medicine-bound medical students, EMRA resident members, and ACEP leadership. The event was an opportunity for EMRA members to provide mentorship to medical students and network with colleagues in ACEP, all while enjoying some great New Orleans Creole cuisine.

The AMA Resident and Fellows Section celebrated its 40th Anniversary this year (as it happens, EMRA will be turning 38 in May), which speaks to the importance of resident involvement in organized medicine. The policy changes made today decide how our generation will be practicing medicine. Our input and efforts are critical to ensure that both medicine and the emergency medicine specialty will remain strong vocations.

Matt Rudy, MD
Vice Speaker of the Council
Washington University
School of Medicine
St. Louis, MO

More information on all AMA Interim Meeting happenings can be found on the AMA website at www.ama-assn.org/amednews/site/house.htm.

Call for EMRA Rep Council Resolutions
Want to make a difference in EMRA or the specialty of emergency medicine? Then author a resolution.

A resolution is essentially a directive for EMRA to take a certain action or to form a policy. Resolutions submitted will be deliberated and decided at the EMRA Representative Council meeting to be held during the SAEM Annual Meeting in Chicago, IL on May 12.

Visit the EMRA website for more details, examples, and to submit your resolution online.

You can always request more information from the Speaker of the Council at speaker@emra.org.

Keep the following timeline so important deadlines are not missed:

Resolution Deadline March 28

Get involved!

Keep the following timeline so important deadlines are not missed:

- Resolutions due – 3/28
- Vote allocation cut off – 4/12
- Reference Committee applications due – 4/12
- EMRA Rep Council Meeting @ SAEM – 5/12

February/March 2012
Though a difficult subject to consider – research indicates that neither residents nor practicing physicians are well-trained in managing child sexual abuse cases. This is why emergency physicians must remember that recognition of possible sexual abuse in children is a vital aspect of the profession. It is estimated that by the age of 18, as many as 25 percent of girls and 10 percent of boys have been victims of sexual abuse. The official definition – a child who engages in sexual activity for which he/she cannot give consent, is unprepared for developmentally, cannot comprehend; and/or activity that violates the law.

Sexual abuse should be considered in the differential when children exhibit behavioral changes, have anogenital problems, or other unexplained complaints. Medical conditions which may be suggestive of abuse include anogenital trauma, bleeding, irritation or discharge, dysuria, frequent UTIs, encopresis, enuresis, pregnancy, diagnosis of sexually transmitted infection (STI), and oral trauma. Acting out with sexual behavior is the most specific indicator of possible abuse.

The evaluation of sexual abuse requires specialized interviewing skills, evidence-collection procedures, and examination techniques. Medical evaluation for sexual abuse includes a history and physical examination, STI screening, and (possibly) forensic evidence collection. Sexual abuse evaluations are ideally performed in a center with a child abuse team equipped to deal with the needs of the sexually abused patient. However, there are circumstances necessitating emergency department evaluation: The abuse occurred within 72 hours; the patient has injuries requiring prompt medical care; or there is obvious forensic evidence that must be collected.

**History**

The history is a fundamental part of the evaluation process, as physical findings of abuse are often absent. The child’s story – as documented by you, the physician – may be admissible in court. Complete documentation is essential, verbatim if possible!

Based on the impressionable nature of children, the interview should be conducted cautiously. If abuse is disclosed, the complete history should be deferred to forensic interviewers trained in the art of formal interviewing. Otherwise, one runs the risk of having valuable testimony excluded from prosecution.

It is reasonable to get just enough information from the victim to determine abuse – and then obtain the remaining history from the guardian.

Child Protective Services (CPS) should be contacted in cases where abuse is suspected, but not yet disclosed. They can then determine the need for a forensic interview. If the patient is being evaluated for nonspecific complaints related to possible sexual abuse, the history should focus on differentiating between other possible explanations for the child’s symptoms.

**Physical exam**

When examining a child for possible sexual abuse, it is important that the physician be familiar with normal variants, nonspecific findings, and diagnostic signs of sexual abuse. Misdiagnosis of sexual abuse
has tremendous consequences, so it is imperative to keep other possible diagnoses in the differential. A list of alternative diagnoses is provided below. Keep in mind that a physical exam will be normal in 80 percent of child victims of sexual abuse.

Evidence collection should be performed if abuse occurred within 72 hours of presentation. Forensic evidence includes blood, semen, saliva, or hair and skin fragments that could track back to a perpetrator, as well as debris that could hint at assault location. Rape evidence collection kits, which are typically supplied by law enforcement, include instructions for handling of clothes and specimen collection. Consider using colposcopy for magnification as well as photographic documentation.

Normal and nonspecific anogenital findings

- Hymenal tags
- Hymenal bumps or mounds
- Labial adhesions
- Clefts or notches in the anterior half of the hymen
- Vaginal discharge
- Genital or anal erythema
- Perianal skin tags
- Anal fissures
- Anal dilatation with stool in ampulla

Findings concerning for sexual abuse

- Notches or clefts in the posterior half of the hymen
- Condylomata acuminata in a child > two years-old
- Immediate, marked anal dilatation
- Anal scarring

Physical findings diagnostic of penetrating trauma

- Acute laceration or ecchymosis of the hymen
- Absence of hymenal tissue in any portion of the posterior half
- Healed hymenal transection or complete cleft
- Deep anal laceration
- Pregnancy without history of consensual intercourse

Conclusion

As emergency physicians, it is imperative that we recognize victims of sexual abuse. If not detected, many of these patients will go on to face further abuse. Maintaining a keen sense of awareness of sexual abuse as a possible diagnosis is of the utmost importance.

References

Two percent

Patients arrive on our doorsteps every day, sick and crashing, anxious and in pain. The two-day-old and the 103-year-old, the homeless alcoholic and the high-tech CEO, the local farmer and the international visitor – we care for them all. And we see the value of the care we provide as we resuscitate the critically ill, manage pain, and make the diagnosis for a worried mother.

Not everyone sees our work in this way. They take special note of the frequent fliers; the drug seekers; the uninsured with toe pain – and believe that these patients make up the majority of work in the emergency department.

After a shift with a few particularly demanding patients, it’s tempting to see your work in the same way. Resist this impulse! The care we provide has incredible value to the healthcare system – we must first appreciate our own work if we are to prove our worth in an era of flux and reform.

Just two percent. Looking at skyrocketing healthcare costs, legislators and regulators are searching for areas to cut spending without compromising patient care. They are also looking for an area where their cuts will be more than just “budget dust.” One popular scapegoat is the “expensive emergency department.”

Of the $2.4 trillion in US healthcare spending, how much is used for emergency care? A mere two percent according to the Department of Health and Human Service’s (very credible) Medical Expenditure Panel Survey. Compared to other care environments, this is an incredibly low number. Consider that some of our most valuable care – resuscitating critical patients – is some of the most expensive care we provide.

In truth, increases in healthcare spending are being driven by the increasing burden of chronic illness in an aging population, pricey branded prescription drugs (particularly chronically prescribed medications), and technologic innovations – not by increasing utilization of the emergency department.

92 percent of emergency department patients have significant illnesses requiring care in one minute to two hours. The CDC’s National Center for Health Statistics runs the numbers every year – they have concluded that the vast majority of our patients have diagnoses requiring emergent care. Even if the patient’s primary care physician (PCP) took on a few of these visits – consider that two-thirds of emergency department visits occur after business hours and on weekends – when PCP offices are quite closed.

Emergency physicians provide a vital safety net for patients, who do not choose when a dangerous medical problem might strike. We provide care to anyone who arrives on our doorstep under the Emergency Medical Treatment and Active Labor Act (EMTALA) mandate, which requires us to provide care to all patients, regardless of ability to pay. This makes emergency physicians one of the leading providers of charity care in the medical system today.

So the next time you’re feeling frustrated after a run of difficult patients – remember the last time you brought back a critically ill patient (using your growing
expertise in the resuscitation in shock). Remember your last uninsured patient, the one you treated for a critical medical problem when nobody else would.

Also consider how important your emergency department is to your community. The number of emergency departments has been dropping while the number of emergency department visits has been rising, compromising the critical safety net we provide. Our emergency departments are becoming even more crowded as volumes rise while admitted patients linger in their gurneys due to bed and nursing shortages on the inpatient floors. Your community needs you to be there, providing care 24/7 to every patient with emergent medical concerns, regardless of their age, gender, income, or level of acuity.

If you’d like to discuss these issues with those who have the power to make a difference, come to ACEP’s Leadership and Advocacy Conference in Washington, D.C. May 20-23. Sunday, the Residents and First-Timer’s Track will provide you with the foundational health policy knowledge you’ve been looking for, all in interactive sessions hosted by EMRA leaders. Continue expanding your new knowledge base on Monday with additional leadership and policy presentations. On Tuesday, you’ll have the chance to speak with your own legislators about issues you find important as an emergency physician. Ask your program director and department chair if they can sponsor you in the 2012 EMRA Chair's Challenge. Last year 130 residents attended. This year, I hope to see you there!

2012 ACEP Leadership and Advocacy Conference

May 20-23, 2012

Washington, DC

EMRA/YPS Residents and First Timers Track

Leadership and Advocacy Essentials

May 20, 2012

11:00 am - 12:00 pm EMRA Health Policy Committee Meeting
(All EMRA and YPS members invited to attend)

12:30 pm - 12:40 pm Welcome and Introduction
Alex Rosenau, DO, FACEP, ACEP Vice President; Donald E. Stader III, MD, EMRA President

12:40 pm - 1:15 pm Introduction to Advocacy
Alison Haddock, MD, EMRA Legislative Advisor

1:15 pm - 1:50 pm Current Issues in Health Policy
Nathaniel R. Schlicher, MD, JD
Past EMRA Legislative Advisor

1:50 pm - 2:25 pm Health Economics
Ethan A. Booker, MD, FACEP, YPS Member

2:35 pm - 3:50 pm Roundtable Discussion
Facilitated by EMRA Board of Directors and YPS Leaders

4:00 pm - 6:00 pm Delivering Powerful Presentations
(Presentation Training)
Shelley Sims and Nan Tolbert, Executive Communication Coaches
The Communication Center

6:00 pm - 7:00 pm Resident and Young Physician Section Reception
Underwritten in part by Team Health

2012 Chair’s Challenge Leadership and Advocacy Conference Scholars Program

Support the development of our specialty’s future leaders and patient advocates

What the ACEP Leadership and Advocacy Conference does for Emergency Medicine Residents:

✓ Exposes them to the legislative process
✓ Fosters in them the advocacy spirit
✓ Teaches them the skills needed to effectively communicate issue-related messages
✓ Empowers them to actively use these skills as leaders

The experience culminates with the residents, along with the other conference attendees, meeting with their U.S. Senators and Representatives on Capitol Hill to discuss the most important health policy issues. For complete schedule and registration form, please visit www.acep.org.

Chair’s Challenge commitment deadline: May 1, 2012

For more information and sponsorship forms, please visit www.emra.org
Medicare expenditures exceed this limit, the RVU conversion factor is reduced so that physician reimbursement is reduced and the cost of services remains under the SGR-imposed limit. If Medicare is over-budget, physicians get reimbursed less.

For the first few years, while the economy grew steadily, Medicare expenses remained under the limit set by the SGR. However, since 2002 expenses have exceeded the SGR limit. A physician payment cut of 4.8 percent was applied in 2002; but since that time Congress has acted 11 times to temporarily postpone additional cuts (often retroactively at the last minute). Since these temporary fixes do not change the underlying requirements set by the SGR, the cuts averted in a given year are carried over to the next year... unless Congress acts.

In 2008, payments were set to drop 10.1 percent before Congress passed a temporary fix. The scheduled cuts increased to 15 percent in 2009 and 21.3 percent in 2010 – yet again, temporary fixes were passed to avoid these cuts. Most recently, Congress narrowly passed a two-month extension of current rates, averting the 27.4 percent cut in physician payments scheduled for January 1, 2012 – but only for 60 days.

Why not replace the SGR?

For many years, many organizations including ACEP, EMRA, and the AMA have called for repeal of the SGR. Unfortunately, replacing the SGR is politically unappealing due to its calculated impact on the federal budget.

