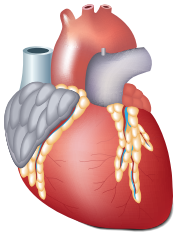
February/March 2013
VOLUME 40, issue 1

EM Resident
The Official Publication of the Emergency Medicine Residents' Association



"…streptokinase was associated with an increased risk of bleeding requiring transfusion, but *not* a decreased risk of re-infarction (unless combined with aspirin)."

Landmark articles series: Managing myocardial ischemia

Nathaniel Mann, MD, Baruch Fertel, MD, University of Cincinnati, Cincinnati, OH
Brian Wexler, MD, Joshua Bucher MD, Robert Wood Johnson Medical School, New Brunswick, NJ

Every residency program seems to have one of "those" guys – the one who can quote every piece of literature on any given subject. It's usually the same person who puts an end to any clinical discussion with a phrase like, "Well, that might be the case, but in the 1997 December issue of *Annals*…"

If you've ever aspired to be like that guy, you're not alone. **EMRA's Research Committee**, in conjunction with *EM Resident,* is now giving you the chance. We'll soon be posting **summaries of landmark articles** pertinent to emergency medicine practice on EMRA.org. In the next several editions of *EM Resident*, we'll briefly highlight some of this relevant research.

In this article we will review three papers on the **management of myocardial ischemia**, a fundamental aspect of emergency medicine.

Paper #1 – Streptokinase, aspirin, or both?

The first paper comes from across the pond – published in the *Lancet* in 1988 – "Randomized Trial of Intravenous Streptokinase, Oral Aspirin, Both, or Neither Among 17,187 Cases of Suspected MI." This candidly titled trial enrolled 17,000+ patients in 400 different hospitals (that's power!) and monitored them for mortality over five weeks.

Conclusion number one was that **aspirin and streptokinase – either alone or together – decreased mortality over placebo**. According to the research, doing *something* is better than doing nothing.

But what is really better, aspirin or streptokinase? Well, when comparing the two individually, they're pretty similar in terms of reducing five-week mortality (23% reduction for aspirin, 25% reduction for streptokinase). There was even data suggesting that, as long as you provide intervention within the first 24 hours of chest pain, deaths can be reduced (but please don't wait that long to give aspirin to your MI patients).

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March 6, 2013	Resident Appreciation Day Nationwide
March 8, 2013	Resident Track at CORD Academic Assembly Denver, CO
March 14-17, 2013	AMSA's Annual Convention & Expo Washington, DC
March 15, 2013	ACGME Match Day Nationwide
March 27-31, 2013	Student National Medical Association (SNMA) Annual Medical Education Conference Louisville, KY
March 29, 2013	ACEP Leadership & Advocacy Conference Abstract Submission Deadline
April 1, 2013	Resolutions for EMRA Representative Council Spring Meeting Deadline
April 2-6, 2013	ACOEP Spring Seminar Fort Lauderdale, FL
April 15, 2013	EMRA Committee Volunteer Application Deadline
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May 4-6, 2013	ABEM Spring Oral Certification Exam Nationwide
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For the sake of consistency, the use of the terms "ED," "emergency department," and "emergency physicians" are preferable to using "ER" or any such derivation.

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President's message

The Tigger Mentality: I'm so happy I could bounce

Cameron Decker, MD
EMRA President
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Houston, TX

"One doesn't need to be a senior resident or even chief resident to influence the culture of the department."

"Be a Tigger, *not* an Eeyore," Dr. Amal Mattu said when discussing the importance of a positive attitude for strong leadership. As I sat in the audience of his "Everyday Leadership" lecture at EMRA's Resident Forum during ACEP's 2012 *Scientific Assembly*, I took a moment to reflect on my attitude throughout the year. With a schedule that paired being resident with another nearly full-time equivalent – comprised of my work with both EMRA and law enforcement – I was the closest thing to a sleep-deprived version of the diva on a Snickers commercial. I realized that *everything* at work, from the broken right mouse button on the computer to that rude consultant refusing to do the right thing for my patient, really frustrated me – and often transformed me into, well, a *grump*.

During his lecture, Dr. Mattu characterized his son – an energetic, fun-loving, curious young boy – as the perfect example of a "Tigger." Tigger, the bouncing, fictional cartoon tiger from A. A. Milne's book *The House at Pooh Corner*, was often juxtaposed in stories with his antithesis, Eeyore, a gloomy and pessimistic donkey.

Fun fact: As a child, I absolutely loved my Eeyore stuffed animal!

Dr. Mattu further described his son, Kamran, as a child who instantly magnifies the energy level of every room into which he steps. Even in the face of adversity, Kamran always finds a way to bring smiles to those around him.

The fact that our names sounded alike was not lost on me; in fact, I took it as a pretty clear sign. If I were to be half the leader I wanted to be, I'd have to set an example and be a role model. Instead of merely *identifying* the problems, I had to be a part of *solving* them. I felt I needed a pretty stark attitude adjustment.

When I returned to work, I strived to be the most positive and optimistic person in the department. I embraced the challenges of the ED. I didn't seem to mind putting in the IT work order for the computer that kept crashing. I relished in talking down the combative and abusive patient (even if I didn't have a syringe of Ativan hiding behind my back). While I couldn't maintain the Tigger mentality every day, on the days I did, I noticed our nurses, techs, and fellow residents seemed to share a happier mood. Furthermore, I sincerely felt like a more upbeat and effective team member.

Emergency medicine is a unique specialty; we have only minutes to develop a meaningful relationship with our patients and extract critically important information. First impressions are everything. If you bring a gloomy attitude to work, those around you are far more likely to adopt it. Being curt with a nurse may cause him/her to be less than pleasant to your next patient. Before you've even walked up to evaluate that patient, your quality relationship is compromised. It is pretty clear that attitudes are contagious; do you want your colleagues to catch yours?

Choosing to be a Tigger instead of an Eeyore is one of Dr. Mattu's steps towards being an "everyday leader." One doesn't need to be a senior resident or even chief resident to influence the culture of the department. While it is easy – especially as an intern – to feel dismayed by the challenges faced in a demanding work environment, consciously making the effort to be a positive problem-tackler can have further reaching effects than ever imagined.

Dr. Randy Pausch also made the distinction between these two famous characters meaningful in his thought-provoking 2007 speech, "The Last Lecture." Dr. Pausch, a computer science professor, achieved worldwide fame for his moving lecture, which he delivered at Carnegie Mellon University shortly after being diagnosed with pancreatic cancer. Given only months to live, he spoke powerfully of the importance of optimism, even when confronted with the worst situations.

Dr. Pausch said plainly, "You better decide early on if you're a Tigger or an Eeyore."

I know which one *I* want to be. ■

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It's complicated: navigating EM organizations

Stephanie Krema, MD
Secretary/*EM Resident* Editor-in-Chief
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There are lots of things to think about as an emergency physician. Eventually, as practicing physicians, we'll have to understand aspects of medicine we did *not* learn in med school. They're not always easy to define, either (which makes them even easier to ignore, until said aspects affect you personally).

Starting out on the EMRA board, I had to quickly learn about the macro world of emergency medicine – the national organizations, the governing bodies, and a bit of U.S. legislation. The goings-on in the background were fascinating, but innumerable. I quickly realized just how much I didn't know. It was like walking into a 7-11 and realizing that there were three Costcos upstairs.

Learning about **the EM organizations** was a start. As with any organization, long, vague names are shortened into frustratingly similar acronyms. The identity and purpose of each overlaps, rendering it difficult to think of an entity in simple terms. For example, let's compare ACEP and SAEM:

- ACEP: For EM attendings
- SAEM: For EM attendings who really enjoy research

Now try the same with AAEM, AMA, ABEM, AOBEM, AOA, ABMS. Keep ibuprofen and/or whiskey at hand during this exercise. And so, I've developed evolving definitions of each organization. The more I learned, the lengthier the definition.

Yet only recently have I thought to question *why* each exists. Asking this simple question – *why* – has helped clarify my internal questions. Since there is no Wikipedia page on the history and politics of the specialty, I was slowly granted answers at random, usually at a meeting or an accidental eavesdropping.

Meanwhile, as a stroke of luck, **The Legacy Project** has brought the history of EM to our collective attention. During the initial planning stages, I caught wind of Dr. Brian Zink's book, *Anyone, Anything, Anytime: A History of Emergency Medicine.* It has answers to the hundreds of little questions I've been amassing – so it's a *good* read! (For example, learn why some older specialties hate our guts.)

EM is supposed to be the youngest and most cohesive medical specialty. Before, I'd envisioned a linear timeline, with the EM pioneers gathering in a cozy wood-paneled room to found ACEP. Then, as more detailed interests arose, new organizations happily sprouted along the timeline. Turns out, it's not that linear and it wasn't always that rosy.

The branching of any group of people is natural. Because it's a relatable example and also my undergrad, let's consider GWU. Born as Columbian College, it grew into Columbian University and was later renamed George Washington University. It now contains 10 separate schools, the oldest being the Columbian School of Arts and Sciences. Time passed, new professions arose, and additional schools were added to coincide with growth. This would be an inefficient place if there were no schools of business, medicine, engineering, or international affairs.

The U.S. military is even more complex. It started as groups of small local militias that were eventually molded into the Continental Army. The name eventually was changed to the U.S. Army, and now contains the Regular Army, the Army National Guard, and the U.S. Army Reserve. The U.S. Army is just *one* branch within the Department of Defense, accompanied by the Navy, Marine Corps, Air Force, and the Defense Agencies.

Emergency medicine is far less branchy.

The graphic included with this article summarizes those organizations that we, as EM residents and medical students, hear about the most. The

definitions, facts, and logos are taken directly from their respective websites.

Within the next few issues of *EM Resident* you'll find an overview of the professional, educational, and political aspects of EM we face as physicians. It's a lot; but, at least I can flatten the learning curve.

As the internet is not an all-inclusive source, any additional information on EM's history, organizations, and people is welcomed! As are corrections. EMResidentEditor@emra.org. ■

References

1. AAEM: www.aaem.org/UserFiles/am13-exhib-pros-v1.pdf
2. AAEM/RSA: www.aaemrsa.org/membership
3. ACEP.org
4. ACOEP: www.acoep.org/hist-acoep.htm; http://www.acoep.org/new-mem.htm
5. EMRA.org
6. SAEM: www.saem.org/sites/default/files/200810MembershipCommObjupdate.pdf
7. www.nyit.edu/medicine/emergency_medicine/emergency_medicine_organizations
8. Zink, Brian J. *Anyone, Anything, Anytime: A History of Emergency Medicine.* 2006. Philadelphia: Mosby Elsevier, 2012. (Websites last accessed January 2013.)

	American Col Emergency Ph ADVANCING EMERGENCY CARE	EMRA	ACOEP The American College of Osteopathic Emergency Medicine	SAEM So	ACADEMY OF EMERGENCY FAAEM allways means board certified	ACADEMY OF EMERGENCY With you all the way.
Year founded	1968	1974	1975	1989	1992	2005
Why founded	The first EM org ever formed, it promoted + maintained the ethical standards of private practice in EM (which was a large issue at the time).	To provide the first resident representation to ACEP + UA/EMS† for those pursuing a career in EM; even though a certifying board (ABEM‡) wasn't approved by ABMS& until 1979.	No one had yet formally grouped to address the interests of Osteopathic emergency physicians + residents.	UA/EMS† + STEM§ joined forces once their missions became the same – providing a forum for EM faculty + helping develop EM faculty.	To oppose the exploitation of EM residency-trained physician by CMGs$ + the increasing number of physicians hired to staff EDs despite lack of formal EM residency training.	AAEM Resident Section became its own org in 2005 – to conduct research; provide professional + public education; restrain cost, improve quality, + promote integrity of the practice + mgmt of EM in the U.S.
Goal	Mission: ACEP promotes the highest quality of emergency care and is the leading advocate for emergency physicians, their patients, + the public.	Mission: EMRA is the voice of EM physicians-in-training + the future of our specialty.	To support high quality emergency care, promote + protect the interests of Osteopathic emergency physicians, ensure the highest standards of postgraduate education, provide leadership in research.	Mission: To lead the advancement of emergency care through education + research, advocacy, + professional development in academic EM.	To promote fair + equitable practice environments necessary to allow emergency physicians deliver the highest quality of patient care; board certification is a mandatory feature for fellowship within the organization.	To provide EM residents a forum + a means to specifically address resident concerns + issues; develop their own programs + services; + have a representative that can impact AAEM's direction + mission.
President	Andrew Sama, MD, FACEP	Cameron Decker, MD	Gregory Christiansen, DO, MEd, FACOEP	Cherri Hobgood, MD, FACEP	William Durkin, Jr., MD, MBA, FAAEM	Leana Wen, MD, MSc
Journal/Pub	*Annals of Emergency Medicine* *ACEP News*	*EM Resident Magazine*	*The Pulse Newsletter*	*Academic Emergency Medicine (AEM)*	*The Journal of Emergency Medicine (JEM)* *Common Sense Newsletter*	*Modern Resident Newsletter*
Nat'l Meeting	ACEP SA	ACEP SA	ACOEP SA	SAEM	AAEM SA	AAEM SA
# members	>28,000	~12,000	> 4,000 (2012)	> 5,500 (2008)	~ 7,000 (2012)	3,106 (2011-12)

† UA/EMS: University Association for Emergency Medical Services
§ STEM: Society for Teachers of Emergency Medicine
‡ ABEM: American Board of Emergency Medicine
& ABMS: American Board of Medical Specialties
$ CMG: Contract Management Group

Advocacycorner

The ACA and Insurance Exchanges

Sarah Hoper MD, JD
Legislative Advisor
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"…before now, only 48% of firms with 3 to 9 employees, and 71% of firms with 10 to 24 employees, offered health insurance. Compare that to 99% of firms with ≥200 employees."

The Patient Protection and Affordable Care Act of 2010 (ACA) requires each state to start or join an insurance exchange by January 1, 2014. The exchanges are designed to help individuals and small businesses purchase qualified, affordable health plans.

In 2010, 55% of the U.S. population was covered by employer-sponsored insurance.[1] However, small employers have had more difficulty procuring reasonable rates for their employees because they have a *smaller population* to risk-stratify. Large companies have had less risk because they have a *larger population* to subsidize the costs of unhealthy and aging employees.

Pre-ACA, the risk that small companies' premiums will not cover the cost of health care for all the company's employees is higher than large companies; the higher the risk, the higher the premiums.[2] Large companies also have had greater bargaining power because they bring in more money to the insurance company.

As a result, before now, only 48% of firms with three to nine employees, and 71% of firms with 10 to 24 employees, offered health insurance. Compare that to 99% of firms with ≥200 employees.[3] Now, with the ACA, exchanges allow small groups and individuals to pool together and increase their purchasing power by creating more stable risk groups. Plus, exchanges give employees more insurance options.

The ACA limits exchanges to small employers (≤100 employees) and individuals. However, large companies can use the exchanges for pre-Medicare retirees and part-time employees. Pre-Medicare retirees are people who have retired but are not yet eligible for Medicare. If large companies choose to drop *all* insurance coverage, known as an "exit strategy," then their employees can use the exchanges. However, companies that enact an exit strategy in 2014 are subject to fines.

In 2017, states can expand their exchanges to include employers with more than 100 employees. There is a wide range of estimates as to the number of employees that will be enrolled through exchanges. A recent RAND report estimated 35 million,[4] while the Congressional Budget Office projects five million.[5]

Individuals seeking health coverage have a similar problem – because they are not risk-stratified across a group, they also face higher premiums than employees of large companies. An estimated one million high-risk individuals will purchase insurance through the exchanges.[6] These individuals represent 3.95 times the average risk.[7] However, Congress has estimated that **22 million people will be insured through the exchanges**.[8] Therefore, **the higher risk of individuals with pre-existing conditions will be spread across a much larger group**, and **the net risk per person *will not increase***.

Insurers that participate in the exchanges cannot refuse to insure any individual. The plans cannot have lifetime and annual limits. There will be four plans: bronze, silver, gold, and platinum. The bronze plan will cover 60% of medical costs, the silver 70%, the gold 80%, and the platinum 90% of medical costs. Each of the plans will be limited to out-of-pocket expenses of $5,950 for individuals, and $11,900 for families. **Individuals with incomes between 133% and 400% of the federal poverty level will receive a tax credit to help purchase insurance**.

States have thee options in implementing an exchange:

1) the state can run its own exchange,
2) the state can join a federally run exchange, or
3) the state can join a partnership exchange with the federal government.

On December 14, 2012, states had to decide which type of exchange to join:

- 24 states opted for federally run exchanges.

- 18 states opted to run their own exchange.
- Seven states have joined in a partnership exchange.
- Florida is still undecided.

Of the states that will run their own exchanges, the Obama administration has granted conditional approval to six: Colorado, Connecticut, Maryland, Massachusetts, Oregon, and Washington. Because a large number of states are defaulting to federally run exchanges, two-thirds of U.S. residents who obtain coverage through an exchange under the ACA will do so in either a federally run exchange or a partnership exchange.[9]

The exchanges are scheduled to be open for enrollment in late 2013 and fully functioning January 1, 2014. However, one of the biggest issues with implementing the ACA is ensuring that eligible individuals know about the benefits available to them. A recent Enroll America survey found that **83% of those eligible for Medicaid are unaware they will qualify for the program**, and **78% of those eligible for tax credits to buy insurance through the exchanges are not aware of their eligibility**.[10]

What does all of this mean for emergency medicine? There will be more patients.

Currently, we do not have the primary care infrastructure to accommodate the newly insured. Patients that are not able to find primary care appointments will come to the emergency department. On the other hand, emergency departments should see fewer self-pay patients and, therefore, have better reimbursement for emergency care. ■

References

1. DeNavas-Walt C, Proctor BC, Smith JC. Income, poverty and health insurance in the United States: 2010. Washington (DC): Census Bureau; 2011.
2. Jost T. Employers and The Exchanges Under the Small Business Health Options Program: Examining the Potential and the Pitfalls. Health Affairs, 31, no. 2, (2012): 267-274.
3. Kaiser Family Foundation, Health Research and Educational Trust. Employer Health Benefits: 2011 annual survey. Menlo Park (CA): KFF; 2011 Sep.
4. Eibner C, Girosi F, Price CC, Cordova A, Hussey PS, Beckman A et al. Establishing state health insurance exchanges: implications for health insurance enrollment, spending, and small businesses. Santa Monica (CA): RAND Corporation; 2010 Available at http://www.rand.org/content/dam/rand/pubs/technical_reports/2010/RAND_927.pdf
5. Congressional budget Office. Letter to the Hon Nancy Pelosi. Washingt (DC): CBO; 2010 March 20. p.9. Available at: http://www.cbo.gov/ftpdocs/113xx/doc11379/AmendReconProp.pdf
6. Rep. Henry A. Waxman; Rep Bart Stupak (October 12, 2012). "Re: Coverage Denials for Pre-Existing Conditions in the Individual Health Insurance Market." U.S. House of Representatives Committee on Energy and Commerce. Available at democrats.energycommerce.house.gov/Press_11/20101012/Memo.Pre-existing. Condition. Denials.Individual.Market. 2010.10.12pdf
7. Pauly MV, Herring B. "Risk Pooling and Regulation: Policy and Reality in Today's Individual Health Insurance Market." Health Affairs. 2007; 26 (3): 770-779.
8. Roby DH. "Private Health Insurance Under Health Care Reform and Health Benefit Exchanges."
9. Viebeck. "Analysis: Feds will have outsized role in health exchanges." Healthwatch: The Hill's Healthcare Blog, 12/13. At: http://thehill.com/blogs/healthwatch/health-reform-implementation/272835-analysis-feds-will-have-outsize-role-in-running-health-exchanges
10. Available at: http://www.enrollamerica.org/categories/population-specific

Transitions in care: A game of telephone

John Anderson, MD
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"Transitions in care occur hourly in the ED and are full of opportunities for success; but they're also prime environments for patient harm and unwarranted medical costs."

As emergency physicians, we manage and oversee more transitions of care than do most – if not all – other specialties. We take reports from prehospital providers and transferring physicians; we sign patients out to colleagues when our shifts end; we admit patients to inpatient services; we both receive and send patients to skilled nursing facilities. Finally, we treat and counsel those who can be safely discharged home.

These transitions are crucial steps in a patient's medical experience and have been identified as areas of focus and improvement by The Joint Commission, the World Health Organization, the Centers for Medicare & Medicaid Services, the Accreditation Council for Graduate Medical Education (ACGME) and the American College of Emergency Physicians (ACEP). Is all this attention warranted? Think back to your last shift: on how many patients did you receive or give reports?

Imagine that a patient from a skilled nursing facility is brought by ambulance – and subsequently admitted – to your emergency department (ED):

- Transition 1: Nursing facility to ambulance
- Transition 2: Ambulance to ED
- Transition 3: Emergency physician ending shift to emergency physician beginning shift
- Transition 4: Emergency physician to hospitalist
- Transition 5: Hospitalist night team to hospitalist day team
- Transition 6: Hospitalist back to nursing facility

Handled badly, transitions can work much like a game of telephone. "I want to go to New York" turns into "I broke the plastic fork." The true message is lost in translation.

The problem is that patient care isn't a game. In fact, the Joint Commission estimates that 80% of preventable, serious medical errors are the result of poor handoffs. Transitions are about both information and responsibility (i.e., who is going to follow up on a result or intervention), and poorly conducted transitions can lead to adverse patient outcomes, increased costs and decreased efficiency.

As part of residency training, we have both the opportunity and responsibility to become proficient in these transitions. The ACGME issued a mandate that *all programs must educate and evaluate handovers*, and that *graduating residents must be proficient in facilitating them*. This has become even more important with increased handovers due to decreased duty hours imposed by recent restrictions.

The *Emergency Medicine Milestones* project echoes this competency specifically for emergency medicine residents. ACEP has made this item a priority for emergency physicians, both in and out of training, and has convened a task force to examine these transitions of care.

So how can we improve our own handoffs in the ED? There is no simple answer. While there are various mnemonics, from SBAR to I-PASS, one single method hasn't been proven effective in every setting. There's not a strong

agreement on all elements that should be included or excluded. There are, however, several proposed principles that appear particularly valuable.

Cheung, et al, summarized these key elements in a 2010 review in the *Annals of Emergency Medicine*.

- First, limit distractions and interruptions before initiating the handoff. This can be quite difficult and – particularly in the ED – will never be ideal; but with a conscious effort, we can improve current practices.
- When starting the handoff, provide a clear but *concise* summary of the patient's visit, including the chief complaint, assessment, plan, and disposition.
- Provide information on outstanding tests and have clear recommendations for potential actions to be taken.
- Ensure that completed studies are available *during* handoff. For example, if you have a chest pain rule-out patient with a non-specific ECG, review the ECG with the next provider; he or she will be better equipped to anticipate and act on changes in subsequent tests. (This also saves the oncoming physician the trouble of tracking down the ECG wherever it may have landed in the department.)
- The next step is to allow time to resolve any questions posed by the oncoming provider.
- Finally, be clear about when responsibility for a patient has transferred from one provider to the next! This clarification will prevent the off-going provider from being approached and subsequently ordering "one more" test or medication that the new provider is unaware of; this kind of miscommunication can change a patient's entire hospital course.

Transitions in care occur hourly in the ED and are full of opportunities for success; but they're also prime environments for patient harm and unwarranted medical costs. These transitions are an area of focus for ACEP and other academic governing bodies. By taking control of transitions in emergency medicine, we may also improve transitions throughout the health care system at large. We can all improve patient outcomes while conscientiously applying our limited resources. ■

References

1. Cheung DS, Kelly JJ, Beach C. et al. Improving Handoffs in the Emergency Department. *Ann Emerg Med*. 2010;55(2):171-80.
2. Improving Transitions of Care: Hand-off Communications. http://www.centerfortransforminghealthcare.org/assets/4/6/CTH_Hand- off_commun_set_final_2010.pdf 2010 [cited 2012 December 6]
3. Philibert IaSA Jr. The ACGME 2011 Duty Hour Standards: Enhancing Quality of Care, Supervision, and Resident Professional Development, in Accreditation Council for Graduate Medical Education, 2011: Chicago, IL. p. 57-61
4. Riesenberg LA, Leitzsch J, Little BW. Systematic review of handoff mnemonics literature. *Am J Med Qual*. 2009;24(3): 196-204.
5. Solet DJ, Norvell JM, Rutan GH, et al. Lost in translation: challenges and opportunities in physician- to-physician communication during patient handoffs. *Acad Med*. 2005;80(12):1094-9.

ViceSpeakerreport

Guardians of the house

Ije Akunyili, MD, MPA
Vice Speaker of the Council
The University of Texas Medical School at Houston
Houston, TX

"The house of medicine has to be for everyone; we cannot have a house where access is denied based on type of or lack of insurance."

Welcome to interim meeting of the American Medical Association! The speaker's gavel struck the sounding block and in one fell swoop I became part of a tradition that began in 1847, when the American Medical Association (AMA) was founded by 250 pioneering delegates. Emergency medicine (EM) has since taken up residence in the house of medicine; but on that historic day in Philadelphia, it was still more than a century away from becoming a recognized specialty.

As EMRA's vice speaker, I am proud to represent emergency medicine residents as a delegate to the **AMA's Resident and Fellow Section** (RFS). The AMA has long extolled scientific achievement and improved public health; the goals of our two organizations –AMA and EMRA – are as unified as ever.