SGR cuts every year since 2003. As a result, repealing the SGR will be very expensive – forcing the CBO to estimate higher future Medicare spending, thereby increasing estimates of future federal budget deficits. In the current political environment, any proposals to replace the SGR with a long-term solution will presumably need to find funding sources to offset some or all of these expenses.

What are the alternatives?

There are several proposals to replace the current SGR system:

- **Option 1: Freeze payment rates.** Eliminate the SGR and leave reimbursement rates unchanged for 10 years. Estimated cost: $298 billion.\(^4\)

- **Option 2: Freeze some rates and cut others.** In October, the Medicare Payment Advisory Commission (Med-PAC), a federal agency that advises Congress, recommended cutting specialist (e.g., non-primary care specialties, including emergency medicine) rates by 5.9 percent every year for three years, then freeze rates for seven years. Primary care reimbursements would be unchanged for 10 years. Estimated cost: $200 billion.

- **Option 3: Restart the SGR with a new baseline.** The National Commission on Fiscal Responsibility and Reform (also known as the Bowles-Simpson commission, after the names of its co-chairs) proposes freezing all rates from 2012-2014, then restarting the SGR program in 2015 using an updated spending baseline from calendar year 2014. Estimated cost: $261 billion.

Looking ahead

Many observers hoped the Congressional Super Committee would include a fix for the SGR in its recommendations. Instead, since the committee reached no agreement, a series of federal spending cuts were automatically triggered – including a two percent cut in Medicare reimbursements starting in 2013. With the upcoming election dominating federal politics, Congress is unlikely to pursue major Medicare legislation soon. In the meantime, a few million more Baby Boomers retire every year, increasing the number of Medicare beneficiaries.

This affects all of us. Visit ACEP’s advocacy website at www.acep.org/advocacy and submit a letter to your representatives! Our elected officials must be reminded that a fair, predictable reimbursement system is the only solution that will ensure continued high-quality care for these patients.

References

A growing number of patients are using the emergency department for acute exacerbations of complex, chronic medical conditions. To meet their needs, emergency physicians must know about palliative care – and how to practice it.

Palliative care is defined by the World Health Organization as “an approach that improves the quality of life of patients and their families facing the problem associated with life-threatening illness, through the prevention and relief of suffering by means of early identification and impeccable assessment and treatment of pain and other problems, physical, psychosocial, and spiritual.”¹ It’s a lengthy but excellent definition. Palliative care encompasses more than simply eliciting and respecting end-of-life decisions for patients with terminal illnesses. The goal is to maximize the patient’s quality of life while meeting the values of both patients and their families. It’s a process that lasts throughout the various stages of chronic or terminal conditions.

Yet practicing palliative medicine in the emergency department is nothing new – it takes many familiar forms. Consider the cancer patient who presents with pain exacerbation. Or the lifelong smoker, whose chest x-ray now show a suspicious mass. Or the frank discussion you must have with the end-stage COPD patient who might need intubation. Even counseling the family of a loved one who just died in the emergency department for acute exacerbation with AIDS.

Providing palliative care in the unique environment of the emergency department is challenging – there are time constraints; there’s a lack of established patient-physician relationships. Yet emergency medicine physicians must nonetheless make emergent decisions with limited information about a patient’s wishes and personal values.

However, such challenges also allow us to take a special role for these patients. To develop a plan of care and disposition for the patient, we work as partners with both the patients and their other physicians.³

As residents, we can begin developing our palliative medicine skills as part of our clinical toolkit. Formal education in palliative care for emergency physicians is rapidly expanding. In 2006, the American Board of Emergency Medicine (ABEM) joined nine other member boards of the American Board of Medical Specialties to sponsor the Hospice and Palliative Medicine (HPM) subspecialty board certification.⁴ At present, there are 82 HPM fellowship programs across the U.S.⁵

In addition to formal educational opportunities, a variety of other curricula in palliative medicine exist for emergency physicians. For example, the curriculum of the Education in Palliative and End-of-Life Care in Emergency Medicine Project (EPEC-EM) aims to teach emergency medicine professionals “essential clinical competencies in palliative care”.⁶ The Center to Advance Palliative Care (CAPC) provides an online source of palliative care resources and educational opportunities.⁷

The management of chronic and terminal illnesses has evolved. Although emergency medicine is traditionally perceived as a resuscitative, acute care specialty – we routinely address palliative care needs with the patients and families.² As emergency physicians, we will all provide palliative care during our careers. Ensuring we have the knowledge to provide the best palliative care possible is our responsibility and privilege.

Resources
1. WHO Definition of Palliative Care. Available online at: http://www.who.int/cancer/palliative/definition/en/
7. Center to Advance Palliative Care: Palliative Care Tools, Training, and Technical Assistance. Available online at: http://www.capc.org/
Thinking rural? Go for it!

I spent about half of my third year clerkships in rural communities in northern California. Before starting rotations, I’d never even thought of northern California as rural; I never knew how spectacularly remote these regions could be. Nor did I appreciate the nuances of practicing medicine in a rural setting.

Luckily, one of my first rotations in a rural community was within a four-bed emergency department in a northern California town of 4,000. One of the first things I noticed – aside from the picturesque town, beautiful creek, and amazing biking opportunities – was the large number of patients who had diabetes, smoked, or were obese. (This is not to imply that everyone in rural areas is unhealthy! In truth, I met some of the most active people I’d ever seen there. Yet, as I explain below, rural areas suffer from some incredible health issues.)

The health disparities affecting rural communities are astounding. A few examples:

- Rural children are more likely to have public insurance (Medicaid or S-CHIP), while urban children are more likely to be privately insured.
- The percentage of children with chronic medical conditions such as diabetes, obesity, and asthma is highest among rural teenagers.
- The majority of rural EMS providers are volunteers with less training than their urban counterparts.
- One-third of all motor vehicle accidents occur in rural areas – but two-thirds of the deaths attributed to these accidents occur on rural roads.
- Rural areas have a huge physician shortage, which is projected to expand substantially over the next decades.

I found that working within these communities felt like an incredible learning and service opportunity. To my surprise, perhaps the most exciting piece of this experience was the diversity of patients and pathology in the emergency department.

I certainly didn't think I would see anything as crazy as the things I saw in the Level 1 trauma centers in the big city. But this emergency department saw its fair share of interesting cases: I saw multiple blunt trauma patients requiring air transport to the trauma center. I saw a gunshot wound to the abdomen. I saw multiple severely septic patients requiring rapid resuscitation. I saw a teenager with a severe asthma exacerbation requiring intubation. I saw a 50-year-old man after he attempted suicide.

Beyond seeing an interesting diversity of critically ill patients, the physicians I worked with were great teachers and mentors. They walked me step-by-step through procedures, helped me think critically through a differential diagnosis, and told me about the challenges of being the only working physician in the area on a Friday night.

If you are thinking about doing a rotation in a rural emergency department or pursuing a career in rural emergency medicine, I say “Go for it!” The work and learning is fascinating and you will be a much-needed resource in your community.

For more information, visit ACEP’s Section of Rural Emergency Medicine at http://www.acep.org/content.aspx?id=30266.

If you are interested in working with EMRA to continue bringing a student voice to emergency medicine, consider applying for the **2012-2013 Medical Student Council**! The deadline is **March 1, 2012**.

As always, if you have any questions or suggestions, please don’t hesitate to email me at msgcchair@emra.org.
Important change in ACGME Program entrance requirements impacting Osteopathic medical students

Recently, the ACGME announced a change to entrance requirements for ACGME residency programs and fellowships. For osteopathic medical students, this change is significant; unfortunately many of these students are unaware of the change in requirements. This article intends to outline these changes so osteopathic medical students 1) know how this impacts their medical career and 2) can be fully prepared for residency applications.

The alteration in requirements is as follows: “Prerequisite clinical education for entry into ACGME-accredited residency programs must be accomplished in ACGME-accredited residency programs or Royal College of Physicians and Surgeons of Canada (RCPSC)-accredited residency programs located in Canada. Prerequisite clinical education for entry into ACGME-accredited fellowship programs must meet the following qualifications: a) for fellowship programs that require completion of a residency program, the completion of an ACGME-accredited residency program or an RCPSC-accredited residency program located in Canada…”

This basically means two things for osteopathic medical students. First, an AOA-rotating internship will not qualify for entrance into a PGY-2+ ACGME residency program; meaning the student will need to repeat the intern year in an ACGME-approved program. Secondly, completing an AOA residency program will not satisfy the requirements for entrance into an ACGME fellowship program. Because there are relatively limited fellowship opportunities offered by the AOA, this essentially forces a student wishing to pursue a fellowship to choose the ACGME route. In short, this change means that osteopathic medical students need to choose either the AOA route or the ACGME route to complete their residency.

While this may not seem that significant at the moment, it appears that the ACGME is stating that the AOA residency/internship programs are not adequate for entrance into ACGME programs. It may be easy to become pessimistic about this change, but it could have at least two positive effects in the future. First, it may force AOA programs to increase their overall quality and consistency. Secondly, because there are only enough AOA programs for roughly half of the osteopathic graduates in the U.S., this may force the AOA into creating more residency programs.

Of course, this is just speculation. Nonetheless, it is important to keep in mind that, even though the change seems drastic, there may still be a positive outcome.

Resources

Editors note: EMRA submitted a letter in opposition to these changes to the ACGME. The ACGME received a largely negative response from those who submitted comments. We anticipate that these proposed changes and comments will be reviewed by the ACGME in February.
Heartbreaker: The hidden ravages of lyme disease

**Case**

Tick-borne illnesses are a common occurrence in emergency departments throughout the East Coast and Upper Midwest. While these illnesses have classic presentations – they may present in unusual ways. History of a tick bite may not always be present, but the patient has almost always spent significant time outdoors.

**HPI:**

A 13-year-old male from Massachusetts presents to the emergency department with seven days of fever, fatigue, and myalgias. A non-pruritic rash appeared on his chest yesterday; he now has a large target-like lesion under the right axilla. He’s had 102° fevers daily, with bilateral knee pain, headache with coughing, and neck pain.

Symptoms resolved with ibuprofen but recurred within six hours. He had visited his pediatrician twice within three days prior to arrival. There, he had negative monospot, rapid Strep, and Lyme titers and was started on empiric PO doxycycline; however, emesis prevented treatment.

The patient denies any tick bites, though he’s been mowing lawns for several weeks.

**Past medical history:** ADHD, anger management

**Medications:** Doxycycline 100mg PO BID x 14 days, APAP PRN fever, PRN fever, ondansetron PRN nausea, methylphenidate, risperidone PRN anger

**Allergies:** NKA

**Review of systems:** Negative other than HPI

**Social history:** Denies tobacco, alcohol, drug use. Lives with parents and two siblings in a wooded area of suburban Massachusetts. School friend recently diagnosed with mononucleosis.

**Physical exam:** VS: T 37.6, HR 84, BP 118/62, RR 20, O2 98 percent

HEENT: NC/AT, PERRLA, EOMI, oral mucosa moist, no pharyngeal erythema/exudates.


Resp: CTAB

CV: Dynamic precordium without thrill; RRR; +S1/S2; no murmurs/rubs/gallops.

Abd: Soft, NT/ND, +BS, liver edge 4-cm below right costal margin.

Skin: Warm, dry. Ovoid, light pink macular rash with 5-cm double ring + central clearing below right scapula. Multiple 0.5-1-cm red macular lesions scattered over body.

Neuro: AOx3, CN II-XII intact. Developmentally normal.

**Diagnostic work-up:** The evaluating physician is unsure of the rash’s etiology and orders CBC-D, Chem-10, liver transaminases, total/direct bilirubin, blood cultures, and CXR.

**Findings**

- WBC 12.2; Hgb 13.7/Hct 39.7; Plt 232; N 71; L 21; E 1.1
- Na 137; K 3.9; Cl 100; HCO3 23; BUN 15; Cr 0.8; Glu 118; Phos 3.6; Ca 9.6
- AlkPhos 250; ALT 34; AST 27; tBili 0.4; dBili <0.1
- CXR: Borderline enlarged cardiac silhouette; mild pulmonary vascular congestion.

**ED course**

Given the enlarged cardiac silhouette on CXR, cardiac workup is pursued. EKG shows QTc 454; T-wave inversions in V3-V5; and 1-mm ST-depression in V4-V6. Cardiology is consulted; they request serial EKGs, troponins, CK, titers (CMV, EBV, Coxsackie, *Borrelia burgdorferi, Rickettsia rickettsii*, ASLO, anti-DNase), Enterovirus PCR, and respiratory virus panel.

Labs show mildly elevated CK, troponins, ESR, and CRP: CK 87 → 71; troponin 0.03 → 0.02; ESR 34, CRP 11.1. The patient is admitted to cardiology with telemetry with the admission diagnosis of carditis versus autoimmune etiology.

**Hospital course**

After admission, cardiac echocardiogram shows mild LV dysfunction (EF 50 percent). He is started on IV ceftriaxone for presumed Lyme carditis, PO doxycycline for empiric Ehrlichiosis coverage. Differential diagnosis includes Lyme carditis, Coxsackievirus, Enterovirus, rheumatic fever, or drug reaction.
Blood cultures are negative. Titers show – positive EBV IgG 59.3; EBV IgM 26; high Lyme antibody ELISA 2.61; negative Lyme IgG; and equivocal Lyme IgM. Respiratory virus panel is positive for Rhinovirus.

**Hospital day three:** Repeat Lyme titers positive; troponins 0.01. Cardiac MRI shows a small area of early and late hyperenhancement consistent with inflammation and fibrosis; mild LV/RV dilation (Fig 1) (z=2.2): borderline depressed global LV systolic function (LVEF 54 percent); no wall motion abnormalities.

Given the abnormal EKG; cardiac dysfunction by echocardiography; erythema migrans; and positive Lyme titer – the patient is diagnosed with Lyme carditis.

**Hospital day four:** Repeat echocardiogram shows normalization of ventricular function (LVEF 62 percent).

**Hospital day five:** Normal CBC/electrolytes/CRP/troponins. The patient is discharged to home with a 21-day course of IV ceftriaxone.

**Readmission to emergency department:** The patient returns to the emergency department two days after discharge, presenting with four hours of dull, non-radiating precordial chest pain. As CXR, EKG, and cardiac enzymes are reassuring, he is discharged home. The patient has a full recovery.

**Discussion**

**Lyme disease** is caused by the spirochete *Borrelia burgdorferi*. Though classically associated with the New England area, *Borrelia* species are found throughout the East Coast; Upper Midwest; West Coast; Europe; Central Asia; even in migratory birds near Antarctica. It is transmitted by the deer tick, *Ixodes scapularis*, a mere 2-3.5mm². Transmission usually occurs with deer tick attachment greater than 48 hours.

Initial presentation usually shows erythema migrans – a target-like rash spreading centripetally around the site of tick attachment with central clearing, though only 25 percent of patients recall a tick bite. It may manifest with multiple erythema migrans rashes from a single tick bite; fatigue; neck stiffness; myalgias; arthralgias, or conjunctivitis. Less commonly, there is anorexia, regional lymphadenopathy, or fever.

Untreated Lyme disease can lead to permanent sequelae, the most common being a polyarticular arthritis, occurring in 60 percent of untreated patients. The classic neuropathic triad consists of meningitis, Bell’s palsy, and motor/sensory radiculoneuropathy. There is also a chronic fibromyalgia-like syndrome, characterized as a non-infectious inflammatory state after bacteria are cleared.

**Lyme carditis** is a rare, potentially life-threatening complication of Lyme disease, present in 0.5-10 percent of cases. It typically presents with AV block a few weeks after tick exposure. Lyme carditis presenting with erythema migrans lesions constitutes *early disseminated Lyme disease*. One should order an EKG on anyone presenting with symptoms concerning for Lyme disease. Third-degree AV block is most common, seen in 49 percent of Lyme carditis cases. Note that the patient presented here had only non-specific ST/T-wave changes.

**Treatment** of Lyme carditis remains controversial. The Infectious Diseases Society of America 2006 guidelines recommend IV ceftriaxone while hospitalized, then PO doxycycline upon discharge. However, these guidelines do not distinguish between Lyme carditis manifesting as AV block or as depressed ventricular function. The only published trial of antibiotic therapy for dilated cardiomyopathy due to Lyme disease used 14 days of IV ceftriaxone and achieved complete reversal of cardiac symptoms in eight of nine patients. No published data exist on the use of PO doxycycline to treat Lyme carditis. In this patient, the rapid response to IV ceftriaxone in the setting of early disseminated Lyme disease suggests that home IV ceftriaxone would be a good choice.

No cases of acute cardiac complications after successful treatment of Lyme carditis have been reported. Almost all have complete resolution of their EKG abnormalities.

As this case illustrates, it is worthwhile for the physician to take special note of the cardiac exam and imaging – especially in patients with suspected Lyme disease. Any suggestion of cardiac dysfunction should prompt an EKG and consideration of cardiac workup. Early antibiotic treatment is key.

**Resources**

Bouncebacks!

37-year-old woman with flu-like symptoms

In Bouncebacks, the authors provide the documentation of an actual patient encounter, discuss patient safety and risk management principles, and then reveal the patient’s “bounceback” diagnosis.

The cases are adapted from the book Bouncebacks! Emergency Department Cases: ED Returns (2006, Anadem Publishing – available at www.amazon.com and www.acep.org), which includes 30 case presentations with risk management commentary by Gregory L. Henry, past president of The American College of Emergency Physicians, and discussions by other nationally recognized experts.

Bouncebacks: Medical and Legal, was released in October 2011 with a novel approach to patient safety by following the stories of 10 patients from the initial visit to the attorney’s desk, including courtroom testimony and settlement decisions. It is colorful and engaging. Authors: Michael Weinstock, Kevin Klauer, and Greg Henry with forward by Mel Herbert, and commentary by many national medical experts, attorneys, and policy makers.

Primary care medicine involves accuracy of diagnosis, whereas our specialty throws in an additional standard; timeliness of care. Below is the story of a 37 year old woman, a run-of-the-mill complaint in a healthy young woman. Her case demonstrates why a cookbook approach will often get it wrong, but having a index of suspicion for subtle symptoms, in this case at her second visit, will provide the practitioner with an approach to making a rapid diagnosis to provide definitive care.

Initial visit

Chief complaint (at 08:54): Flu-like symptoms

Vital signs

<table>
<thead>
<tr>
<th>Time</th>
<th>Temp (F)</th>
<th>Pulse</th>
<th>Resp</th>
<th>Syst</th>
<th>Diast</th>
<th>O2</th>
<th>Pain scale</th>
</tr>
</thead>
<tbody>
<tr>
<td>08:57</td>
<td>97.8</td>
<td>76</td>
<td>18</td>
<td>141</td>
<td>94</td>
<td></td>
<td></td>
</tr>
<tr>
<td>12:00</td>
<td>68</td>
<td>20</td>
<td>108</td>
<td>56</td>
<td>2</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

History of present illness (at 09:12): The patient presents with a spontaneous onset of a severe, sharp frontal headache that began gradually today at 6AM.

The symptoms are constant and 8/10 in severity. She did have vomiting which began 3 hours ago. She did use Tylenol, which was minimally effective. She does not have a history of headaches. Patient complains of photophobia. She denies, fever, rash, confusion, loss of consciousness, weakness of the extremities, slurred speech, vertigo, myalgias, diplopia or blurred vision, cough, rhinorrhea, facial pain, neck stiffness, lightheadedness, nausea/vomiting, or abdominal pain.

Past medical history/triage

Allergies: NKDA
Medications: Tylenol
PMH/PSH: None
Social history: No smoking, alcohol or drugs
Family history: Heart disease, HTN
Physical exam (AT 09:17):

general: Well-developed, well-nourished, poorly-hydrated individual in no acute respiratory distress.

Eyes: PERRL, EOMI, Fundi normal
Nose: There is no rhinorrhea.

“Call the flu, the flu. Call gastroenteritis, gastroenteritis.”

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Mouth/dental: The posterior pharynx is free erythema and exudates.

Neck: The neck is supple and nontender to palpation. There is no cervical lymphadenopathy. No masses or thyromegaly, no JVD.

Cardiovascular: RRR without m/r/g

Respiratory: Lungs CTAB

GI: Soft and NT without r/r/g

Integumentary: The skin appears normal for age and race. It is warm and dry.

Neuro: A&O X 3m CN 2-12 intact. Sensory and motor functions are intact. Biceps, triceps, patellar, and achilles are equal and intact. Downward plantar reflexes are normal. Finger to nose is WNL. Grasp is equal bilaterally. The gait is normal.

Orders (at 09:17): Demerol 50mg IVP, Phenergan 12.5mg IVP, IV fluids NS 2 L bolus

Results (results at 10:53):

- CBC, lytes, BUN/creat, cardiac enzymes normal.
- Urine pregnancy negative. Dip WNL.
- Brain CT negative.

Progress notes (at 11:57): Patient is feeling much better. Patient is ready to go home. Spinal tap was discussed with the patient and her husband, but they refused, promising to return if fever, stiff neck, weakness, paralysis, or sensory loss.

Diagnosis (at 11:58): Gastroenteritis, Cephalgia

Disposition (12:26): Discharged ambulatory with spouse, F/U PCP if not improved in 3-4 days, instructions for gastroenteritis and HA, Rx for phenergan and Darvocet.

Discussion of risk management issues

Issue #1: Contradictory information in HPI and ROS

Discussion: This is a subtle but important point. The physician documents vomiting in the HPI but no nausea/vomiting in the ROS. Consistency in documentation is important to ensure reliability and accuracy, especially if a case gets into an attorney’s hands. Additionally, the primary evaluation was for headache, yet the first diagnosis was gastroenteritis, making the physician’s thought process difficult to follow. She had vomiting with headache, how did this become gastroenteritis?

Teaching Point: Inconsistent documentation is a present to an attorney, re-read your notes prior to patient disposition.

Issue #2: Non-discriminatory use of lab work

Discussion: Why were labs ordered on a healthy young patient? Was there a concern which was not documented? By ordering cardiac enzymes, was the physician concerned about atypical angina? (Really atypical angina?!) Kudos for a good neurologic exam! As the chart reads, after the history and physical, further testing was extraneous.

Teaching Point: Order only pertinent labs that would aid diagnostics and alter management.

Issue #3: Not every patient with a headache needs a head CT…

Discussion: The chief complaint of headache accounts for 2.2% of all ED visits. A good physician must be discriminatory in deciding which of those millions of headaches requires a scan. ACEP guidelines for neuroimaging in the acute headache patient include

1. Abnormal findings on neurologic examination including altered mental status
2. New sudden-onset severe headache
3. HIV-positive patients with a new type of headache
4. Consideration in patients older than 50 years with a new type of headache and normal neurologic examination

A final note on this head CT – why was it done? What was the doctor looking for?

- If a mass, this would be a very rapid cancer.
- If meningitis, a CT would be normal.
- Carbon monoxide poisoning, pseudotumor cerebri, acute angle closure glaucoma, preeclampsia… unlikely
- So we are left with subarachnoid hemorrhage. If the physician was concerned about SAH, an LP was mandatory. If the physician was concerned about SAH, the most important part of the history is the onset. Here with documentation was ‘spontaneous’. What does this mean? We are not sure… There was a discussion about LP, but it seems like a CYA (cover your… butt) discussion; if an LP was necessary and the patient refused, document understanding of refusal including the worse possible outcome. If the LP was not necessary, do not open a can of worms…

Teaching Point: Take care to order head CTs on the appropriate patients.

Issue #4: Using all-encompassing, inaccurate documentation.

Discussion: Not every patient with vomiting and headache has the flu. It’s unclear here whether the chief complaint is from the patient’s mouth, “Doc, I have flu-like symptoms,” or whether the triage nurse bundled the patient’s symptoms of HA and vomiting into “flu-like symptoms.” Either way, physicians need to remain factual and precise. The patient’s story does not sound like the flu, nor does it sound like gastroenteritis, the latter of which would require diarrhea. Often discharge diagnoses are provisional.
Bouncebacks!

continued from page 25

and preliminary.