This year we saw the election of several EMRA members as **AMA delegates**. Similarly, EM residents have strong representation on the **RFS Governing Council**. What we bring to the AMA is a can-do attitude, problem-solving skills, and tireless energy.

My first recollection of a "house of medicine" – in very literal terms – is my childhood home. It was a quiet two-story affair in a serene former coal-mining town in Eastern Nigeria. My father was a small-town doctor, which meant he was an emergency physician and surgeon by day, family medicine doctor by night.

Patients would line up in front of our house for medical care. There was a small back room that served as both a guest room and a treatment room, where people would come for chloroquine shots for malaria, eye exams, and laceration repairs. They would bring their febrile children and ailing elderly parents to "Doc," as everyone fondly called him.

I saw my first EKG machine and ultrasound in his home clinic, tucked in the drawer of that room. He was very proud of his refurbished, but functional, equipment. He was protective of his patients, who waited until he returned home from his day job at the main teaching hospital. They would make their way through a dark windy hallway – literally dark, if we did not have electricity – to be examined and treated. Doc had no specialists on-call, no ancillary staff, and exceedingly limited resources.

Today I belong to a different house of medicine. I am one lone specialist among many. Medicine is increasingly specialized and sub-specialized – and sometimes, even splintered.

Herein lies the issue we have to worry most about: In this intricate web that we celebrate as the house of medicine, we have become more exclusionary of those on its periphery. It is a far cry from the house of my childhood, where everyone was welcomed – be they the mayor of the city, or the seamstress of the shantytown next door. The house of medicine has to be for *everyone*; we cannot have a house where access is denied based on type of or lack of insurance.

Emergency physicians are the guardians of the house of medicine. We see the indigent, the elderly, and the 30 million people that – even under the Affordable Health Care Act – will remain uninsured. We are a unique specialty in this way.

As I said during my acceptance speech at ACEP's *Scientific Assembly* in Denver, "We are called to be the voice of the voiceless." This makes us even more indispensable to this system.

At the end of the meeting we attended a reception in honor of Dr. Steven Stack, chair of the AMA Board of Trustees. I had the pleasure of meeting Dr. Stack – a sharp, energetic, kind person, and a practicing emergency physician. Dr. Stack, who's had a long relationship with ACEP and is a friend of EMRA, has a keen understanding of the complex health care issues we face as residents.

The AMA has come a long way in the last 160 years. As we celebrate Dr. Stack and all our emergency colleagues, our focus must remain on being the guardians that make medical care open, affordable, and accessible to *all* of our patients. The house of medicine needs us, but we need the AMA to continue to be the umbrella organization under which all doctors serve.

And so, I congratulate all my good friends that do incredible work for emergency medicine and represent us so strongly. I look forward to many years of close alliance between EMRA and the AMA. ■

2013 EMRA Events at SAEM Annual Meeting

Westin Peachtree Plaza
210 Peachtree Street
Atlanta, GA 30303

May 14-17, 2013

Tuesday, May 14, 2013

9:00 am – 5:00 pm	EMRA Board of Directors Meeting

Wednesday, May 15, 2013

9:00 am – 12:00 pm	EMRA Board of Directors Meeting
1:30 pm – 2:30 pm	EMRA Regional Representative Committee
1:30 pm – 2:30 pm	EMRA Committee Chair/Vice Chair Orientation
1:30 pm – 5:00 pm	EMRA Medical Student Governing Committee
2:30 pm – 3:00 pm	EMRA Conference Committee Orientation
3:00 pm – 4:00 pm	EMRA Reference Committee Public Hearing
4:00 pm – 5:00 pm	EMRA Reference Committee Work Meeting
4:00 pm – 5:30 pm	EMRA Resident Trivia Contest

Thursday, May 16, 2013

8:00 am – 8:30 am	EMRA Representative Council Welcome Breakfast
8:00 am – 8:30 am	EMRA Representative Council Registration
8:30 am – 12:00 pm	EMRA Representative Council Meeting/Town Hall
1:30 pm – 3:30 pm	EMRA International Committee
1:30 pm – 3:30 pm	EMRA Health Policy Committee
1:30 pm – 3:30 pm	EMRA Research Committee
1:30 pm – 3:30 pm	EMRA Critical Care Committee
1:30 pm – 3:30 pm	EMRA Technology Committee
3:30 pm – 5:30 pm	EMRA Education Committee
3:30 pm – 5:30 pm	EMRA Awards Committee
3:30 pm – 5:30 pm	EMRA EMS Committee
3:30 pm – 5:30 pm	EMRA Wilderness Medicine Committee
3:30 pm – 5:30 pm	EMRA Editorial Advisory Committee
10:00 pm – 2:00 am	EMRA Party

Friday, May 17, 2013

8:00 am – 1:00 pm	EMRA/SAEM Simulation Academy Resident Sim Wars Competition
9:00 am – 3:00 pm	EMRA Board of Directors Meeting & Committee Updates
6:00 pm – 7:00 pm	EMRA Spring Awards Reception

Note: schedule is subject to change.
Please visit emra.org as we near meeting date for changes.

The hidden curriculum in medical education

Jonathan Heidt, MD
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RRC-EM Representative
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St. Louis, MO

"When cynicism takes over, our ability to demonstrate empathy for our sickest, most vulnerable patients becomes a true challenge."

Twice a year, resident representatives from each residency review committee – collectively the **Council of Review Committee Residents** (CRCR) – meet to discuss issues pertaining to residents and students at the ACGME. During the last meeting, we discussed the prevalence of "abuse" in medical education.

When I first saw this topic on the agenda, I was rather confused. Since we now have strict duty-hour regulations and universal policies on harassment, I was unsure what types of abuse we'd discuss. Medical school and residency have been challenging, but I've been training to become an independent physician – my patients' lives depend upon my ability to make quick and accurate decisions. What else should I expect?

However, in a recent survey of medical students published in *JAMA*, 46.4% of respondents stated they had been abused at some time while enrolled in medical school; 69% of those abused reported at least one episode that was of "major importance and upsetting;" 50% stated that the abuse affected them for at least a month; and 16% stated that it would "always affect them." To understand how such "abuse" can exist and perpetuate, we need to first examine the culture of medical education.

One definition of *culture* in Webster's Dictionary is "the set of values, conventions, or social practices associated with a particular field, activity, or societal characteristic." This culture of medicine is immediately ingrained upon us in medical school; it is, if you will, our *hidden curriculum*. Based upon prior surveys of physicians, several "lessons" have been identified that lead to a set of premises upon which we base our professional lives. How many of these lessons have you been taught? How many of these premises do you *believe*?

Lessons
- Doctors cannot make mistakes.
- A patient's death represents a doctor's failure.
- There is only one right answer.

Premise: *You must be perfect.*

Lessons
- You can be rude if you're doing something important.
- You don't have to attend class to be successful.
- Communication skills are nice but not essential.

Premise: *Your outcomes are more important than your process.*

Lessons
- Doctors are married to medicine.
- Medicine is a higher calling than other professions.
- Leaving the hospital is a sign of weakness.

Premise: *Medicine takes priority over everything.*

Lessons
- You must not question doctors more senior than you.
- Nurses should not questions doctors.
- Subspecialist care is better than generalist care.

Premise: *Hierarchy is necessary.*

> "This culture of medicine is immediately ingrained upon us in medical school; it is, if you will, our *hidden agenda*."

These premises have had a profound impact upon my professional development. When I began training, I remember my optimism and altruistic view of medicine. Yet at the end of residency, I told my wife, "Medicine is not a career, it's a way of life." Cynicism had begun to take over.

Until recently, I didn't recognize the magnitude of this culture's impact. When cynicism takes over, our ability to demonstrate empathy for our sickest, most vulnerable patients becomes a true challenge.

These influences not only impact our clinical care, but the process by which we teach and learn. Residents and students are always expected to have the "right" answers, or else suffer public humiliation from supervising physicians, regardless of that superior's true teaching ability. As a result, an environment of escalating competition and disconnection develops.

"Pimping" (the teaching method) is an example. Trainees are asked a series of questions, with the expectation that they will eventually answer incorrectly. When used appropriately, this method of teaching can be used to identify areas of knowledge strength and weakness. Because this method is how I was taught, I often use the strategy to teach my own trainees. However, this method is also frequently used to enforce hierarchy and induce fear among medical trainees.

During our meeting at the ACGME, the CRCR members struggled to identify the moment that benign teaching crosses the line into abuse. Perhaps we struggled because, as senior residents and junior attendings, we've already inadvertently used this teaching method with junior residents and students. By perpetuating this environment, we are becoming part of the problem.

As we struggle to further define the problem of abuse in medical education, we're also attempting to estimate the prevalence of *perceived* abuse. We anticipate the perceived rate may be specialty-dependent, but will persistently exist (including within emergency medicine). To address this problem, a change in culture will be required that will be neither quick nor easy. As we continue to gather information on this topic to present to the leadership at the ACGME, I will keep you up to date on all proposals and recommendations. If you have any questions or comments on this topic, please email me at rrcemrep@emra.org. ■

References

1. Haidet P, Stein H. The Role of the Student-Teacher Relationship in the Formation of Physicians. *J Gen Intern Med*. 2006 January; 21(S1): S16–S20.
2. Silver HK, Glicken AD. Medical Student Abuse: Incidence, Severity and Significance. *JAMA*. 1990 Jan 26;263(4):527-32.
3. Osuch J. Legacy of Abuse in a Sacred Profession: Another Call for Change. *Virtual Mentor*. February 2009, Vol 11, Number 2:161-166.

Sniffing out intranasal medication delivery in the pediatric ED

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Raising awareness about the utility of intranasal medication benefits not only patients, but also parents and providers.

Often anxious, occasionally combative, or even convulsing, the pediatric patient can present a serious challenge to the emergency physician. The intranasal route of medication administration is shown to be **uniquely suited for pediatric emergency medicine**; however, inconsistent practice patterns and under-utilization of intranasal medications likely results from **lack of exposure and familiarity**. This article highlights the attributes of the intranasal route and its application to common pediatric emergency scenarios. Raising awareness about the utility of intranasal medication benefits not only patients, but also parents and providers.

Route mechanics.[1] The target of the intranasal route is the large surface area of capillary beds and capacitance vessels in the mucosal surface of the turbinate respiratory zone, located predominantly at the inferior nasal turbinate (Figure 1). The ideal drug is lipophilic with a low molecular weight. It passes through the epithelial cells, each containing upwards of 300 microvilli, providing a surface area of approximately 120-150 cm^2. The avid production of mucous and cilia-mediated clearance leads to a significant particle clearance every 15-20 minutes.

Advantages

- No delay to establish IV access, no need for sterile technique, and no needle-stick hazard.
- Avoids the hepatic and gastrointestinal first-pass effect.
- Nausea and vomiting do not impede delivery.
- Plasma profile is similar to the intravenous route with fast onset of action.[1]
- Inexpensive delivery devices – an atomizer converts liquid formulation into a mist to increase target delivery[2] *(Figure 2)*.
- Specific to pediatrics:
  - Easy, rapid, non-invasive administration in a potentially fearful, uncooperative child.
  - Patient positioning is irrelevant when using the atomizer; the patient can be in position of comfort, held in arms of caregiver.
  - Avoids the anxiety evoked by needles.
  - Avoids PO pitfalls, such as availability of liquid formulation and palatability.
  - Useful in management of common pediatric emergency department (ED) presentations.

Disadvantages

- Can cause transient irritation to nasal mucosa.
- Copious blood from trauma or inflammatory secretions can impede delivery.
- Absorption can be hindered by chronic conditions of impaired mucociliary clearance of secretions: primary ciliary dyskinesia, cystic fibrosis, and poorly controlled asthma or diabetes.
- Expect divided dosing and frequent re-dosing in larger pediatric patients: More than 1 mL volume per nostril gives mucosal saturation and runoff.
- When an atomizer is not available, dripping medication into the nares is difficult and less effective.
- Limited arsenal of medications appropriate for intranasal delivery as a result of the specific physiochemical profile required.
- *Theoretical* adverse events: Rapid, systemic absorption of opiates and benzodiazepines has the potential for over-sedation and hypotension. A 2010 review of intranasal medication from the American Academy of Pediatrics found no such adverse events in intranasal fentanyl and midazolam.[3]

Application. Studies on three common uses of intranasal medications are discussed below: Anxiolysis, analgesia, and seizure control. Other applications include naloxone administration, epistaxis control, and pre-medication for nasogastric tube placement. Due to safety profile and ease of administration, the intranasal route is well suited beyond the ED – pre-hospital, home-based, and austere or wilderness medicine settings.

Anxiolysis. In the pediatric ED, anxiety can make the simplest procedure difficult. When minimal sedation is appropriate, the intranasal route should be considered, as oral medication onset and effectiveness can vary.

Lane & Schunk published a retrospective review of minimal sedation using intranasal midazolam for minor procedures in 205 pediatric emergency patients aged 1-60 months. Approximately **95% did not require additional sedation**; only one adverse event occurred – blow-by oxygen resolved a desaturation following adjuvant IV ketamine.[4] In a randomized control trial, Klien et al. compared oral, intranasal, and buccal midazolam in pediatric laceration repair (N=169). Time to onset, sedation level, and parent satisfaction favored the intranasal route.[5]

Analgesia. An ideal drug for acute pain has a short time to onset, adequate analgesia, and good safety profile. Borland et al., published a prospective, randomized, double

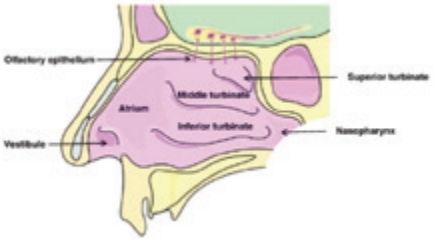


Figure 1. Layout of the nasal cavity[1]

blind, placebo-controlled clinical trial in a tertiary care pediatric ED. They found intranasal fentanyl at 1.7 µg/kg equivalent to IV morphine at 0.1 mg/kg as an analgesic, in 67 pediatric patients with long-bone fractures.[6]

When Borland et al. integrated intranasal fentanyl into their moderate-severe pain treatment protocol, the number of IVs placed specifically for opioids *dropped by* 58%. On top of that, time to receiving analgesia decreased by about 30 minutes.[7] Holdgate et al. published similar results (31-minute reduction) in a mixed adult-pediatric ED.[8] Furthermore, with protocoled intranasal fentanyl, younger pediatric patients (a group known to be undertreated for acute pain) were more likely to be treated with opioids.[8,9]

Seizure control. Benzodiazepines are the first-line treatment in seizure management. A 2009 literature review concluded that intranasal midazolam is equivalent to IV diazepam in seizure cessation, while lacking the difficulty and delay associated with establishing IV access.[2] The dose 0.2 mg/kg of intranasal midazolam is used in many studies, including Holsti et al. 2007. After revising the local EMS pediatric seizure treatment protocol to include intranasal midazolam instead of rectal diazepam, mean seizure time decreased by approximately 20 minutes, and patients were significantly less likely to require EMS bag-mask ventilation, have a seizure in the ED, require ED intubation, require oxygen at ED disposition, require anticonvulsants in the ED, and require hospital admission and intensive care (N=57).[10]

Take-home pearls

1. **Maximize concentration, minimize volume.** Use the most concentrated formulation available. Ideal dose-volume per nostril is 0.2-0.3 mL, which is often easier to achieve in children as a result of weight-based dosing. If greater than 1 mL is unavoidable, consider spreading the dose across two administrations, 15 minutes apart.
2. **Use both nostrils.** Take full advantage of the available absorptive surface area! Apply half the dose to each side if beyond ideal volume.
3. **Use an atomizer.** Avoid the drip technique to reduce runoff. Check to see if atomizers are stocked in your ED (*Figure 2*).
4. **Avoid under-dosing.** Expect to dose higher than with IV when accounting for the slower, incomplete absorption across the nasal mucosa. Refer to *Table 1* for dosing recommendations.
5. **Suction.** Suctioning the nose prior to delivery is the greatest tool to improve the effectiveness of intranasal medications. However, recognize when inflammation and trauma make the route impractical and always have a plan for alternative access. ■

Figure 2.
A standard syringe with a screw-on Luer fitting and nasal atomizer[5]

PHOTO COURTESY OF LMA NORTH AMERICA

Table 1. Intranasal medications and doses on the basis of published literature. Reproduced from Pediatrics.[3]

Clinical Scenario	Intranasal Medication & Dose	Important reminders
Pain Control	Fentanyl 1.5–2.0 µg/kg	• Monitor for respiratory depression. • Titration is possible every 15 minutes. • Consider administering oral medications to take effect as intranasal wears off.
Anxiolysis	Midazolam 0.4–0.5 mg/kg	• Anxiolysis only • Use concentrated form (5 mg/ml), as other concentration may not work. • Warn patient and family that burning sensation may last 30 seconds.
Seizures	Midazolam 0.2 mg/kg	• Use the concentrated form (5 mg/ml), as other concentration may not work. • Deliver immediately to allow absorption to occur while you support airway.

References

1. Grassin-Delyle S, et al. Intranasal drug delivery: An efficient and non-invasive route for systemic administration: Focus on opioids. *Pharmacology & Therapeutics*. Jun2012, Vol. 134 Issue 3, p366-379
2. Wermeling D. Intranasal Delivery of Antiepileptic Medications for Treatment. *Nontraditional Epilepsy Treatment Approaches, Neurotherapeutics*. 6(2):352-358
3. Wolfe TR and Braude DA. Intranasal medication delivery for children: a brief review and update. *Pediatrics, Official Journal of the American Academy of Pediatrics*. 2010 Sep; 126 (3): 532-7
4. Lane RD and Schunk JE. Atomized intranasal midazolam use for minor procedures in the pediatric emergency department. *Pediatric Emergency Care*. 2008 May; 24 (5): 300-3
5. Klein J, et al. Eileen. Pediatrics/original research: A Randomized Clinical Trial Comparing Oral, Aerosolized Intranasal, and Aerosolized Buccal Midazolam. *Annals of Emergency Medicine*. 2011 Oct; 58(4):323-329
6. Borland M, et al. A Randomized Controlled Trial Comparing Intranasal Fentanyl to Intravenous Morphine for Managing Acute Pain in Children in the Emergency Department. *Annals of Emergency Medicine*. 2007 Mar; 49 (3): 335-40
7. Borland ML, et al. Comparative review of the clinical use of intranasal fentanyl versus morphine in a paediatric emergency department. *Emergency Medicine Australasia*. 2008 Dec; 20 (6): 515-20
8. Holdgate **A**, et al. The Implementation of Intranasal Fentanyl for Children in a Mixed Adult and Pediatric Emergency Department Reduces Time to Analgesic Administration. *Academic Emergency Medicine*. 2010 Feb; 17 (2): 214-7
9. Alexander J, Manno M. Underuse of analgesia in very young pediatric patients with isolated painful injuries. Ann Emerg Med. 2003,41:617–622.
10. Holsti M, et al. Prehospital Intranasal Midazolam for the Treatment of Pediatric Seizures. *Pediatric Emergency Care*. 2007 Mar; 23 (3): 148-53.

Is there a doctor on board?

Graham Ingalsbe, MSIV
Medical Student Governing Council Chair
University of Miami
Miller School of Medicine
Miami, FL

"…there may come the time when a medical student's BLS and ACLS training is the only onboard option."

The cabin door is now closed…All electronic devices must be turned off at this time…In the event of a water landing, your seat cushion may be used as a flotation device…Apply your oxygen mask before assisting others.

During residency interview season, it can feel like we spend more time in transit than we actually do visiting potential programs. We almost-docs cycle through dry cleaners, airports, and musty hotel rooms. By the end of this process, we'll be better able to recite the pre-flight safety demonstration than the differential for chest pain.

Remarkably, air travel is an incredibly safe process; fail-safes, redundancies, and checklists prepare the crew for virtually any problem. Yet, with every flight, there's the unpredictability of the *human factor* – an acute in-flight health crisis – and that dreaded overhead message: "Is there a doctor on board?"

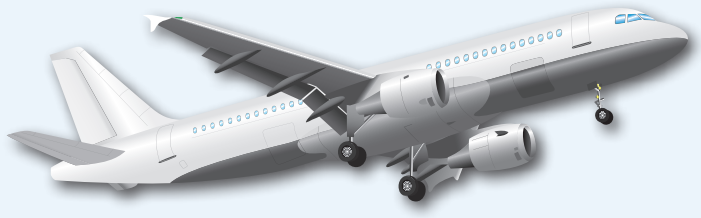
In-flight medical emergencies have existed since the commercialization of air travel. While there is no universal reporting system, a large Federal Aviation Administration study from 2000 reported an average of at least 13 domestic in-flight medical events per day (an estimate considered to be conservative). The most common chief onboard complaints are vasovagal, cardiac, neurologic, or respiratory events. As the population ages and air travel increases, so may the frequency and seriousness of acute events.

I often wonder what I'd do in this situation. As students pursuing careers in emergency medicine, the potential to be called upon in crises like these demonstrates many of the reasons we love the field: Acting swiftly to assess and stabilize any complaint with limited resources. As students, what is our role?

Our role is *vague*. No data have reported the incidence of medical student response to in-flight requests for medical personnel. Luckily, more than 70% of flights were reported to have a medical professional (physician, nurse, or EMT) available. In the case of multiple volunteers, students should defer to those with more experience and professional licensing.

However, there may come the time when a medical student's BLS and ACLS training is the only onboard option. It's never appropriate to falsely identify oneself, so be upfront about your status as a student and inquire if on-ground professionals are available to assist. The Aviation Medical Assistance Act of 1998 protects medical professional volunteers who act in good faith and do not receive fiscal compensation for their services. (But don't worry – if you volunteer and they bump you into first class, that's just fine.)

There also are significant resources available to you. Since 2004, planes with a capacity greater than 50 seats have been required to carry an automated external defibrillator, and all planes must be equipped with an emergency medical kit. While kits may vary, they all contain 22 essential items, including a sphygmomanometer, three sizes of oropharyngeal airways, IV access supplies, and a variety of medications from analgesics to epinephrine.



"Some airlines staff their own physicians, while others utilize commercial medical consultants to guide decision-making."

Beyond the basic equipment available on the plane, there is a growing body of on-the-ground medical personnel who can assist medical responders in flight. Some airlines staff their own physicians, while others utilize commercial medical consultants to guide decision-making. Ultimately, the decision of whether or not the plane must be immediately diverted rests with the captain, but the opinion of the medical team is essential.

In the end, it's up to the individual health care professional to decide whether or not he or she wants to respond. Emergency medicine providers tend to gravitate toward the specialty out of a willingness and desire to care for *any* patient with *any* complaint at *any* time. Your ability to act quickly and decisively will make you among the most qualified to care for a patient in a setting as awkward and limited as an airplane flying at 30,000 feet. ■

Sources

1. DeJohn CA, Veronneau SJ, Wolbrink AM, et al. The evaluation of inflight medical care aboard selected U.S. air carriers: 1996 to 1997. Washington, D.C.: Federal Aviation Administration, Office of Aviation Medicine, 2000.
2. Gendreau, MA, DeJohn, C. Responding to Medical Events During Commercial Flights. *N Engl J Med*, Vol. 346, No. 14, April 2002.
3. FAA Code of Regulations, Section A121.1, http://rgl.faa.gov

Contents	Quantity
Sphygmomanometer	1
Stethoscope	1
Airways, oropharyngeal (3 sizes): 1 pediatric, 1 small adult, 1 large adult or equivalent	3
Self-inflating manual resuscitation device with 3 masks (1 pediatric, 1 small adult, 1 large adult or equivalent)	1 (3 masks)
CPR mask (3 sizes): 1 pediatric, 1 small adult, 1 large adult, or equivalent	3
IV Admin Set: Tubing with 2 Y-connectors Alcohol sponges Adhesive tape, 1" standard roll Tape scissors Tourniquet	1 2 1 1 pair 1
Saline solution, 500 cc	1
Protective non-permeable gloves or equivalent	1 pair
Needles (2x18 ga., 2x20 ga., 2x22 ga., or sizes necessary to administer required medications)	6
Syringes (1-5 cc, 2-10 cc, or sizes necessary to administer required medications)	4
Analgesic, non-narcotic, tablets, 325 mg	4
Antihistamine tablets, 25 mg	4
Antihistamine injectable, 50 mg (single-dose ampule or equivalent)	2
Atropine, 0.5 mg, 5 cc (single-dose ampule or equivalent)	2
Aspirin tablets, 325 mg	4
Bronchodilator, inhaled (metered dose inhaler or equivalent)	1
Dextrose, 50%/50 cc injectable (single-dose ampule or equivalent)	1
Epinephrine 1:1000, 1 cc, injectable (single-dose ampule or equivalent)	2
Epinephrine 1:10,000, 2 cc, injectable (single-dose ampule or equivalent)	2
Lidocaine, 5 cc, 20 mg/ml, injectable (single-dose ampule or equivalent)	2
Nitroglycerin tablets, 0.4 mg	10
Basic instructions for use of the drugs in the kit	1

Source: FAA Code of Regulations, Section A121.1, http://rgl.faa.gov

Staying awake when the action starts

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Medical Student Governing Council
Harvard Medical School
Boston, MA

Fortunately for most of us, the image of the trembling, bleary-eyed physician nearing the 40th hour of a shift is a thing of the past. Scheduled shift work in the emergency department (ED) has plenty of benefits for our well-being. On the other hand, **sleep hygiene** is rarely emphasized in medical school. So how can residents and students optimize quality sleep with rapidly changing shifts?