Teaching Point: Call the flu, the flu. Call gastroenteritis, gastroenteritis.

These points are relatively minor, but may demonstrate a sloppy evaluation is there ultimately was an adverse outcome. Could this initial evaluation have spotted the eventual diagnosis? Read on…

The bounceback

- Return ED visit (3 days later) -
  - 18:34 – Complaint of left arm numbness and weakness
  - 21:21 – History confirms intermittent HA and neck pains for 4 days. Initial set of vital signs are normal. Neuro exam documents left upper and lower extremity weakness
  - 23:08 – Lumbar puncture results: WBC = 0 and RBC = 1
  - 23:23 – Nurse notes sudden change of condition; pt. incontinent of urine and right eye is deviated laterally. Pt. cannot move body in coordinated fashion. Doctor orders neck CT
  - 01:35 – Doctor progress note: only minimal use of left side, mental status grossly decreased with ability to follow simple commands only
  - 02:02 – Radiologist calls with CT results: Right carotid artery dissection
  - Admission: Inpatient MRI demonstrates large right middle cerebral artery infarct with edema and subfalcine herniation and brainstem infarct. No flow in the right internal carotid artery
  - Two days later – Pt. is unresponsive with fixed pupils, no purposeful movements. EEG shows brain death. After discussion with family, the patient is extubated and expires

- Final diagnosis: Carotid artery dissection

Discussion of risk management issues from second ED visit

Issue #1: Failure to order the appropriate neuroimaging

Discussion: Notice that in the HPI the physician notes “neck pain” and, yet, only a head CT was ordered in the early part of the work-up. It was not until the patient deteriorated 2 hours later that a carotid CTA was performed and finally read 2 hours after that! The diagnosis of carotid artery dissection took over 7 hours to make.

Teaching Point: Let patient symptomatology and exam findings guide your work-up.

Issue #2: Inadequate differential diagnosis

Discussion: The differential diagnosis of atraumatic, sudden-onset, and severe headache includes: subarachnoid hemorrhage, carotid/vertebral artery dissection, cerebral venous thrombosis, idiopathic intracranial hypertension. This is the main learning point of this case; don’t cookbook your testing; for patients under 40, the causes of stroke are different from older patients;
  - Dissection of extracranial arteries
  - Atherothrombotic, cardioembolic, non-atherosclerotic vasculopathy
  - Migraines.

The neck is the vascular supply for the head; consider imaging in patients with a negative head CT and persistent deficits.

Teaching Point: The cause of stroke in younger adults is different from older adults.

Issue #3: No serial examinations or documentation

Discussion: According to the American College of Emergency Physicians (ACEP) Clinical Policy regarding HA, pain response to therapy should not be used as a diagnostic indicator of the underlying etiology of an acute headache. In a patient with neurologic deficits on physical examination, frequent serial exams and documentation are prudent.

Teaching Point: Sick patients need serial exams and notes.

Discussion of carotid artery dissection

General

At the first visit, our patient had a carotid artery dissection preceded by headache, and at the second neck pain with neurologic symptoms. Initially, this would have been a tough diagnosis. At the second visit, the physician ordered another CT scan of the brain, failing to consider dissection until the symptoms irreversibly progressed.

Carotid artery dissection (CAD) can have a varied clinical presentation. Classic symptoms include acute onset of ipsilateral headache with facial and neck pain. However, presentations may range a spectrum of isolated neck pain to cranial nerve palsies or cerebral ischemia. Interestingly, headache usually precedes a cerebral ischemic event by a median time of four days, as in this case. Physical exam findings can include neurologic deficits and less commonly, scalp tenderness or a carotid bruit.

Carotid artery dissection can be split into extracranial and intracranial, the former with a more favorable prognosis. Strokes are caused by embolization from carotid thrombus formation, and are found in 30-80% of patients. Ptosis and miosis can be found together in up to 50% of CAD patients. Cranial nerve deficits are found in approximately 10% of patients with extracranial CAD. Dissecting ICA aneurysms are the etiology of SAH in up to 3% of cases, which can result in a physician stopping the evaluation at a positive LP.

26 EM Resident
Signs and symptoms in patients with carotid artery dissection

<table>
<thead>
<tr>
<th>Sign or symptom</th>
<th>Proportion of patients %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ipsilateral headache (slow onset, constant)</td>
<td>58-92</td>
</tr>
<tr>
<td>Cerebral ischemia</td>
<td>63-90</td>
</tr>
<tr>
<td>Oculosympathetic paresis</td>
<td>9-75</td>
</tr>
<tr>
<td>Neck pain</td>
<td>18-46</td>
</tr>
<tr>
<td>Subjective bruit/Pulsatile tinnitus</td>
<td>12-39</td>
</tr>
</tbody>
</table>

First-line therapy is anticoagulation with unfractionated heparin followed by coumadin with a target INR of 2.5-3. Contraindications to anticoagulation include:
- Large infarct with associated edema and mass effect
- Infarction hemorrhagic transformation
- Intracranial aneurysm
- Intracranial dissection extension.

If there are no neurologic ischemic symptoms, antiplatelet therapy can be considered.

Endovascular and surgical therapies should be considered if there is failure or contraindications to medical management or with persistent ischemic symptoms. Endovascular therapies include intra-arterial thrombolysis, aneurysm coiling, percutaneous transluminal angioplasty and stenting. Surgical therapies include carotid artery ligation or bypass if good collaterals exist, or decompressive craniectomy if edema and mass effect are present. Such decisions should be made in early and close discussion with the interventional radiology, neurology, and neurosurgery consultants.

Risk management pearls
- Causes of stroke symptoms in patients less than 40 are different than in the elderly.
- DDX of sudden onset severe HA include Subarachnoid Hemorrhage (SAH), Carotid / Vertebral Artery Dissection, Cerebral Venous Thrombosis, and Idiopathic Intracranial Hypertension
- Pain response to therapy should not be used as a diagnostic indicator of the underlying etiology of an acute headache.
- The imaging study of choice for diagnosis of carotid artery dissection is MRI/MRA, but CT is acceptable acutely in unstable patients.

Final note: These bizarre cases will occur in our careers; a horrible diagnosis which is impossible to make at the initial visit.

When this happens, it is nice to have a thorough, consisted documentation which allows the reviewer to follow the thought process of the provider.

References
Emergency physicians as anesthetists

Background

In the developing world, the morbid-ity and mortality of general anesthesia remains high simply because anesthesiologists are not readily available. In International Medical-Surgical Response Teams (IMSuRT), the availability of an anesthesiologist is usually the rate-limiting step. Our team proposes that emergency physicians – who possess skills of airway control; IV sedation administration; and ventilator management – may serve as an anesthetist, assuming proper training. We describe such a training program.

Methods

Part I: Training of the emergency physician as an anesthetist in the U.S.

The curriculum for the training program is known as Emergency Physician General Anesthetic Syllabus (EP GAS); it is centered on a textbook, Stoelting and Miller’s The Basics of Anesthesia. Emphasis was placed on the anesthesia machine, properties of inhaled anesthetics, the Mean Alveolar Concentration of Gases Principle, Second Gas Effect, onset and relative potencies of narcotics, benzodiazepines, muscle relaxants, local anesthetics, and conduction anesthesia.

Initial training of the emergency physicians started with a basic introduction to the anesthesia machine at Memorial Hospital in South Bend, IN. A board-certified emergency physician worked under the auspices of a board-certified anesthesiologist. The anesthesiologist supervised the emergency physician in the same fashion as they supervise paramedics and emergency residents, as defined by the American Society of Anesthesiologists. The emergency physician then learned how to set up for a routine anesthetic.

They used a simple, oft used mnemonic, MS MAID:
- M - machine check (on/off switch; oxygen, nitrous oxide, sevoflurane, and desflurane levels; filling apparatus; pop off valve pressure check; circuitry maintenance)
- S - suction apparatus assembly
- M - monitor (BP; cardiac; O2 saturation; end tidal CO2; anesthetic inspiratory and expiratory concentrations; ventilator monitor and settings)
- A - airway supplies (ET tube; stylet; blade and handle; bag valve mask; oral airway; O2 tubing; tape)
- I - intravenous line placement
- D - drugs (Table 1)

During a period of 10 weeks, the emergency physician provided general anesthesia for 60 patients (Table 2). The anesthesiologist monitored the measurement and administration of medications at all times. During each surgical case, the anesthesiologist was constantly present and rendered instruction. After surgery, both the anesthesiologist and emergency physician accompanied patients from the operating room to the recovery room – where the emergency physician gave report to the postoperative nurse. Supervision by the anesthesiologist was constant.

During surgical cases, a vigilance routine was introduced with a protocol-like approach in the form of a constantly repeated survey. The emergency physician maintained visual inspection of the patient and airway, machine and circuit integrity, and vital signs. Attention was paid to the O2 saturation, ETCO2 and to the concentrations of inhaled and exhaled gases with recordings of minute ventilation, tidal volume, rate, and...
maximum airway pressure. During cases with spontaneous ventilation and general anesthesia, the minute ventilation was constantly watched. Palpation of the pre-temporal arterial pulse, assessment of scalp capillary refill, and auscultation of the lungs with a standard stethoscope and an esophageal stethoscope were also used for monitoring.

**Part II: The Haiti experience**

Surgery was performed at Haiti’s largest private hospital – Sacred Heart in Milot – February 19-26, 2011, one year after the devastating 2010 earthquake. There, the emergency physician successfully performed anesthesia on 15 cases (Table 3). The emergency physician was also required to stay with each postoperative patient until their airway was secure and remained free from aspiration risk or respiratory failure; they were also responsible for pre and post-operative evaluations. Table 4 itemizes the challenges encountered by the emergency physician in Haiti and the U.S. Nocturnal airway rounds were performed each night for all postoperative patients.

**Discussion**

Reviews and recent surveys of anesthesia care in developing countries confirm the long established principle that the rate-limiting step for surgical team deployment is the availability of anesthesiologists. This was proven to be true in our Haiti experience, where it was noted that the anesthesiologist was essential to relief efforts. Prior to the Haiti earthquake, we discovered that anesthesia was administered by nurse anesthetists using spinal anesthesia whenever possible (due to high rates of general anesthetic complications). Many surgical cases performed after the earthquake could have been managed by general anesthesia if anesthesiologists were available.

The most common causes of anesthetic mistakes are technical failure and human error. Human error is subdivided into four categories: 1) skill-related; 2) errors of judgment; 3) failure of monitoring; and 4) and vigilance. Technical errors include deficiency in skill; equipment design; improper drug dosage; disconnection or inadequate circuitry; inadequate gas flows; and esophageal intubation.

Prevention of anesthetic mishaps begins with proper preparation pre-operatively plus constant intra-operative vigilance.

We addressed human and technical errors causing anesthetic mishaps by developing

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**Table 1: Medications used for Anesthesia during Surgical Cases**

<table>
<thead>
<tr>
<th>Pre-Induction/Induction</th>
<th>Anesthesia Induction</th>
<th>Maintenance/Emergence</th>
</tr>
</thead>
<tbody>
<tr>
<td>rocuronium 0.5cc/5mg</td>
<td>preoxygenation 100% O₂</td>
<td>sevoflurane 4% at 0.6L O₂ at time of incision</td>
</tr>
<tr>
<td>glycopyrrolate 1cc/0.2mg</td>
<td>sevoflurane 4% at 10L O₂</td>
<td>nitrous oxide at 0.6L O₂ at time of incision</td>
</tr>
<tr>
<td>fentanyl 2cc/100mcg</td>
<td>sevoflurane 4% at 2L O₂</td>
<td></td>
</tr>
<tr>
<td>propofol 15cc/150mg</td>
<td>nitrous oxide at 2L O₂</td>
<td>emergence: begins at last suture, with stopping anesthetic + administer 10L O₂</td>
</tr>
<tr>
<td>succinylcholine 5cc/100mg</td>
<td></td>
<td></td>
</tr>
<tr>
<td>propofol 5cc/50 mg (rescue)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>succinylcholine 5cc/100mg (rescue)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Table 2: U.S. Training Cases**

<table>
<thead>
<tr>
<th>Surgical Category</th>
<th># of cases</th>
<th>Example Cases</th>
<th>Example Challenges</th>
</tr>
</thead>
<tbody>
<tr>
<td>Orthopedic</td>
<td>11</td>
<td>Hip prosthesis</td>
<td>Elderly patients requiring vasopressor support</td>
</tr>
<tr>
<td>Genitourinary</td>
<td>2</td>
<td>Prostatectomy</td>
<td>Attention to blood + volume lost</td>
</tr>
<tr>
<td>Ear, nose, throat</td>
<td>20</td>
<td>Thyroidectomy</td>
<td>Covered airway with circuit disconnection</td>
</tr>
<tr>
<td>OB Gyn</td>
<td>8</td>
<td>Vaginal Hysterectomy</td>
<td>Required 3 doses of ephedrine + 1 dose of phenylephrine after fluid bolus for hypotension</td>
</tr>
<tr>
<td>General surgery</td>
<td>13</td>
<td>Colectomy</td>
<td>NG tube enters trachea, deflating bellows</td>
</tr>
<tr>
<td>Vascular</td>
<td>6</td>
<td>Endarterectomy</td>
<td>Inadvertent shutting off of ETCO₂ monitor</td>
</tr>
</tbody>
</table>

continued on page 30
a curriculum specifically designed for the emergency physician. The core component of the training is to instill a state of hypervigilance and absolute need for routine protocol.