The first principle is to **schedule enough sleep *prior* to a shift**. If you run on seven or eight hours of sleep, you need that amount of sleep prior to a shift to maintain wakefulness. Sleep deprivation becomes noticeable in cognitive tasks after losing a mere eight hours of sleep, even when those hours accumulate over the course of several days[1]. Naps – even as short as 15 minutes – can improve wakefulness for several hours, but beware of "sleep inertia," the tendency to be sleepier immediately after arising from a short nap (and before experiencing eventual gains in wakefulness[2]).

Second, **manage psychostimulants appropriately**. Caffeine increases vigilance and reduces errors in high-attention tasks among both sleep-deprived and well-rested people[3,4]. Remember to manage the timing of your caffeine intake, as its elimination half-life is only between three and four-and-a-half hours[5]. A cup o' joe before work may leave you *more* tired by the end of your shift.

Watch for side effects of excessive consumption, ranging from the well-known urinary frequency and insomnia to more the serious dizziness, fever, vomiting, diarrhea, convulsions, increased intraocular pressure, and cardiac arrhythmias. Modafinil and D-amphetamine have also shown improvements in wakefulness for patients with diagnosed sleep disorders, but their use in students and residents with varying shifts requires further study[6]. Therefore, maximize the use of **natural psychostimulants** – keep yourself cool and stay near bright lights.

Last, **be mindful of your circadian rhythm**. The most common clinical sleep-related problem in shift workers in settings such as the ED is shift-work sleep disorder – a combination of shift-time tiredness and the inability to fall asleep due to frequent changes in circadian rhythm[7]. The human circadian rhythm can naturally adjust to up to one hour of advancement per day, meaning that the switch from a day schedule to a night schedule takes 12 days to complete.

Sleep aids may be necessary to adapt your circadian rhythm to rapidly shifting schedules[8]. If a warm, dark, quiet room doesn't put you to sleep after an overnight shift, you may need to add some pharmacologic therapy. Melatonin, the exogenous version of the natural pineal gland hormone, has the fewest side effects, with abdominal cramping as the only complaint. Taking 3-6 g melatonin in the late afternoon prior to sleep causes a *phase advance*, or earlier wake time by up to two hours[9]. Taking melatonin in the early morning causes a *phase delay*, or subsequently delayed sleep and wake times by up to two hours. Melatonin has not been shown to improve resident mood or attention in the small studies to date, but does increase total hours of sleep when used appropriately.

More aggressive sleep aid options include zolpidem (an imidazopyridine benzodiazepine), one of the most common sleep aids for residents rapidly transitioning

"Sleep deprivation becomes noticeable in cognitive tasks after losing a mere eight hours of sleep, even when those hours accumulate over the course of several days."

to night shifts. With a half-life of only two-and-a-half hours and minimal side effects, the risks of use are considered to be few[10]. However, despite its frequent use by EM residents[11], zolpidem has not been studied specifically in medical residents for its effects on vigilance.

Zaleplon, a sleep aid with an even shorter half-life of only one to two hours, may facilitate shorter naps and has no documented adverse psychomotor impairment[12]. Temazepam, another common benzodiazepine, has also been used, though its nine-hour half-life makes it unattractive for the resident seeking a quick return to work[13]. Likewise, triazolam and diphenhydramine, previously popular sleep aids, are not recommended because of adverse effects on cognition[14].

Maximizing wakefulness and performance in the ED ultimately requires a combination of smart decisions around scheduled sleep; natural wakefulness adjuncts; and, *potentially* sleep aids or stimulants. Fortunately for most of us, the adrenaline surge with the arrival of critical patients can promote vigilance. The bottom line is: we must always be aware of the potential for cognitive errors when transitioning between work schedules. ■

References

1. Veasey S, Rosen R, Barzansky B, Rosen I, Owens J. Sleep loss and fatigue in residency training: a reappraisal. *JAMA*. 2002;288(9):1116–1124.
2. Helmus T, Rosenthal L, Bishop C, et al. The alerting effects of short and long naps in narcoleptic, sleep deprived, and alert individuals. *Sleep*. 1997;20(4):251–257.
3. Horne JA, Reyner LA. Counteracting driver sleepiness: effects of napping, caffeine, and placebo. *Psychophysiology*. 1996;33(3):306–309.
4. Regina EG, Smith GM, Keiper CG, McKelvey RK. Effects of caffeine on alertness in simulated automobile driving. *Journal of Applied Psychology*. 1974;59(4):483–489.
5. Callahan MM, Robertson RS, Branfman AR, McComish MF, Yesair DW. Comparison of caffeine metabolism in three nonsmoking populations after oral administration of radiolabeled caffeine. *Drug Metab. Dispos.* 1983;11(3):211–217.
6. Westcott KJ. Modafinil, sleep deprivation, and cognitive function in military and medical settings. *Mil Med*. 2005;170(4):333–335.
7. Schwartz JRL, Roth T. Shift work sleep disorder: burden of illness and approaches to management. *Drugs*. 2006;66(18):2357–2370.
8. Chiang J, Jagoda A, Ji L. Sleep Aids, Stimulants, and Drug and Alcohol Use in Residency. In: *The Medical Student Survival Guide*. Irving, TX: Emergency Medicine Residents Association; 2007:204–208.
9. Lewy AJ, Bauer VK, Ahmed S, et al. The human phase response curve (PRC) to melatonin is about 12 hours out of phase with the PRC to light. *Chronobiol. Int.* 1998;15(1):71–83.
10. Anon. Zolpidem: Drug Information. 2012.
11. McBeth BD, McNamara RM, Ankel FK, et al. Modafinil and Zolpidem Use by Emergency Medicine Residents. *Academic Emergency Medicine*. 2009;16(12):1311–1317.
12. Hurst M, Noble S. Zaleplon. *CNS Drugs*. 1999;11(5). Available at: http://adisonline.com/cnsdrugs/Fulltext/1999/11050/Zaleplon.6.aspx.
13. Anon. Temazepam: Drug Information. 2012.
14. Mendelson WB, Roth T, Cassella J, et al. The treatment of chronic insomnia: drug indications, chronic use and abuse liability. Summary of a 2001 New Clinical Drug Evaluation Unit meeting symposium. *Sleep Med Rev*. 2004;8(1):7–17.

Power to the People: Combatting opioid overdose with accessible nasal naloxone

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"It is a relatively recent development in our society that the medical community recognized a valuable resource: The layperson."

As a safety-net hospital for many of Boston's indigent, Boston Medical Center faces a large number of challenging cases on a weekly, nightly, or even hourly basis – many of them complex in every sense of the word. A patient with at least five major medical conditions, a full page of medications with which they are not compliant, and an unsafe living situation is the rule, not the exception. **I witnessed both major multisystem traumas and minor medical issues, which ballooned into life-threatening illnesses, all because of lack of access to health care.** These cases made me feel so helpless, and often stayed with me – intellectually and emotionally – well past my shift.

One of the medical issues that really caught my attention was the number of patients being brought in with anoxic brain injuries due to respiratory depression secondary to an opioid overdose. There were kids several years younger than I was (20 at the time), who had done irreversible damage, and would never be fully functional again. I suspect that many of these kids were too young to be drug addicts, and I suspect they were experimenting when they overdosed. As for the kids and adults who *were* drug addicts, I imagined the chance to gain sobriety and lead a prosperous life was gone forever. I know how dramatic that sounds. I know that it's very difficult to stop using drugs and that many people fail, so why should I expect any one of these people to overcome their addiction? **As medical professionals, however, we at least owe it to these patients to try and help them succeed, and keep them from hurting or killing themselves by overdosing.**

The primary method of reversing opioid overdose is the administration of naloxone, an opioid- receptor antagonist. Up until a few years ago, the medication was administered by trained medical professionals primarily through IV or IM injections in pre-hospital and inpatient settings. Recently, a device that aerosolizes the naloxone and delivers it intranasally has become more popular. Before its advent, only people with advanced life support certifications could administer naloxone. EMT-basics are now permitted to give it, and I strongly believe that lay people should be empowered to give it, as well.

Unlike IV or IM naloxone, the aerosol medication is easily portable and requires minimal training. Furthermore, it is not known to cause serious side effects and has virtually no potential for abuse. **Decades ago society had no CPR/ BLS classes; no one could fathom that – after encountering a pulseless and apneic person – another "average" person would respond by aggressively pounding on a victim's chest.** It is a relatively recent development in our society that the medical community recognized a valuable resource: the lay person. Since then, we have been working to better utilize lay people by encouraging

"...it is now time to use lay people to help combat opioid overdose by teaching them how to recognize and respond to an overdose by using nasal naloxone."

CPR/BLS/first aid classes, and teaching them how to use EpiPens and many other life-saving emergency skills.

I think it is now time to use lay people to help combat opioid overdose by teaching them how to recognize and respond to an overdose by using nasal naloxone. The national average ambulance response time is around 10 minutes, yet it takes less than half of that for anoxic brain injury to occur. Furthermore, after talking with one of my classmates who worked as an EMT for several years, I was alerted to a disturbing practice. During her EMT training, she was instructed to withhold pushing IV naloxone to overdose patients until the ambulance was pulling into the hospital bay. The rationale was that overdose patients have been known to become combative following naloxone administration, leaving emergency personnel in vulnerable positions, even when restraints are used. If this practice is widespread, this would certainly exacerbate the anoxic brain injury, even if efforts at maintaining ventilator support are made.

In 2007, the Boston Public Health Commission (BPHC) piloted a program aimed at educating people at high risk for an opioid overdose on how to recognize an overdose and reverse it with nasal naloxone. The program enjoyed significant success, spurring other states to adopt similar programs. Last fall, I wrote a resolution asking the American Medical Association (AMA) to officially announce its support of programs like the one sponsored by the BPHC. It passed the student section that fall, and this spring, the resolution passed the AMA House of Delegates to become official AMA policy.

I implore the present and future health care professionals reading this to empower the bystander by making nasal naloxone more accessible to the public. Fatal opioid overdoses tripled between 1999 and 2006, turning a longstanding problem into a critical societal issue. There are many maladies that render us truly helpless, but this is not one of them; we have a unique opportunity to make a significant impact on the health of these people. I recognize the enormous difficulty of making a change within a population like opioid drug users, but we have yet to exhaust our options. ■

Going viral (or not)

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"Don't anchor on viral syndrome," I thought to myself as I walked out of the room. "Keep the other bad causes of vomiting in kids in your differential."

Case

A healthy, full-term, one-year-old male presented to the emergency department (ED) with 12 hours of non-bilious, intermittent vomiting occurring shortly after feeding. His mother reports he started antibiotics several days earlier for an upper respiratory infection; he's also been transitioning from breastfeeding to cow's milk. His medical history was otherwise unremarkable.

The child appeared healthy with normal vital signs and an unremarkable abdominal exam. I explained to his parents that I thought the child probably had a virus, or that perhaps he was not tolerating the transition to cow's milk. "Let's see if we can get him to drink some fluids here in the ED; if that doesn't work, we'll look for other causes of the vomiting." His mom and dad agreed with this approach.

"Don't anchor on viral syndrome," I thought to myself as I walked out of the room. "Keep the other bad causes of vomiting in kids in your differential." I presented the case to the attending physician, who agreed with my initial plan for oral rehydration and observation in the ED.

I reexamined the patient about 45 minutes later; he had vomited again, was not tolerating oral hydration, and was becoming more lethargic. I asked the nurse to draw basic labs and start IV fluids. A few minutes later, she came back and reported that the patient had just had a bright red, heme-positive bowel movement.

When I went back into the room and looked in the patient's diaper, a voice inside my head shouted, "Currant jelly stool! This definitely isn't viral syndrome."

An ultrasound, a surgery consult, and a contrast enema later, the patient was again stable. The radiologist had successfully reduced his intussusception, he was feeding without difficulty, and he was admitted to the pediatric floor for overnight observation.

Intussusception: A brief review

Pathophysiology and Epidemiology

Intussusception is one of the most common abdominal pediatric surgical emergencies, exceeding appendicitis in prevalence in very young children, and representing the most common cause of intestinal obstruction in children younger than two years old. It is nearly three times more prevalent in males and affects about one in 2,000 children.[1,2]

The etiology of intussusception is often unknown, with nearly 90% classified as idiopathic,[3,4] though Adenovirus has been widely implicated as a potential cause. Lead points can occur in older children related to other disease processes such as Henoch-Schönlein Purpura, Meckel's diverticulum, celiac disease, and cystic fibrosis.[1]

Presentation

Classically, vomiting, abdominal pain, and bloody stools mark intussusception – though it's estimated that less than one-third of cases have all three.[1] Most patients have some combination of these signs, however, with **abdominal pain** and **emesis** being the most common, especially in younger children.[5,6] Lethargy and colicky pain are also associated with intussusception.

"… although common diseases occur commonly, as an emergency physician I must keep the catastrophic causes of common symptoms in mind at all times."

On physical exam, a palpable right upper quadrant mass and an empty right-lower quadrant (Dance's sign) is a classically described exam finding. Many children have the notoriously described *currant jelly stool*, which consists of a mixture of sloughed mucosa, blood, and mucus and is confirmed by hemeoccult test.

The differential diagnosis for intussusception includes trauma, incarcerated hernias, neoplasm, milk allergies, appendicitis, masses, and of course, viral syndrome.[7]

Diagnostic evaluation

Ultrasound performed by an experienced technician is widely used to diagnose intussusception. Recent evidence suggests that, with focused training, emergency physicians can accurately diagnose ileocecal intussusception with bedside ultrasound.[8]

Plain abdominal radiographs can also be of some utility. For example, the presence of **air in the ascending colon** on the three-view abdominal XR (which includes the decubitus view) can decrease the likelihood of – or even exclude – intussusception.[9,10] Some authors have suggested that, when clinical suspicion for intussusception is high and plain films are suggestive of the diagnosis, ultrasound need not be performed and patients can go straight to reduction.[11]

Management

The most important step in managing intussusception in the ED is establishing the diagnosis. The most common treatment is non-operative reduction with an air or contrast enema. More than 90% of intussusceptions can be successfully reduced without surgery, with <10% rate of recurrence.[1,12]

If enema reduction is unsuccessful, surgical repair of the obstruction is necessary. Consult pediatric surgery and a pediatric radiologist *early*; attempts at reduction should not be delayed! Mortality from intussusception is exceedingly low when appropriately managed, but can be fatal within several days if not.

This case reinforced for me that – although common diseases do, in fact, occur commonly – as an emergency physician I must keep the *catastrophic causes* of *common symptoms* in mind at all times. Yes, most vomiting in children is related to benign viral illnesses. But our role is to remember that serious, often unexpected diagnoses like intussusception can have an identical presentation. ■

References

1. Marx J (Ed). Rosen's Emergency Medicine, Concepts and Clinical Practice: 7th Edition. Part V: Chapter 170, Gastrointestinal Disorders.
2. Blanco FC, Chahine AA, King L. Intussusception. Available online at: http://emedicine.medscape.com/article/930708 (Last Accessed 12/10/12)
3. Cserni T, Paran S, Puri P. New hypothesis on the pathogenesis of ileocecal itussuception. *J Pediatr Surg* 2007;42:1515-19.
4. Pepper VK, Stanfill AB, Pearl RH. Diagnosis and management of pediatric appendicitis, intussusception, and Meckel diverticulum. *Surg Clin North Am*. 2012 Jun;92(3):505-26, vii.
5. Mandeville K, Chien M, Willyerd FA, et al. Intussuception: Clinical presentations and imaging characteristics. *Pediatr Emerg Care* 2012;28(9):842-44
6. Klein EJ, Kapoor D, Shugerman RP. The diagnosis of intussusception. *Clin Pediatr* (Phila). 2004 May;43(4):343-7.
7. Pollack ES. Pediatric abdominal surgical emergencies. *Pediatr Ann*. 1996 Aug;25(8):448-57.
8. Riera A, Hsiao AL, Langhan ML, Goodman TR, Chen L. Diagnosis of intussusception by physician novice sonographers in the emergency department. *Ann Emerg Med* 2012;60(3):264-68.
9. Roskind CG, Kamdar G, Ruzal-Shapiro CB, Bennett JE, Dayan PS. Accuracy of plain radiographs to exclude the diagnosis of intussusception. *Pediatr Emerg Care*. 2012 Sep;28(9):855-8.
10. Hooker RL, Hernanz-Schulman M, Yu C, Kan JH. Radiographic evaluation of intussusception: utility of left-side-down decubitus view. *Radiology*. 2008 Sep;248(3):987-94.
11. Mendez D, Caviness AC, Ma L, Macias CC. The diagnostic accuracy of an abdominal radiograph with signs and symptoms of intussusception. *Am J Emerg Med*. 2012 Mar;30(3):426-31.
12. Niramis R, Watanatittan S, Kruatrachue A, et al. Management of recurrent intussusception: nonoperative or operative reduction?. *J Pediatr Surg*. Nov 2010;45(11):2175-80.

Spotlight on...
Readmission Reduction Program

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With rising health care costs, the Center for Medicare and Medicaid Services (CMS) has searched for ways to create incentives to lower costs and improve care. Since reviewing services rendered on a case-by-case basis is expensive and poor care is often not the result of one *single* mistake, but system-wide shortcomings, CMS decided to penalize hospitals for excess readmissions in aggregate.

CMS, with input from health care providers, decided to focus on three diagnoses – acute myocardial infarction, heart failure and pneumonia. Data was collected from Medicare claims and the Veteran's Affairs health care system on patients older than 65 and eligible for those services. Using a formula devised by statisticians, CMS compared the mortality rate and readmission rate within 30 days for all three diagnoses to the 30-day readmission rate for all causes, averaged over the preceding three years to determine excess readmissions.

This ratio is compared against a national average, with adjustments for population factors such as age, gender and comorbidities. Hospitals with excess readmissions will pay a penalty between 0.1% and 1% of total Medicare reimbursements for the fiscal year 2013. The cap increases 1% percent per year for the next two years, reaching 3% for fiscal year 2015. CMS is considering adding other diagnoses to the three it is currently tracking. The median 30-day readmission rates released by CMS were 18.4% for pneumonia, 19.9% for acute myocardial infarction and 24.8% for patients admitted with heart failure.

This method has been costly for hospitals, with over 2,200 hospitals penalized this year for an estimated total of $280 million. It has been estimated that 17% of patients admitted to a hospital were readmitted within 30 days, resulting in an estimated cost of $1.9 billion annually. Although this is a drop in the bucket for an industry that cost $2.9 trillion in 2010 (consuming 17% of our nation's GDP), the policy takes aim at the single biggest recipient of Medicare payments: hospitals, which account for more than 30% of the total cost of health care spending.

CMS hopes failing hospitals will emulate the practices of high performers, and place a renewed focus on discharge planning. To reduce readmissions, patients must be connected to the resources needed to maintain health and patient education. For example, ensuring the patient understands all aspects of the discharge plan well enough to teach it back to a health care professional, filling prescriptions prior to hospital discharge, scheduling close clinical follow-ups, ensuring that patients have transportation to their follow-up clinic visits, and that qualified patients have home nursing.

Some hospitals have hired home health professionals to visit patients after discharge to make sure discharge instructions have been adequately communicated and that patients have the resources to follow them. People with mental illness, those who have a fragmented social support network, those who speak limited English, and patients with limited health care literacy all pose challenges to these systems.

The socioeconomic status of the patient population influences the resources available to provide care and the likelihood of readmission. Many of the hospitals penalized are teaching institutions that serve underserved populations. Despite acknowledging this increased burden on safety net hospitals, CMS instituted penalties this year, while trying to determine how to account for socioeconomics in their calculations. In its quest to improve care for *all* patients, there was concern that – if adjustments

"The median 30-day readmission rates released by CMS were 18.4% for pneumonia, 19.9% for acute myocardial infarction and 24.8% for patients admitted with heart failure."

were not handled carefully – they would result in a lower standard of care for *poor* patients.

This poses a unique quandary for emergency physicians. As the gateway physicians, we see patients both during their initial admission, as well as during unscheduled hospital visits; however, discharge planning is completed by the inpatient team. As financial incentives for hospitals to reduce readmissions increase, emergency physicians may find increased push-back when patients return within the 30-day window with concerning symptoms. Negotiating the needs of our diverse patient population and the new regulations being imposed on the systems that facilitate our practice will become increasingly fraught as CMS looks for ways for curb health care costs. It is important to remember in our race to build a more efficient health care system that there are many significant outcomes and unforeseen challenges with which to contend. Safeguards that protect our most vulnerable patients and provide necessary access to care are essential to improving the health of our communities and our nation. ■

References

1. National Health Expenditures 2010 Highlights. Accessed on October 18, 2012. At: http://www.cms.gov/Research-Statistics-Data-and-Systems/Statistics-Trends-and-Reports/NationalHealthExpendData/Downloads/highlights.pdf
2. Readmission Measures Overview: Publicly reporting risk-standardized, 30-day readmission measures for AMI, HF and PN. Accessed on October 18, 2012. At: http://www.qualitynet.org
3. Frequently Asked Questions (FAQs):CMS 30-Day Risk-Standardized Readmission Measuresfor Acute Myocardial Infarction (AMI), Heart Failure (HF), and Pneumonia . Accessed on October 18, 2012. At: http://www.qualitynet.org
4. Feigl, C. (2012, August 27). 2,200 hospitals face medicare pay penalty for readmissions. *amednews.com*. Retrieved from http://www.ama-assn.org/amednews/2012/08/27/gvsb0827.htm

Use of ketamine in pediatric procedural sedation

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"Studies looking at the use of ketofol appear to be promising, and indicate that the sedative appears to be potentially superior to ketamine or propofol alone."

A two-year-old girl presents to the emergency department with a 6-cm foot laceration, thanks to her older brother and a broken lamp. She receives ketamine 2mg/kg and drifts off into a dissociative state as the laceration is repaired. She soon wakes up peacefully in her mother's arms.

Emergency physicians should be experts in managing common procedures, and acquire the skills needed to control respiratory and cardiovascular status during sedation. When considering procedural sedation, it is important for the physician to know what it is and when to use it, and have a clear understanding of the pharmacologic agents available.

In 2008 *The Annals of Emergency Medicine* published a clinical policy statement addressing critical issues in the sedation of pediatric patients in the emergency department. Procedural sedation is defined as "the technique of administering sedatives or dissociative agents with or without analgesics to induce a state that allows the patient to tolerate unpleasant procedures while maintaining cardiorespiratory function".[6] Procedures such as fracture reduction, laceration repair, and incision and drainage of an abscess tend to be most effectively performed with sedation.

Ketamine generally remains the sedative of choice in the pediatric population. This preference exists because ketamine is fast on, fast off, well-tolerated, and generally safe. It begs the question whether an alternative to ketamine even needs to exist in the physician's armamentarium, given ketamine's ease of use and success. Ketamine has well-known and concerning side effects, however, including laryngospasm and emergence reaction.

The drug traditionally has been thought to raise intracranial pressure and, therefore, has been avoided in trauma patients; however, there is a case series indicating ketamine may actually *reduce* intracranial pressure.[2] More research is needed to determine its safety in trauma patients.

The most feared and commonly encountered risks associated with procedural sedation include respiratory depression and hypotension. Recent studies have looked at the combination of ketamine and propofol, known appropriately as **ketofol**. When these medications are used in conjunction, theoretical synergy might alleviate some of these risks and limit adverse side effects.

Ketamine is known to preserve respiratory drive and increase blood pressure, while propofol causes respiratory depression and hypotension. Ketamine causes post-procedural agitation, while propofol has anxiolytic properties. Ketamine is emetogenic, and propofol has antiemetic properties.

Finally, ketamine provides analgesia, while propofol does not. This sounds like the perfect marriage between two sedative agents, and its effectiveness has also been supported in the literature.

Recent literature

In May 2011 Shah et al. looked at **ketafol vs. ketamine** alone in patients aged 2-17

years with isolated orthopaedic injuries. The patients were randomized to each group and primary measures included total sedation time, recovery time, adverse events, efficacy, and provider and patient satisfaction. Shah and his colleagues found that ketofol provided slightly faster recovery times, required less time to achieve ideal sedation, and resulted in less vomiting and higher satisfaction scores. There were similar efficacy and airway complications in both groups.[5]

In an opposite perspective, David et al. studied **ketofol vs. propofol** in healthy children and adults undergoing procedural sedation. The primary objective was respiratory depression of ketofol compared to propofol alone. Secondary outcomes similarly looked at provider satisfaction, sedation quality, and total propofol dosage to achieve sedation. David actually found a comparable rate of respiratory depression between the two groups; however, the secondary outcomes favored ketofol in markedly improved provider satisfaction scores, less propofol required to achieve adequate sedation, and possibly better sedation quality.[3]

Finally in 2010, Andolfatto et al. studied the effectiveness, recovery time, and adverse events profile of a 1:1 mixture of ketamine and propofol in patients less than 21 years old undergoing primary orthopaedic procedures. They concluded that procedural sedation using ketofol is highly effective – recovery times were short; adverse events were few; and patients, caregivers, and staff were highly satisfied.[1]

The bottom line with these three studies suggests that ketofol is a safe and effective option for pediatric procedural sedation in the emergency department, and is highly favored by patients as well as the medical staff.