With sufficient prior planning and communication, emergency physicians can fill the void of general anesthetic delivery in medical mission trips. Preparation includes designation of a group leader, creation of a formal agreement with a host institution, and intergroup adherence to pre-established roles. Although critical care has been singled out to develop a curriculum teaching non-critical care physicians these medical principles, there is no curriculum for training a non-anesthesiologist the useful basics of general anesthesia administration in austere environments. In our Haiti experience, we have demonstrated the success of a model curriculum – training emergency physicians to deliver general anesthesia on surgical medical mission trips.

References

Table 3: Haiti Surgical Cases and Challenges

<table>
<thead>
<tr>
<th>Age</th>
<th>Sex</th>
<th>Procedure</th>
<th>Challenges</th>
</tr>
</thead>
<tbody>
<tr>
<td>33</td>
<td>M</td>
<td>Left hip hemiarthroplasty(^1)</td>
<td>Left alone by anesthesiologist for emergency vascular access in cholera tent</td>
</tr>
<tr>
<td>9</td>
<td>F</td>
<td>Drilling, I+D</td>
<td></td>
</tr>
<tr>
<td>19</td>
<td>M</td>
<td>Right closing wedge osteotomy</td>
<td></td>
</tr>
<tr>
<td>35</td>
<td>M</td>
<td>Removal of ex-fix, long leg cast LLE(^2)</td>
<td>Failure to give cefazolin pre-operatively</td>
</tr>
<tr>
<td>28</td>
<td>F</td>
<td>Removal of hardware</td>
<td></td>
</tr>
<tr>
<td>56</td>
<td>F</td>
<td>Exploration of sternal mass(^3)</td>
<td>Case aborted due to unexpected heavy bleeding and uncertain anatomic extension of mass</td>
</tr>
<tr>
<td>36</td>
<td>M</td>
<td>Removal of hardware distal interlock(^4)</td>
<td>Delayed emergence due to unexpected prolongation of surgery</td>
</tr>
<tr>
<td>29</td>
<td>M</td>
<td>Removal of hardware</td>
<td></td>
</tr>
<tr>
<td>17</td>
<td>M</td>
<td>Open ACL reconstruction</td>
<td></td>
</tr>
<tr>
<td>30</td>
<td>F</td>
<td>External fixation (long)</td>
<td></td>
</tr>
<tr>
<td>26</td>
<td>M</td>
<td>Right forearm tendon transfer</td>
<td></td>
</tr>
<tr>
<td>50</td>
<td>F</td>
<td>ORIF R ankle (asthma)</td>
<td></td>
</tr>
<tr>
<td>27</td>
<td>M</td>
<td>I+D, ex-fix LLE, ex-fix R femur</td>
<td></td>
</tr>
<tr>
<td>28</td>
<td>M</td>
<td>Extensor R forearm Tendon transfer(^5)</td>
<td>Nerve block results in bupivacaine seizures, cardiac arrhythmias, + 4 hr extreme delirium + rhabdomyolysis</td>
</tr>
<tr>
<td>16</td>
<td>M</td>
<td>Multiple trauma with facial injury, upper airway obstruction(^6)</td>
<td>Resuscitated in large closet. Improvised XR. Later found extubated w impending respiratory arrest. Reinubalw difficulty. Sedated w large doses morphine until extubated 5 days later. Survives.</td>
</tr>
</tbody>
</table>

Table 4: U.S. Training Challenges and Challenges in Haiti

<table>
<thead>
<tr>
<th>US Challenges</th>
<th>Haiti Challenges</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Patients with large body habitus</td>
<td>1. Lack of anesthetic tubing requiring reuse</td>
</tr>
<tr>
<td>2. Vaporlock with sevoflurane not filling</td>
<td>2. Inconsistent wall suction</td>
</tr>
<tr>
<td>4. Laryngospasm treatment</td>
<td>4. Malfunctioning ETCO(_2) monitor</td>
</tr>
<tr>
<td>5. Flat ambu-bag due to leaky scavenger valve</td>
<td>5. Asthma presented on table requiring albuterol in ET tube with sevoflurane</td>
</tr>
<tr>
<td>6. Forget oral airway use during bagging with induction</td>
<td>6. Rudimentary C-arm + orthopedic tourniquets</td>
</tr>
<tr>
<td>7. Nasogastric tube placement entering the trachea which deflates bellows on ventilator</td>
<td>7. Refilling of sodalime CO(_2) scavenger</td>
</tr>
<tr>
<td>8. Masking cases (without ET tube)</td>
<td>8. Zeroing of ETCO(_2) + O(_2) causes 5 seconds w/o monitoring</td>
</tr>
<tr>
<td>10. 2-handed masking while using ventilator</td>
<td>10. Lack of syringe labels</td>
</tr>
<tr>
<td>11. Diagnosis of dead space ventilation</td>
<td>11. Shortage of blunt syringes</td>
</tr>
<tr>
<td>12. Oral airway prevents biting down on tube during emergence</td>
<td>12. Shortage of IV extension tubing</td>
</tr>
<tr>
<td></td>
<td>13. Setup delays due to OR changes + unfamiliarity with rooms</td>
</tr>
</tbody>
</table>
Where do emergency medicine resident paychecks come from?

Few residents have time to follow – let alone comprehend – proposed federal financial policy changes shaping the future of Graduate Medical Education (GME). This article will provide a basic background to help readers engage in the important conversations taking place about the future of resident support.

At one time, the cost of resident training was the responsibility of the teaching hospital. In 1965, as costs increased and the importance of medical training became more apparent, the federal government decided to fund GME through Medicare¹. The government concluded that training residents requires financial support for administrative costs, teaching costs, and resident salaries – costs referred to as Direct Medical Education (DME).

Later, it was recognized that resident physicians made teaching hospitals less efficient through the need for teaching, ancillary services, and technology. Plus, teaching institutions cared for sicker patients. The government again adjusted hospital reimbursement based on these costs – termed Indirect Medical Education (IME).

Medicare reimbursement is therefore based on an equation that incorporates the factors influencing both DME and IME. The distinction is important because DME was capped in the 1980s, effectively limiting the number of resident physicians supported by these funds per institution¹. However, some institutions choose to support a number of residents beyond this cap – but at their own expense.

Currently, $9.5 billion is used to support 100,000 of about 113,000 active residents². Approximately two-thirds of these dollars are IME. Recent stressors on the government’s pocketbook have lead to discussion of significant budget cuts. There has been congressional discussion of saving $60 billion over the next 10 years by cutting GME funding. One suggestion is to limit DME reimbursement to 120 percent of the national average resident physician salary in 2010³. However, this would have substantial ramifications in urban residency programs, where the cost of living is significantly higher, with salaries adjusted to compensate. They further suggested significant reductions to IME adjustment³.

In short, the quality of residency training and resident payment are in peril. It is unclear how medical education would compensate with these cuts. It could be that our hospital employers will absorb the loss, or it may translate to reductions in our paycheck.

The good news is that several physician organizations have stepped up to the plate in defense of the GME budget. You may have received emails recently from ACEP, EMRA, SAEM, and AAMC. They encourage us to contact governmental representatives in an effort to combat any momentum that cuts to GME have gained. These emails are informative and provide the best tools for self-education and active involvement. I would encourage all students and residents to educate themselves, engage in the discussions, and publically defend our ability to learn how to care for our patients.

Resources

“Soft tissue foreign bodies are typically superficial in location, making their localization and removal well suited to emergency ultrasound.”

You sank my battleship!

**HPI**

A 14-year-old male with a history of bipolar disorder and impulse control disorder presents with a chief complaint of “I put game pieces in my arm.”

On further questioning, the patient states that he inserted several plastic game pieces into a self-inflicted laceration on his right forearm. He lives in a group home where he receives psychiatric therapy and is in a supervised setting for aggressive behavior. Several weeks prior, he intentionally cut his right wrist and has been on cephalexin for mild cellulitis.

He reports redness, swelling, and pain in his right forearm. He denies auditory or visual hallucinations, suicidal or homicidal ideation. Medications include valproic acid, escitalopram, aripiprazole, quetiapine, and lamotrigine.

**Physical exam**

Physical exam reveals a well-appearing, afebrile, overweight adolescent male. He has two healing transverse lacerations to the volar surface of his right forearm – 4 cm and 3 cm respectively (Figure 1).

Closer exam reveals erythema and edema without tenderness or palpable foreign body. The remainder of his exam is unremarkable.

**Workup: Questions to consider**

1. Forearm radiographs were obtained (Figure 2). Is there a foreign body evident on plain radiography?
2. What diagnostic studies should be performed?
3. What are potential complications of this clinical entity?
4. Is there a role for emergency bedside ultrasound?

**Emergency department course**

After initial evaluation, CBC and electrolytes were ordered, and the patient was given a dose of IV piperacillin/tazobactam. Bedside ultrasound examination with high-frequency linear-array probe was performed (Figure 3).
Complications related to retained foreign bodies are numerous and troublesome – including pain, infection, cosmetic defect, or even foreign body migration.

Following foreign body removal, the patient was admitted to the inpatient adolescent psychiatric service. He completed a course of levofloxacin for cellulitis.

**Discussion**

In this case, emergency ultrasound was essential – it identified the presence of foreign bodies, as well as their location, size, and depth. Intra-operative ultrasound can quickly confirm successful removal of all objects. Therefore, the time and extent of surgical exploration is significantly minimized.

**Evaluation** of a patient with a retained foreign body may be complicated by several variables – with factors specific to the object itself or to the physical location in the patient’s body. A foreign body can complicate matters with its size, material, shape, or quantity. For example, radiolucent foreign bodies, as in our case, present an additional challenge in their discovery. Multiple studies have demonstrated the utility of ultrasound within the emergency department to identify objects embedded in soft tissue – including plastic, vegetation (e.g., splinters and thorns), or other commonly radiolucent objects.

Its physical location can create problems as well, depending on the tissue type, depth, and accessibility. For example, some objects are readily apparent on plain radiography – but they may be difficult to localize and remove based on the radiographic findings alone. Soft tissue foreign bodies are typically superficial in location, making their localization and removal well suited to emergency ultrasound. However, those located in the hand or foot are particularly difficult. Luckily, ultrasound can be used to locate and remove such foreign bodies under real-time ultrasound guidance.

**Complications** related to retained foreign bodies are numerous and troublesome – including pain, infection, cosmetic defect, or even foreign body migration. Missed foreign bodies are also a well-documented source of potential medicolegal liability for emergency physicians.

continued on page 34
Deciding which probe to use, as always, presents a conundrum. Since foreign bodies are typically superficial, a high-frequency linear array probe should be used to provide the best imaging. Remember, higher frequency transducers provide better resolution (i.e., more detailed images) at the expense of limited depth. On the flip side, lower frequency transducers (those used for the FAST exam, aortic, renal, or biliary exams) have greater depth of penetration.

Specific ultrasound artifacts associated with soft tissue foreign bodies make localization easier for the emergency physician. Posterior acoustic shadowing is seen when the ultrasound waves are effectively “blocked” by a highly reflective object, as in the foreign body seen in our case (Figure 5), resulting in a shadow-like anechoic area seen posterior to the echogenic object.

Reverberation artifact (caused by repeated reflection of ultrasound waves between two highly reflective surfaces or vibrations in metal objects) appears on ultrasound as a series of faint parallel lines posterior to the foreign body. This artifact is commonly seen with metallic objects, as in the embedded sewing needle seen here (Figure 6).

Reverberation artifact is also associated with glass, as with this fragment of window glass lodged in a patient’s hand (Figure 7). Both were successfully removed using emergency ultrasound.

Despite widespread use of emergency ultrasound for foreign body removal, recent studies on the sensitivity and specificity of this technique have yielded variable results. A large cadaver-based study of ultrasound-guided foreign body removal performed by residency-trained emergency physicians (with significant ultrasound experience) demonstrated a sensitivity of 53% and specificity of 47% 5. More recently, a study involving emergency physicians and residents yielded sensitivities of 97% and 86% respectively1. Factors associated with decreased sensitivity (in both studies) included small size and the presence of multiple foreign bodies.

Potential pitfalls in the ultrasound-guided removal of foreign bodies are largely related to inadvertent injury to adjacent musculoskeletal, nervous, or vascular structures. A general rule of thumb is to only attempt removal of well-visualized, fairly superficial foreign bodies. Another quick tip (that may save you trouble later in your career) is to avoid saying that all objects were definitively removed. So it is important to caution the patient that small fragments may still be present – and to stress the importance of timely follow up.

References
EMRA Activities at the 2012 SAEM Annual Meeting

May 9-12, 2012
Sheraton Chicago Hotel & Towers
301 East North Water Street
Chicago, Illinois 60611

EMRA Board of Directors
Wednesday, May 9
9:00 am – 3:00 pm
Thursday, May 10
7:00 am – 9:00 am (Committee update)
Friday, May 11
1:00 pm – 5:00 pm

EMRA Representative Council
Wednesday, May 9
1:00 pm – 2:00 pm (Regional Representative Meeting)
Conference Committee Orientation
Friday, May 11
2:30 pm – 3:00 pm (Representative Council Reference Committee Public Hearing)
3:00 pm – 4:00 pm (Reference Committee Work Meeting)
4:00 pm – 5:00 pm
Saturday, May 12
8:00 am – 8:30 am
8:30 am – 12:00 pm (Representative Council Welcome Breakfast & Registration)

EMRA Committees
Wednesday, May 9
3:00 pm – 4:00 pm (Committee Chair Orientation)
4:00 pm – 6:00 pm (Health Policy Committee)
4:00 pm – 6:00 pm (Research Committee)
4:00 pm – 6:00 pm (Critical Care Committee)
4:00 pm – 6:00 pm (International Committee)
4:00 pm – 6:00 pm (Technology Committee)
4:00 pm – 6:00 pm (Education Committee)
Thursday, May 10
1:00 pm – 5:00 pm (Medical Student Governing Council Meeting)

Other Fun Stuff
Thursday, May 10
4:30 pm – 5:30 pm (EMRA National EM Jeopardy Contest)
10:00 pm – ? (EMRA Party (Location TBA))
Friday, May 11
8:00 am – 12:00 pm (EMRA Sonolympics)
12:00 pm – 5:00 pm (EMRA Resident Sim Wars Competition)
5:30 pm – 6:30 pm (EMRA Spring Awards Reception)

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

Emergency medicine is a specialty marked by constant change. To provide the most safe and effective care, emergency medicine physicians must be willing to objectively review and adapt their practices as new evidence, equipment, and treatment options become available.

Recommendations for the management of a pneumothorax in the emergency department have been fairly consistent in recent years. However, an emerging body of literature is leading to reevaluation of how we treat pneumothorax. The goal of this review is to 1) discuss two recently published studies that present new data and 2) question optimal pneumothorax management techniques.

In the first article, Inaba et al. present data from a cadaver-based study evaluating successful pleural entry of a standard needle thoracostomy (decompression) at two different anatomic positions. In the second article, Kulvatunyu et al. share their experience and data using percutaneous pigtail catheters instead of standard chest tubes for management of a traumatic pneumothorax. Taken together, these two articles potentially challenge the traditional management of tension and non-tension pneumothorax – and perhaps change the standard of care.


**Introduction and research question**: The ability to recognize and manage a tension pneumothorax is a critical skill for pre-hospital and hospital-based emergency care providers. According to Advanced Trauma Life Support guidelines, a tension pneumothorax or suspected tension pneumothorax should be managed by decompression using a 5-cm, 14-gauge angiocatheter placed in the 2nd intercostal space, midclavicular line. However, multiple studies, both imaging- and outcome-based, have demonstrated that this technique has a high failure rate. The goal of the study was to investigate whether placement in the 5th intercostal space, midaxillary line would produce more consistent needle entry into the chest cavity than the traditional approach.

**Methods**: Twenty unpreserved cadavers without obvious chest wall deformities were randomly selected. Needle thoracostomies were performed on each cadaver using a 5-cm, 14-gauge angiocatheter. Needles were inserted in the 2nd intercostal space, midclavicular line and the 5th intercostal space, midaxillary line for a total of four thoracostomies per cadaver. The study reported successful entry into the chest cavity and the average thickness of the chest wall, based on entry site.

**Results**: Only 57.3 percent (23/40) of the thoracostomies performed in the 2nd intercostal space, midclavicular line successfully entered the chest cavity. Of the thoracostomies performed in the 5th intercostal space, midaxillary, 100% (40/40) entered the chest cavity. The average chest wall depth of the 2nd intercostal space, midclavicular line was 4.5cm +/- 1.1cm. The average chest wall depth at the 5th intercostal space, midaxillary line was 3.5cm +/-0.9cm. Of the thoracostomies placed in the 2nd intercostal space, 75 percent entered the chest cavity for male cadavers – compared to only 16.7 percent for female cadavers.

<table>
<thead>
<tr>
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<th>Successful Entry into Chest Cavity</th>
<th>Average Depth of Chest Wall</th>
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<tbody>
<tr>
<td>2nd Intercostal Space, Mid-clavicular Line</td>
<td>57 percent (23/40)</td>
<td>4.5 cm +/- 1.1 cm</td>
</tr>
<tr>
<td>5th Intercostal Space, Mid-axillary Line</td>
<td>100 percent (40/40)</td>
<td>3.5 cm +/- 0.9 cm</td>
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**Conclusions**: Although the authors recognize that the findings must be validated in live patients, they conclude that needle thoracostomies more frequently enter the chest cavity when placed in the 5th intercostal space, midaxillary line compared to the standard location of the 2nd intercostal space, midclavicular line.


**Introduction and research question**: The traditional management for a traumatic pneumothorax or hemopneumothorax involves placement of a large-caliber chest tube. However, chest tube placement can be a painful procedure and can result in a number of complications. The use of pigtail catheters for treatment of a non-
traumatic pneumothorax is increasing. The authors discuss their experience placing pigtail catheters for a traumatic pneumothorax at a Level 1 Trauma Center.

Methods: The article is a retrospective chart review for patients presenting to a single Level 1 Trauma Center over a two-year period, who had either a traditional chest tube or pigtail catheter placed for chest trauma. All pigtails and chest tubes were placed by members of the trauma team (including surgery and emergency medicine residents) and were inserted into either the anterior 2nd or 3rd intercostal space or in the lateral 5th intercostal space. The study reported outcomes for the two different treatment groups.

Results: In the two-year period, 94 trauma patients received bedside pigtail catheters (75 for pneumothorax) and 386 received chest tubes (146 for pneumothorax). Later, when evaluating outcomes it was found that patients receiving pigtail catheters were similar to those receiving chest tubes with regard to mechanical ventilation, complications, and overall demographics. Although the tube failure rate was higher for pigtail catheters, the finding was not statistically significant.

Conclusions: The authors conclude that bedside placement of pigtail catheters for patients with a traumatic pneumothorax is feasible and has similar efficacy and complication rates when compared to traditional chest tube placement.

Discussion
These studies have several limitations due to their design; as a result, it is challenging to comment conclusively on patient outcomes. However, the purpose of the articles was not to determine outcomes, rather to highlight alternatives to traditional management.

In the Inaba et al. study, the authors used fresh cadavers and verified success by performing bilateral thoracostomies to assess penetration into the pleural cavity. While decompression via the 5th intercostal space, midaxillary line had a higher success rate than the traditional approach, in a cadaver, it is impossible to determine the rate or types of complications.

When performing a needle thoracostomy in the 5th intercostal space, midaxillary line in a supine patient, one may miss an air pocket in the apical anterior region of the thoracic cavity. In the patient with a true tension pneumothorax, it is unlikely that this matters. However, in patients with pleural adhesions the situation may be more complicated.

As pleural adhesions are reported to be more frequently found in the lower chest cavity, decompression in the 5th intercostal space, midaxillary line may be more likely to cause injury to the lung. In patients with cardiomyopathy, there is also the potential risk of injuring the heart with a needle thoracostomy in the 5th intercostal space, midaxillary line.

The patient population that may truly benefit from pigtail catheters versus large bore chest tube insertion still needs to be determined. In a 2009 Rivera et al. study, the authors retrospectively analyzed patients who received a non-emergent large catheter versus patients who received a non-emergent small catheter. The interventions were conducted in patients with a pneumothorax, hemothorax, empyema, or effusion. Unfortunately the non-emergent large chest tube cohort tended to be sicker (based on Injury Severity Score) and more frequently required mechanical ventilation – thus limiting the ability to determine which intervention would be appropriate for a given patient.3

In the Kulvatunyou et al. pigtail catheter study, charts were also retrospectively reviewed. Although there was no statistical significance (in terms of the Injury Severity Score and Chest Abbreviated Injury Scale) between the pigtail group and the large bore chest tube group, selection bias is still an issue. Nonetheless, the study takes us one step closer in determining which patient may be appropriate for pigtail catheter insertion.

Does this change clinical practice?
The results from these studies encourage providers to reconsider the current management of patients with a pneumothorax in the emergency department. It could be extrapolated that with these changes in management, outcomes may improve in terms of decreased cost, decreased pain, decreased morbidity, or decreased mortality. However, these results still need to be established in future clinical trials.

In the patient with tension pneumothorax, if a catheter length greater than 5cm is not available – the more appropriate technique may be accessing the 5th intercostal space, midaxillary line (rather than via the 2nd intercostal space, midclavicular line.)

In a patient with minor to moderate injury and a traumatic pneumothorax, a pigtail catheter may be an appropriate alternative to a large bore chest tube. Further studies would need to be done to determine if a pigtail catheter would be appropriate in a patient with a hemothorax or more complicated pleural fluid collection.

References
Adapting medical education to a new generation

Graduate medical education in the U.S. is changing. The ACGME has already implemented new duty hour standards. Residency programs will soon implement new training “milestones,” a new accreditation system, and new emergency medicine program requirements. With these changes, medical education will adapt to the needs of the new generation of physicians.

The present evolution of graduate medical education (GME) is providing a tremendous opportunity for students and residents to work with their mentors to develop an updated educational system. Most current students and residents in training (born between 1982 and 2005) have been called “Generation Y” or the “millennial generation.”

September 11; terrorism; school violence; globalization; and economic recession have had a tremendous impact on our development. Simultaneously, the use of technology and social media has rapidly evolved. As a result of this mixed lot of influences, a new set of values has become apparent – one different from that our predecessors.

We require social connectedness, teamwork, free expression, work-life flexibility, and integration of technology into daily life. To ensure a successful educational system, all parties must recognize that this generation cannot be forced in the mold of past generations, nor should our core values be viewed as weaknesses.

In a recent article published in the Journal of Graduate Medical Education, “The Challenges and Opportunities of Teaching Generation Y,” the author argues that GME development should focus on four core areas: 1) Interactive teaching with technology; 2) Professionalism; 3) Mentoring; and 4) Communication and feedback. These four areas provide a plausible framework for a new educational system, one compatible with the perspective of a Generation Y member.