Conclusion

Emergency physicians should be experts in procedural sedation of all age groups. Although ketamine is most commonly used in the pediatric population for sedation, it is important to be aware of other options that may provide safe, effective, and speedy induction and recovery times. Studies looking at the use of ketofol appear to be promising, and indicate that the sedative appears to be potentially superior to ketamine or propofol alone. ■

References

1. Andolfatto G, Willman E. A prospective case series of pediatric procedural sedation and analgesia in the emergency department using single-syringe ketamine-propofol combination (ketofol). *Acad Emerg Med.* 2010;17(2):194
2. Bar-Joseph G, Guilburd Y, Tamir A, Guilburd JN. Effectiveness of ketamine in decreasing intracranial pressure in children with intracranial hypertension. J Neurosurg Pediatr. 2009:4(1):40-6
3. David H, Shipp J. A randomized controlled trial of ketamine/propofol versus propofol alone for emergency department procedural sedation. *Ann Emerg Med.* 2011;57(5):435
4. Mace SE, Brown LA, Francis L, Godwin SA, Hahn SA, Howard PK, Kennedy RM, Mooney DP, Sacchetti AD, Wears RL, Clark RM. Clinical Policy: Critical Issues in the Sedation of Pediatric Patients in the Emergency Department. *Ann Emerg Med.* 2008. 51(4):378-379
5. Shah A, Mosdossy G, McLeod S, Lehnhardt K, Peddle M, Rieder M. A blinded, randomized controlled trial to evaluate ketamine/propofol versus ketamine alone for procedural sedation in children. *Ann Emerg Med*. 2001;57(5):425

"When considering procedural sedation, it is important for the physician to know what it is and when to use it, and have a clear understanding of the pharmacologic agents available."

The ACA and You

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The future of health care is at our doorstep, full of numerous possibilities and unforeseeable consequences. Of course, I'm talking about the Affordable Care Act (ACA), known to some as "Obamacare."

Four years ago, the Obama administration embarked on an ambitious plan to change our health care system and – for better or worse – they have succeeded. So what is there to discuss – we're done, right? Not quite.

The ACA was designed to be released in stages; much of the regulation is yet to be written, so many opportunities for advocacy still exist. The 2012 election didn't change the power structure in Washington, DC. There remains a Democratic president and Senate sharing power with a Republican-controlled House of Representatives. Congress has been faced with a similar conflict – unsuccessfully attempting to repeal the ACA twice in the past two years. After the Supreme Court ruling affirmed the constitutionality of most of the law, it's unlikely they'll try again during this administration.

How will the ACA change ED visit patterns?

While it will be years before we can truly grasp the full impact of the Affordable Care Act, the similarly-modeled Massachusetts health care insurance reform – which was enacted six years ago – may offer some clues. As much as former Massachusetts Governor Mitt Romney tried to disengage from the reforms he enacted during his recent bid for the presidency, the ACA has a very similar design. We can therefore examine the impact of health care reform in New England to predict the ACA's national impact.

Emergency department (ED) visits in Massachusetts increased after the reforms, but not significantly more than they did nationwide.[1] An increase in the insured population, with more patients having primary care, should theoretically *decrease* ED visits, but the current evidence is contradictory. The Massachusetts analysis showed a small but significant decrease in non-urgent visits.[1]

On the other hand, a 2008 study noted that the increasing national trend in ED usage per capita could not be attributed to the uninsured.[2] It's also worth noting that Medicaid patients visit the ED at more than double the rate of uninsured, so adding patients to Medicaid rolls may drive up ED visits even if patients have primary providers.

Long-term data is obviously lacking, but Massachusetts also saw increased implementation of preventive care amongst the newly insured[3], which theoretically may decrease future ED visits. However, primary care providers have become saturated, and there's a significant portion of the population that is now insured *but unable to find a primary care provider*.[3] Will an increased implementation of preventive care ultimately lessen the ED burden? Only time will tell.

The elephant in the room: Medicare funding

We'll have more people coming to the ED who are insured – this should increase our revenue, right? Well, there's more nuance to this issue.

First, a quick history lesson: Since 1997, the Medicare Payment Advisory Commission (MedPAC) has been around to advise Congress on Medicare spending. The commission's recommendations can be adopted or rejected by Congress. The most notable rejections have been the repeated recommendations for fixing the sustainable growth rate formula (SGR). (*See the February/March 2012 issue of* EM Resident *for an in-depth explanation of the SGR*).

The ACA established the Independent Payment Advisory Board (IPAB) to oversee Medicare payment decisions. Congress can overrule IPAB only by a "supermajority" or two-thirds vote. Beginning in April 2013, the Centers for Medicare & Medicaid Services (CMS) will produce an annual projection of Medicare's per capita spending growth rate for the following two years, with a targeted rate that will initially be based on the Consumer Price Index and then the gross domestic product. If the Medicare spending projection exceeds the targeted goals, IPAB is supposed to propose annual recommendations to meet the goal. The rub is that, if Congress cannot come up with an alternate proposal to meet the target goals, they're obligated to pass IPAB's recommendations.

The proposed mechanisms have far-reaching consequences for all of medicine. ACEP and many other physician organizations, including the American Medical Association, are opposed to the current structure of IPAB. Among their chief concerns is that IPAB – endowed with great power and beholden to neither voters nor lobbyists – will disproportionally target and cut physician salaries.[4,5] Many health policy experts and economists, on the other hand, believe that it is precisely that decision-making independence that will be vital to make the unpopular choices of what treatments to cover. We will explore IPAB in depth in a future issue.

Quality benchmarks

In 2007, an initiative from the Centers for Medicare & Medicaid Services (CMS) was put in place to pair reimbursement with quality and efficiency measures, an initiative that was accelerated and encouraged by the ACA. Some of the benchmarks are quite reasonable, such as *the door-to-CT interpretation time* for strokes; some are questionable, such as *time from arrival to disposition* (which we all know is subject to multiple variables).

The problem is, some of the benchmarks are significantly flawed – for example, performing head CTs on trauma patients who do not meet the exclusion criteria (instituted in January 2012).[6] This measure frighteningly lacks evidence to support it. The head CT quality measure was instituted *against* the recommendations of the National Quality Forum; since its implementation, studies have shown that a significant percentage of the CTs done that *do not* fill the exclusion criteria were, in fact, clinically indicated.[7] This is just another sign that we physicians need to get our hands dirty – with advocacy, mind you.

RVUs (Read: your salary)

Like that trauma that comes in at 4:00 am, the fun isn't over yet. When you graduate, if you go to work in a "eat what you kill" job – where you receive a base salary plus RVUs – your pay will likely be affected by the ACA and the IPAB. RVUs, or Relative Value Units, are what pay the bills.

CMS annually evaluates services and places a value upon the service provided (i.e., a certain diagnosis and chart level), and this determines how many RVUs each is worth. The total budget is limited, so when the RVU for a procedure or type of visit goes up, somewhere another RVU must decrease.

Currently, the plan is to increase RVUs of primary care visits and decrease those of secondary care specialties to make primary care a more attractive specialty. At the 2012 update, emergency RVUs remained stable, with only a 1% across-the-board reduction due to the latest of many patches to the SGR.

Is that it?

That would be too easy. There are number of other vital issues being fought over. Among the most notable are **finding a permanent fix to the SGR formula**, **tort reform**, and **balance billing**. The ACA extended the Federal Torts Claim Act to supply medical malpractice coverage to free clinics (and other non-emergent medical facilities), acting under EMTALA to the extent provided to federal officers and employees. As we speak, emergency medicine advocacy organizations like ACEP and AAEM are lobbying to have this coverage extended to emergency physicians.

As for balance billing (the ability to bill the patient for services not covered by insurance) and tort reform, these issues primarily are being debated at the state level and need your support!

So what does this ultimately mean for emergency medicine?

We find ourselves in a state of uncertainty. ED physicians provide more uninsured coverage than those in any other medical specialty. In 2000 we provided $138,000 of coverage per physician (compared to the national average of $25,000[8]) and we're still facing an ever-increasing volume of patients. Having a significantly larger insured base could theoretically improve our bottom lines. On the other hand, there will be increased pressure to meet quality control benchmarks and pressure from administrators to reduce testing and admissions.

Legislation that will affect the future of our field is being developed, introduced, and voted on continuously. Get informed, get involved, and make your voice heard! To learn more, please visit ACEP's advocacy website at **acep.org/advocacy**, where you also can submit a letter to your representative. Also visit **emra.org > Resources > Advocacy** to sign up for the **ACEP 911 Network** to stay informed about political developments that will affect your practice. ■

References

1. Smulowitz PB, Lipton R, Wharam JF, et al. Emergency department utilization after the implementation of Massachusetts health reform. *Ann Emerg Med*. Sep 2011;58(3): 225-234 e221.
2. Weber EJ, Showstack JA, Hunt KA et al. Are the uninsured responsible for the increase in emergency department visits in the United States? *Ann Emerg Med*. 2008;52(2):108–115.
3. Long, S. *"What is the evidence on Health Reform in Massachusetts and How Might the Lessons from Massachusetts Apply to National Health Reform?"* Urban Institute. June 2010. http://www.urban.org/uploadedpdf/412118-massachusetts-national-health-reform.pdf
4. American College of Emergency Physicians (2012). ACEP Hails House Actions on Liability Reform and Repeal of IPAB [press release]. Retrieved from http://www.acep.org/Content.aspx?id=84481
5. American Medical Association (2012). AMA to the Detroit News: Medicare Pay Board Unnecessary [press release]. Retrieved from http://www.ama-assn.org/ama/pub/news/letters-editor/2012-05-17-detroit-news-medicare-pay-board-unnecessary.page
6. McHugh, M., Van Dyke, K., McClelland M., Moss D. *Improving Patient Flow and Reducing Emergency Department Crowding: A Guide for Hospitals*. (Prepared by the Health Research & Educational Trust, an affiliate of the American Hospital Association, under contract 290-200-600022, Task Order No. 6). AHRQ Publication No. 11(12)-0094, October 2011. Agency for Healthcare Research and Quality, Rockville, MD. http://www.ahrq.gov/qual/ptflow/
7. Schuur JD et al. *Assessment of Medicare's imaging efficiency measure for emergency department patients with atraumatic headache. Ann Emerg Med* 2012 Sep; 60:280.
8. American Medical Association and Center for Health Policy Research. *Physician Marketplace Report: The Impact of EMTALA on Physician Practices*. February 2003

Critical care pearls: Harvested one mile above sea level

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Rising numbers of ICU patients have led to an increasing numbers of ICU "boarders" in the ED. Depending on how full your hospital is, patients have to wait hours in the ED *under your care* before they can be transferred up to the unit. Now is the time to get involved in critical care. Check out these top pearls – summarized from the presentations at ACEP's 2012 *Scientific Assembly* – and save a life (and your sanity).

Critical care update 2012: The year in review

Drs. Evie Marcolini, Tiffany Osborn, Michael Winters

1) *In vented patients, lung-protective tidal volumes (6-8 mL/kg) not only improve in-hospital mortality, but have also been shown to have a mortality benefit at two years*. For every increase in tidal volume by 1 mL/kg, there is an 18% relative mortality risk over two years. Be vigilant about keeping your patients on lung protective tidal volumes based on *ideal* body weight.

Acute decompensated heart failure: Cutting-edge therapies to benefit now and later

Dr. Matthew Strehlow

2) *Give sublingual nitroglycerin while waiting for the NTG drip to arrive*. Standard dosing of sublingual NTG (0.4 mg SL q15 min) is equivalent to an infusion of 60-80 mcg/min. High doses of NTG drip are safe, so start your drip at 100 mcg/min and reduce that preload! Loop diuretics have adverse cardiovascular effects in in the first 15 minutes. However, if used in combination with nitrates, adverse effects such as increased afterload, vasoconstriction, and decreased renal perfusion can be avoided.

The crashing patient: Clinical pearls for pre- or post-cardiac arrest

Dr. Matthew Strehlow

3) *To prevent hyperventilation during an adult resuscitation, consider switching to a 500 mL pediatric ambu-bag (an adult bag is 1 L)*. Decreasing the bag size will reduce minute ventilation, which in turn will decrease the complications from hyperventilation. Remember, the goal for ventilation is only 6-8 mL/kg.

4) *Put a three-way stopcock on your IO to give fluid boluses*. Pulling up 60cc of NS in a syringe and pushing that through the IO works better and faster than pressure-bagging your IVF. You can also give vasopressors, push dose meds, and other infusions through an IO as long as it is in a good position. Remember to watch for pallor and signs of compartment syndrome.

Undifferentiated shock: Making a difference

Dr. Matthew Strehlow

5) *Consider adjusting your shock index calculation for patients older than 55*. Remember, Shock index = heart rate / systolic blood pressure; age adjusted shock index = Shock index x age. An age-adjusted shock index greater than 50 is a poor prognostic indicator.