Interactive teaching with technology

Students and residents have become accustomed to rapid, constant change in technology, now incorporated seamlessly into daily life. Interaction with technology – rather than traditional passive learning through lecture – may now be a more effective means of education. Medical educators can employ immediate feedback provided by simulations and collaborative learning – tools with which Generation Y has become accustomed.

In a society where multitasking is the norm, educators should no longer assume that students are being rude when viewing an electronic device. For example, if a student is viewing a cellphone during rounds, they may be researching the topic in question rather than ignoring the discussion. Acceptance of this new model of instant information retrieval should be embraced rather than admonished.
Professionalism
Some medical educators argue that new physicians lack the value of self-sacrifice for the greater good. This viewpoint can lead to the misperception that this generation of physicians lack sufficient professionalism. Unlike our predecessors, millennials do not look at an organization to see how we will fit into it – but rather how that organization will fit into our lives.

The issue is work-life balance. To continue recruiting the best and brightest, educators need to understand this philosophy. Medical educators should not assume that their understanding of professionalism is common knowledge; it is an ever-changing standard. To assure mutual understanding, educators and students should have open communication regarding expectations.

Mentoring
It has been suggested that millennial educators and program leaders are good at forming mentoring relationships. The successful leader defines goals and expectations; then works with the student/resident to achieve them. The “academic advisor” may be of more benefit as a “mentor,” with regular meetings and as well as individualized attention.

Current trainees also tend to share opinions and feedback, regardless of organizational hierarchy. This new reality may at first be unsettling to leaders. However, this openness and desire to be engaged should be recognized as a valuable contribution to both the educational process and patient care.

Communication and feedback
Millennial students/residents generally value immediate feedback. While regularly scheduled meetings are important, educators should also provide on-the-spot feedback. Generation Y also values the feedback of peers and coworkers – therefore 360-degree evaluations (including staff, patients, and faculty) would be beneficial. When areas of improvement are identified, educators should work with the trainee to develop a plan for improvement rather than merely identifying faults.

In summary, the changes occurring in GME provide a unique opportunity for residents and students to participate in the evolution of a new educational system. However, to design a successful system, educators should adapt to the modern learning style of medicine’s newest generation.

Resources
Call for 2012 EMRA Spring Award Nominations

It's time to nominate yourself or a colleague for an EMRA Award. Visit the website for application instructions. Deadline for submission is March 15. Awards will be presented at the EMRA Award Reception, Friday, May 11, during the SAEM Annual Meeting in Chicago.

EMRA Travel Scholarships to SAEM
EMRA will sponsor six $500.00 travel scholarship for active resident members to attend the 2012 SAEM Annual Meeting.

Travel Scholarships to Leadership and Advocacy Conference
EMRA will sponsor three $500.00 travel scholarship for active resident members to attend the 2012 ACEP Leadership and Advocacy Conference.

Robert J. Doherty, MD, FACEP, EMF/ACEP Teaching Fellowship Scholarship
This scholarship provides tuition for the ACEP Teaching Fellowship, an intensive course in faculty development.

Dr. Alexandra Greene Medical Student Award
The Dr. Alexandra Greene Medical Student Award recognizes a student who displays a significant dedication to emergency medicine.

Residency Director Award
This award recognizes an assistant or associate residency director who serves as a role model for residents and exemplifies those qualities residents value in a mentor.

Jean Hollister EMS Award
This award recognizes a resident who has made valuable contributions to pre-hospital care and emergency medical services.

Academic Excellence Award
This award is given to a resident who has done outstanding work in research or other academic pursuits.

Dedication Award
This award recognizes an EMRA member who has demonstrated significant dedication in promoting the goals and objectives of EMRA at local, state and national levels.

Residency Coordinator Award
This award is given to the residency coordinator who regularly goes above and beyond the call of duty for the good of the program and its residents; supports resident endeavors in extracurricular activities like community service, research, etc.; and actively supports resident involvement in their specialty organizations.

Local Action Grant
This grant is awarded to promote the involvement of emergency medicine residents in community service and other activities that support the specialty of emergency medicine.

For more information visit www.emra.org.

EMRA seeking residency teams to participate in annual JEOPARDY competition!

EMRA will once again be hosting the infamous residency jeopardy tournament at the SAEM Annual Conference! Do you have three fellow residents daring enough to compete for the coveted the EMRA jeopardy trophy? If you are interested please contact: rrcemrep@emra.org or academicaffairsrep@emra.org for more information.

Deadline is February 28th so do not delay!
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

Young Physician Section and EMRA

Abstracts will be accepted

Presenters will be notified by April 16, 2012

Abstract submissions should be sent to academicaffairs@acep.org

Visit www.emra.org for more details

YPS-EMRA Call for Posters

for the ACEP Leadership and Advocacy Conference

MAY 20, 2012
Washington, DC

Mark your calendars for the new EMRA committee application deadlines this spring!

Apply by April 15, 2012 to serve on the Health Policy, International, Technology, Research, Critical Care, Education, and EM Resident Advisory Committee and take on projects as determined by the Board of Directors.

Feeling really passionate? Apply by March 7, 2012 to be considered for the position of Vice Chair. The Vice Chair of each committee for 2012-2013 must accept a two-year commitment, as they will continue as Chair for the 2013-2014 year.

All applicants must be EMRA members and must submit a Letter of Intent stating their interest in serving on the committee (and express their interest in running for Vice Chair, if applicable), as well as their Curriculum Vitae.

Apply online at www.emra.org/committeeapp.aspx or by emailing your application materials to committees@emra.org.
Nathaniel R. Schlicher, MD, JD
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.

List Price $12.95 • ACEP Member Price $10.80
EMRA Member Price $9.00
900309; Published 2011; 138 pages; Soft Cover 5.5 x 8.5

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!

List Price $12.00 • ACEP Member Price $10.80
EMRA Member Price $7.00
900303; Published 2011; 24 pages; Soft Cover 4 x 6

Joseph P. Wood, MD, JD
Invaluable for any emergency physician entering into an employment or independent contract agreement to provide medical services to that of a hospital or group. What you don’t know can really hurt you!

List Price $49.95 • ACEP Member Price $44.95
EMRA Member Price $29.95
900310; Published 2007; 92 pages; Soft Cover 5.5 x 8.5

Emergency Medicine’s Top Clinical Problems, 2nd Edition
Gary Katz, MD, MBA; Mark Moseley, MD, MBA
A new and improved pocket reference and quiz tool. Each chapter starts with critical actions and then logically expands with disease-specific information. The design simulates the format of an emergency medicine oral or written board exam.

List Price $12.95 • ACEP Member Price $11.85
EMRA Member Price $9.00
900046; Published 2008; 218 pages; Soft Cover 4 x 6

Brian J. Levine, MD
A quick reference guide to antibiotic use in the emergency department. Organized alphabetically by organism system, followed by sections on “Special Topics” to make reference quick and easy for a particular disease process. Color coded.

List Price $25.95 • ACEP Member Price $23.35
EMRA Member Price $18.95
900030; Published 2010; 128 pages; Soft Cover 4 x 6

Career Planning Guide for Emergency Medicine, 2nd Edition
Gus Garmel, MD
Get help organizing and understanding the many complex issues concerning emergency medicine careers. Topics include career possibilities, CVs, interview tips, contract negotiations, benefits & more.

List Price $12.95 • ACEP Member Price $11.85
EMRA Member Price $9.00
900080; Published 2007; 104 pages; Soft Cover 5.5 x 8.5

Kristin E. Harkin, MD; Jeremy T. Cushman, MD, MS
The most comprehensive guide to the specialty of emergency medicine written specifically for medical students. Familiarize yourself with all aspects of emergency medicine including lifestyle and wellness, careers, training, research, fellowships, subspecialties and much more.

List Price $25.95 • ACEP Member Price $23.35
EMRA Member Price $18.95
900120; Published 2007; 280 pages; Soft Cover 5.5 x 9

Emergency Medicine’s Top Pediatric Clinical Problems, 1st Edition
Dale Woolridge, MD, PhD
The pediatric version of top clinical problems features the same design and format as its cousin. A must-have pocket reference and teaching tool for all EM physicians, especially during pediatric rotations.

List Price $25.95 • ACEP Member Price $23.35
EMRA Member Price $18.95
900230; Published 2008; 336 pages; Soft Cover 4 x 6

ABX Guide for 2011 Mobile App
Robert Blankenship, MD; Brian Levine, MD
A necessary for any physician, resident, medical student, or other health care professional who rotates in the ED. Select antibiotics based on organ system and diagnosis. Virtually every type of infectious disease is covered for outpatient management and for patients needing admission. With everything you love about the printed guide included, plus the ability to search, it’s fast, easy to use, and accurate! Also available in iPhone, Droid, and BlackBerry platforms. Visit your provider’s application store to download.

List Price $25.95 • ACEP Member Price $23.35
EMRA Member Price $18.95
Palm OS 9000210 / Pocket PC 9000200

EMRA pocket reference cards

Pediatric Qwic Card
Dale P. Woolridge, MD, PhD
This comprehensive quick reference card has pertinent information from proper dosages, vital stats by age, pearls, to RSI. The perfect accompaniment to the new pediatric family of publications from EMRA.

List Price $12.00
ACEP Member Price $10.80
EMRA Member Price $7.00
900240; Published 2008; Folded; Laminated Card 4 x 7

EMRA Sepsis Card
2012/2009 Edition: Chris Coletti, MD and John Powell, MD
Everything you need to know about improving outcomes for septic patients in the ED available in this newly revised pocket reference guide. This comprehensive review of sepsis treatment recommendations was developed by the EMRA Critical Care Committee.

List Price $12.00 • ACEP Member Price $11.80
EMRA Member Price $7.00
900220; Published 2009; Folded; Laminated Card 4 x 7

EMRA Airway Card
Micelle J. Haydel, MD
A handy pocket reference for intubation of neonates to adults. Includes helpful information on drips, tube placement and Glasgow Coma Scale. A must-have in the emergency department for patients of all ages!

List Price $12.00 • ACEP Member Price $10.80
EMRA Member Price $7.00
900180; Published 2011; Laminated Card 4 x 7

Clinical Prediction Card
John D. Anderson, MD and Todd Guth, MD with contributions from the EMRA Medical Student Council (Tom Becker, Alexis Bence, Jordan Cretese, MD; Sarah Dubbs, MD; Brian Geyer; Kevin Jones, MD; and Shae Patryk)
Additional contributions from Chris Scott, MD
A great reminder of commonly-used prediction rules for the ED. Perfect for medical students and interns and indispensable prompt for those 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.

List Price $12.00 • ACEP Member Price $11.80
EMRA Member Price $7.00
900300; Published 2010; Folded; Laminated Card 4 x 7
1. A 50-year-old man presents with nausea and vertigo. Vital signs are within normal limits. Physical examination reveals nystagmus but is otherwise normal. The pharmacologic agent most appropriate for treating these symptoms is
   A. Haloperidol
   B. Lorazepam
   C. Meclizine
   D. Ondansetron

2. A 57-year-old alcoholic man presents with hematemesis. He appears disheveled and intoxicated. Vital signs are blood pressure 80/40, pulse 130, respiratory rate 24, temperature 36.2°C (97.2°F), and oxygen saturation 97% on room air. Physical examination reveals tense ascites and scleral icterus. Pending definitive treatment, which of the following medications should be started intravenously in the emergency department?
   A. Cimetidine
   B. Octreotide
   C. Propranolol
   D. Vitamin K

3. A 30-year-old woman who is 29 weeks pregnant presents after she slipped on a patch of ice and fell on her front steps. She has had a normal pregnancy with no complications. She denies abdominal pain, vaginal discharge, and bleeding and can feel movement of the fetus. Vital signs include blood pressure 108/76 and pulse 88; fetal heart rate is 130. Physical examination reveals a small area of ecchymosis on the left side of the abdomen with no other abdominal or uterine tenderness. What is the appropriate management?
   A. Abdominal and fetal ultrasonography and discharge if negative
   B. Admission and cardiotocographic monitoring for 24 hours
   C. Discharge home with next-day followup with obstetrician
   D. Observation and cardiotocographic monitoring for 6 hours

4. Endocarditis prophylaxis is recommended for which of the following patients?
   A. 20-year-old woman with atrial septal defect repair 1 week earlier who now needs emergent endoscopy for hematemesis
   B. 40-year-old man with hypertrophic obstructive cardiomyopathy referred for extraction of impacted wisdom teeth
   C. 60-year-old man with prior endocarditis who requires bladder catheterization for urinary retention without findings of infection
   D. 60-year-old woman with aortic valve replacement who fell and has an avulsed tooth and mucosal lacerations

5. A patient with a long history of COPD presents with shortness of breath. He is in severe respiratory distress. Vital signs include pulse 124, respirations 32, temperature 37°C (98.6°F), and oxygen saturation 91%. Examination reveals diffuse wheezes and intercostal retractions; ABG analysis results are: pH, 7.3; PaO2, 60; PaCO2, 65; and bicarbonate, 30 mEq/L. He is receiving nebulized albuterol. What is the next step in management?
   A. Administer antibiotics
   B. Begin noninvasive ventilation
   C. Check D-dimer level
   D. Switch the nebulizer from oxygen to room air
Pediatric pearls

Risk management pitfalls for lower gastrointestinal bleeding

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1. “The 6-month-old patient had a vague history of colicky abdominal pain, but he appeared well in the ED. This looked like a milk-protein allergy.”

Intussusception classically presents with colicky abdominal pain, and the patient may appear well between painful episodes. A positive fecal occult blood test can support a suspicion of intussusception, although it may also be positive in the child with milk-protein allergy. History is an important tool in narrowing the differential diagnosis. Milk-protein allergy is not likely to begin acutely in this older patient. Ultrasound should be used to diagnose intussusception. Observation in the ED may also be warranted if ultrasound is unavailable, and it may be helpful in deciding whether to obtain a CT scan, which would expose the patient to radiation.

2. “The 10-year-old patient had colicky abdominal pain, but she was too old to have intussusception.”

Although intussusception is most common in younger patients, it can occur at any age. The incidence of intussusception associated with a pathologic lead point increases with age.

3. “Intussusception in the 3-year-old patient was successfully reduced, and though she appeared well, I decided to admit her for observation, since 50% of recurrences occur in the first 48 hours.”

Hospital admission is not indicated in the easily and successfully reduced case of idiopathic intussusception if, after a period of observation in the ED, the patient returns to baseline status and tolerates oral intake without vomiting or pain. Hospital admission to monitor for recurrence after a simple reduction in the well-appearing patient is not warranted and imposes significant costs on the healthcare system. Family counseling must be given, as well as clear discharge instructions regarding returning to the ED in the event of abdominal pain, vomiting, or bloody stools.

4. “The patient had frank hematochezia, but it didn’t resemble redcurrant jelly stools, so intussusception was lower on my differential.”

Although it is considered the “classic” presentation, intussusception does not commonly present with redcurrant jelly stools. Frank hematochezia is a presenting sign in about 60% of cases of intussusception.

5. “Though this patient appeared well, the stools were grossly bloody, which warranted an in-depth work-up.”

Many food products and medications may give the false appearance of bloody stools. The presence of blood should be confirmed with a fecal occult blood test prior to initiating further evaluation in the stable patient.

6. “I thought my patient had intussusception, but her abdomen was tender and it was more efficient to obtain a CT scan to rule out other possible GI pathologies, like appendicitis.”

Ultrasonography is a sensitive and specific imaging modality for intussusception. If available, an ultrasound examination will spare the patient exposure to the radiation from a CT scan. If the ultrasound result is negative or inconclusive, CT would be the next option.

7. “It was the middle of the night and the ultrasound technician wouldn’t be available for another 4 hours. Although I thought the patient had intussusception, he appeared well, so I waited until the tech arrived.”

Ultrasonography is the best imaging choice for diagnosing intussusception and will avoid unnecessary radiation exposure from CT. However, a delay in diagnosis and therapeutic reduction can increase the risk for complications. If ultrasound is unavailable and you suspect intussusception, a CT scan should be obtained.
Risk management pitfalls for antibiotics in the emergency department

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1. “I treated the UTI with nitrofurantoin. I didn’t know it wouldn’t work.”
   Males and patients with pyelonephritis should not be treated with nitrofurantoin. Due to tissue penetration issues, it should be used only for women with uncomplicated cystitis.

2. “I treated the patient from the nursing home with urosepsis with cefazolin - that should have been adequate, since most UTIs are caused by E. coli.”
   Remember that nursing home patients and those recently hospitalized may have more resistant bacteria and need antimicrobials with broader coverage.

3. “He had a hazy, ill-defined possible infiltrate and was otherwise healthy, so I discharged him on amoxicillin-clavulanate.”
   This is incomplete coverage for pneumonia. Remember to cover for atypical pathogens with azithromycin, doxycycline, or a respiratory fluoroquinolone.

4. “She had a small area of localized infection on her abdominal wall, so I treated her by prescribing coverage for CA-MRSA with trimethoprim-sulfamethoxazole. I can’t believe how bad it looked when she came back 3 days later.”
   Incision and drainage is the mainstay of treatment for abscesses.

5. “Do you remember the diabetic patient with the inner-thigh infection you treated yesterday? He came back today in septic shock.”
   Don’t forget to consider necrotizing infections when treating skin and soft-tissue infections. Early on, these may not show classic signs and symptoms. Early recognition requires a high degree of clinical suspicion. When in doubt, obtain specialty consultation.

6. “The patient had a fever and left-lower-quadrant tenderness, so I recommended antibiotics for diverticulitis. How should I have known he would come back with an acute abdomen?”
   Patients with possible diverticulitis may develop serious complications, such as abscess formation. They should undergo diagnostic imaging.

7. “I gave antibiotics in the ED right after I evaluated the patient. It wasn’t my fault the CT didn’t get done for 12 hours and the appendix perfored.”
   A patient with an acute abdomen should have timely surgical consultation, not just antibiotic treatment.

8. “She was sent from the nursing home with a fever, and her x-ray had an infiltrate, so I treated with azithromycin and admitted her. I can’t believe she was intubated the next day.”
   Remember that nursing home patients have healthcare-associated pneumonia and need more broad-spectrum coverage.
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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 pension, open books, full benefits and more. Contact Steve Rudis, MD (careers@emp.com), Emergency Medicine Physicians, 4535 Dressler Rd. NW, Canton, OH 44718. 800-828-0898 or fax 330-493-8677.

Ohio, Cincinnati: Excellent opportunity with established equity-ownership group north of...
Cincinnati. BP/BC EM physicians are sought for newer hospital with state-of-the-art ED seeing approximately 63,000 patients annually. Very good coverage of 61 physician and 44 MLP hours daily. Generous package includes family medical plan, employer-funded pension, CME/expense account, malpractice, guaranteed hourly plus incentive income, plus shareholder opportunity at one year with no buy-in. This location is convenient to Cincinnati, Dayton or suburban living. Contact Kim Rooney, Premier Health Care Services, (800) 726-3627, ext. 3674; krooney@phcsday.com. ■

Ohio, West side of Cleveland: Emergency Medicine Consultants of Lorain County (www.emcole.com), an independent physician-owned and directed emergency medicine group seeking full time/part-time BC/BP Emergency Medicine Physicians to work in the ED. Independent Contractor status. Excellent Compensation. Please contact Wendy Weitzel (440) 329-7450; or email wweitzel@emhrhs.org. ■

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 Health Care Services, (800) 726-3627, ext 3674, e-mail krooney@phcsday.com, fax CV (937)312-3675. ■

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 Health Care Services, (800)726-3627, ext. 3674, krooney@phcsday.com, fax (937) 312-3675. ■

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 Health Care Services, (800) 726-3627, ext.3682, aspegal@phcsday.com, fax (937) 312-3683. ■

Ohio, Parma: Parma Community General is a full-service community hospital in suburban Cleveland seeing 48,000 ED pts/yr. The ED is newly renovated and the staff is stable and highly regarded. 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. ■

Oklahoma, Tulsa: Modern 971-bed regional tertiary care center sees 84,000 ED patients per year. Broad pathology, high acuity, modern...
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

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 mccrearyse@upmc.edu.

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.

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Jaime T. Snarski, MD volunteering on medical team in Haiti.

"As a physician at TeamHealth, I’m encouraged to take time to serve in areas of great medical need. This past January, on the one-year anniversary of the earthquake, I volunteered in Haiti. I spent my days in an “ER” that only had two beds and two chairs. With limited resources, I relied on my clinical skills for most diagnoses. I was constantly challenged, but left inspired by the resiliency of the Haitian people and the volunteers devoted to making a difference.”

Call Dr. Robert Maha at (888) 647-9077; Fax: (412) 432-7480 or email at 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 desirable residential communities, the area also affords 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.

**Texas, Cypress:** North Cypress Medical Center, Cypress, TX (10 Miles North of Houston). Cypress Emergency Associates (CEA) is an independently owned physician group in Cypress, Texas. CEA is seeking BC/BP Emergency Medicine Physicians to join our group. NCMC is a 170-bed acute care hospital with a 26-bed ED and an annual volume of 42,000. State-of the art equipment, acute MI/stroke programs, ER ultrasound program. Physician coverage is 44 hours per day with mid-levels covering 12 hours in fast track. Willowbrook Freestanding ER, 6 miles east of main campus, 14 beds, CT, U/S, lab onsite, annual
Visits 12,000. Spring Cypress Freestanding ER OPENING FALL 2011, 6 miles north of main campus, 10 beds, CT, U/S, lab onsite. What’s in it for you? Hourly guarantee plus productivity; Independent Contractor status; Paid Malpractice Insurance with tail coverage. Interested candidates should contact Teri Geen at (800) 346-0747 ext. 6054 or email CV to tgeen@psrinc.net.

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 877-467-1293 x1280.

Texas, Texarkana: Emergency Medicine Opportunity – Wadley Regional Medical Center, Texarkana, TX – A 370-bed hospital
classified advertising

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
- Short and long term disability insurance
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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) 382-4322 or a.lane@titandoctors.com

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Command Performance

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.

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 Health Care Services, (800) 406-8118, rklockow@phcsday.com; or fax CV to (954) 986-8820.

West Virginia, Huntington: Equity ownership group has a very appealing opportunity in newer ED with a patient volume of 73,000 annual visits. This Level II facility has 66 hours of physician coverage, plus 48 MLP hours daily; and new scribe program. An excellent package is offered including guaranteed hourly plus RVU, family medical plan, malpractice, employer-funded pension, additional incentive income, shareholder opportunity at one year with no buy-in, plus additional benefits. Located 45 minutes from Charleston on the Ohio River, Huntington is home to Marshall University. For additional information, please contact Rachel Klockow, Premier Health Care Services, (800) 406-8118; e-mail rklockow@phcsday.com; or fax CV to (954) 986-8820.

AOBEM) for Capital Regional Medical Center in Tallahassee, Florida.

Stable, democratic physician group seeks top quality BC/BP 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 behavioral health unit, as well as the area’s hospital-based prenatal clinic and geriatric 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 School 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@iasishcare.com, fax: 615-467-1293 or call Irene Hudson at 877-844-2747, x1280.

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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
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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) 382-4322 or a.lane@titandoctors.com
Maintain a keen sense of awareness

The National Child Abuse and Neglect Data System (NCANDS) estimated 695,000 children in the 50 states, District of Columbia and Puerto Rico were neglected or abused in 2010. According to this report Child Protective Services investigators assess, that for unique victims, the most common types of maltreatment total 78.3% suffered neglect, 17.6% suffered physical abuse, and 9.2% suffered sexual abuse. As emergency room physicians you deal with the horrific violent act of sexual abuse against children. Arm yourself with the knowledge for detecting these cases when you read Stephen Charbonneau, MD, JD's article on Evaluation of sexual abuse in children on page 14.

April is National Child Abuse Prevention Month, a time to raise awareness about child abuse and neglect and create strong communities to support children and families.

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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.

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