Cutting-edge: Controversies in critically ill cardiac patients

Dr. Bradford Walters

6) *For your next patient in cardiogenic shock, use norepinephrine instead of dopamine*. Aside from a select patient population, patients who receive dopamine have a higher mortality than those who receive norepinephrine.

Critical care for the non-intensivist

Dr. Scott Weingart

7) *Check your inotropy by performing a bedside echo*. If the heart is hypodynamic, check your ionized calcium. Low ionized calcium can be a cause of low inotropy.

8) *Consider occult GI bleed, adrenal insufficiency, hypothyroidism, salicylate toxicity, and thiamine deficiency* in the patient who remains critically unstable and undifferentiated, despite aggressive resuscitation.

Pacemakers and AICDs: Short circuit of the electronic heart

Dr. Tarlan Hedayati

9) *When placed over a pacemaker, the magnet will turn sensing function off and allow the pacer to just pace*. Indications for placing a magnet over a pacemaker:

- Symptomatic bradycardia or no pacer activity
- Asystole
  - Slow spikes: low battery
  - No spikes: component or battery failure
- Too many spikes: over-sensing
  - Pacemaker-mediated tachycardia

BONUS PEARL: Always ensure that external pacer pads are on the patent prior to *applying the magnet.*

Abdominal pain after bariatric surgery: What are the issues?

Dr. Brian Lin

10) *Gastric lap band deflation: An emergency procedure used for band slippage or severe dysphagia.* Consult surgery first, but be prepared.

- Use a non-coring needle (like one you'd use for accessing a port).
- Find pouch in the subcutaneous tissue.
- You'll know your needle is in the pouch when it can stand upright on its own.
- Remove 1-2 mL of saline.
- Look for improvement of symptoms.

… And finally

Did you know that there are now several options for completing a **critical care fellowship**? There are FOUR pathways: internal medicine, surgery, neurology, and anesthesia. For application timelines, see the fellowship database on the EMRA Critical Care Committee website.

Check out www.empostcall.com for Dr. Adaira Landry's blog on *Updates and Critical Points*, an EM critical care-based journal club.

If you haven't already dog-eared your own copy, take a look at the **2013 EMRA *PressorDex***, compiled and edited by Dr. John Greenwood. It's the latest EMRA publication, providing guidelines to using pressors, vasoactive drugs, and other meds in the critically ill patient. Keep your eyes out for the upcoming PressorDex iPhone/iPad app! ■

Get involved!

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:

➔ Resolutions due – 4/1 ➔ Vote allocation cut off – 4/16
➔ Reference Committee applications due – 4/16 ➔ EMRA Rep Council Meeting @ SAEM – 5/16

Moneymatters

Disability insurance for EM residents: Making cents of it all!

M. Shayne Ruffing, CLU, ChFC, AEP
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One of the most challenging decisions that residents face is the acquisition of an appropriate disability income plan. Access to unbiased, reliable, consistent information is difficult to find. Furthermore, the language is unfamiliar, the investment is substantial, and there is a defined time-sensitivity to taking appropriate action. In the event you make a bad decision, the ability to make a change may be limited.

This article is dedicated to disability insurance for emergency medicine residents. What is it, why it is important, and what factors go into making an informed and educated decision?

The need

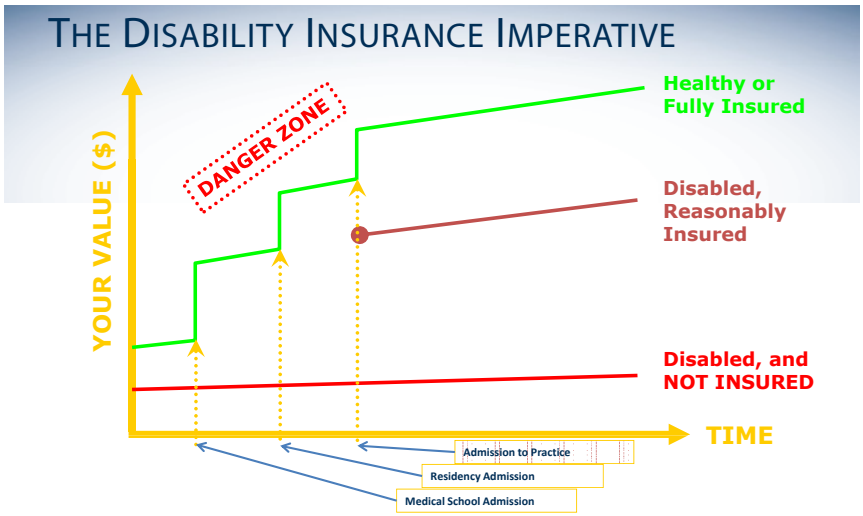
Often referred to simply as "DI," disability insurance is a financial product that will replace your income in the event you cannot work – more specifically, cannot work as an *emergency physician*. To put this in perspective, consider the *Disability Insurance Imperative* graph below.

Getting into practice is expensive and most often quantified in hundreds of thousands of dollars in student loans, credit card balances, and family-related debt. Becoming disabled midway through your career can be bad. Becoming disabled *early* in your career can be *catastrophic*.

With appropriate disability insurance, a resident can insure not only their current house staff earnings, but also the majority of their *future earnings*. The cost is not inconsequential, but neither is the benefit, if it becomes needed. Consider two employment scenarios:

- Job ONE will pay you $300,000 per year, if you're healthy – and nothing if you're disabled.
- Job TWO will pay you $290,000 per year if you're healthy – and $230,000 per year if you're disabled.

In Job TWO, you are giving up $10,000 of annual income with the assurance that your income will not go away.



INTEGRATED WEALTHCARE
Collaborative Wealth Management for the Medical Community

The market

With most insurance programs, there are many companies and products to choose from. With disability, there are a maximum of six competitive contracts for an emergency physician, depending on the physician's state of residence. What makes a contract *competitive*? Four key factors:

1. The contract is "**own occupation**," or **specialty-specific**. This is the most comprehensive form of disability protection. If an injury or illness prevents you from being able to practice in your specialty, you can receive the full benefits in your plan – regardless of your ability to work in another occupation, regardless of any new salary you receive in that new occupation.
2. The contract has **specialty limits** for residents and fellows. These contracts allow you to obtain high levels of benefits simply based on your current PGY status, without the typical limitations that would be imposed if you already were in practice.
3. The contract will **allow you to increase your benefit in the future**, without medical qualification. Once you are in practice, you can increase your protection simply by proving your financial qualification.
4. **The contract cannot be changed by anyone but you**. The premium, definitions, and discounts are all guaranteed by the company. Only *you* can facilitate a change in the terms.

The challenges

It seems counterintuitive, but disability insurance can be difficult to obtain. With most insurance, a company will charge you more to offset abnormal risk. With disability, the company will either limit the contract or simply decline to offer it. "Common" medical considerations, such as torn ligaments, back pain, old knee injuries, and even complications of pregnancy, can prevent you from being able to obtain the coverage that you would like. If you have ever seen a psychiatrist for stress or anxiety, or take medications to treat them, you're going to have difficulties. A diagnosis of ADD will result in a limited benefit; being overweight or underweight also can get you declined.

Our office reviews an average of 300 disability applications for residents every year. Between 20-25% of the applications are declined or significantly modified by the insurance company.

The opportunity

With so many challenges, what is the good news? Plenty, actually!

- If you're perfectly healthy, the process is not complicated and market competition is driving prices down and benefits up. With six contracts in most states, it's likely that we can find a good solution for you.
- As a resident, you have the ability to lock in amounts of income protection that you may never be able to obtain again. You can actually insure greater than 100% of your income *if you obtain coverage while still in training*.
- There is likely to be a ***guaranteed issue*** offering for all graduating EMRA residents, ***effective March 1, 2013***. This means that you can get a great disability plan, with no medical qualification! There also is likely to be online enrollment, eliminating the reams of paper that must commonly be processed.
- If three or more members of the same program qualify for and obtain coverage at the same time, we can negotiate a discount program for you that will reduce the permanent, lifetime cost by up to 44%.

The disability marketplace is as healthy and competitive as it has been in over a decade. I encourage you to reach out to a professional who understands how the industry works, understands the emergency medicine financial model and can guide you towards the best solution.

The action plan

Please visit the **Integrated WealthCare** website for updated emergency medicine disability information. Specific information will be located under the **Physician Strategies/EMRA Members** tab at www.integratedwealthcare.com. You can also always reach out to a member of my team for guidance at 1-866-694-6292. Ask for Jessee at ext. 1002 for assistance.

Thank you for all you do and give to our communities! ■

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

Acute respiratory failure in the cancer patient

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Near the end of your shift, a hypotensive, tachypneic, and tachycardic woman being treated for breast cancer arrives in your emergency department (ED). While assessing her ABCs, you consider the most life-threatening diagnoses that mandate immediate attention. Before reaching for the airway box, a directed history and physical – plus a quick ultrasound – may save the day.

Background

With an incidence of 10-50%, acute respiratory failure is the most common ICU admission diagnosis in patients with hematologic and solid malignancy.[1] Overall ICU mortality can reach 50% and as high as 75% mortality in those requiring mechanical ventilation.[1] Three common etiologies for acute respiratory failure are cardiac tamponade, pulmonary embolism (PE), and pneumonia.

Cardiac tamponade

Malignant cardiac tamponade, usually due to lung, breast, and hematologic cancers, can result from **chemotherapy**, **radiation**, or **direct or metastatic extension**.[2] Cardiac tamponade usually results from rapid fluid accumulation impairing diastolic filling.

Echocardiography is the most reliable indicator of tamponade – while the classically-described Beck's triad and ECG findings of low voltage and electrical alternans are less common.[2,3] Although bedside ultrasonography will detect the effusion, diagnosis can be made by **right ventricle collapse in diastole** (sensitivity 38-48%, specificity 84-100%) and **right atrial collapse in systole** (sensitivity 55-60%, specificity 50-68%).[4]

Caution: Intubating a patient with cardiac tamponade can result in PEA arrest, as these patients are highly preload dependent.[5] A bolus of IV fluids may temporize the problem, but ultimately pericardial drainage – either by pericardiocentesis or pericardial window – is required. If emergent pericardiocentesis is performed, an indwelling draining catheter should be placed, because half of malignant effusions will reaccumulate.[2]

Pulmonary embolism

Although the presence of any cancer is a risk factor for PE, ovarian and brain cancers are most highly associated with thrombotic complications.[1] Other causes of hypercoagulability include chemotherapy, central venous catheters, recent surgery, immobilization, and medications such as serum estrogen receptor modulators.[1]

The severity of the PE dictates its therapy. Therefore, diagnostic tools (i.e., CT angiography, bedside ultrasound, laboratory markers) must be promptly and efficiently used to initiate appropriate care.[7] The definitions of PE severity are as follows:

- **Massive PE**: Right ventricular dysfunction and hypotension
- **Submassive PE**: Right ventricular dysfunction and normotension; patients with submassive PE appear stable, but may go into progressive right ventricle failure
- **Non-massive PE**: Normal right ventricle function and normotension[7]

Bedside ultrasound identifies signs of right heart strain, such as right ventricle dilation and hypokinesis, or inferior vena cava collapsibility with respiratory

variation.[7] *Caution*: Always keep in mind that these ultrasound findings may be preexisting from other disease states, such as pulmonary hypertension and right ventricular infarction. Aside from ultrasound, **troponins** and **BNP** may detect signs of right heart strain.[7]

When treating non-massive and certain submassive PEs in cancer patients, low-molecular-weight heparin (LMWH) is associated with decreased mortality.[6] Due to the many contraindications to fibrinolytics, many cancer patients with massive – occasionally submassive – PE may undergo surgical embolectomy or interventional radiology (IR)-directed thrombolysis.[7]

Pneumonia

The most common cause of respiratory failure in the oncologic patient is pneumonia.[1] **Bedside ultrasound** has been shown to be superior (sensitivity 95%, specificity 95%) to chest x-ray (sensitivity 67%, specificity 85%) in its detection.[8] Important considerations in cancer patients include neutropenia, corticosteroid use, frequent hospitalizations, and risk for aspiration (i.e., head and neck cancer).[1]

Caution: Cancer patients may *not* show traditional lobar consolidation or infiltrate, so begin **empiric antibiotics** promptly.[1] Likewise, **collect sputum or tracheal aspirates** early to guide inpatient antibiotic therapy. If sputum is unable to be collected, bronchoalveolar lavage or lung biopsy may be needed. If the degree of respiratory distress warrants intubation, use **low tidal volumes** to prevent pneumothorax and ARDS.[1]

Conclusion

Cancer patients with acute respiratory failure are a challenging group to manage in the ED. Whether diagnosing cardiac tamponade or pneumonia or risk stratifying PE, **bedside ultrasound** can facilitate a rapid diagnosis and appropriate treatment. Initiate **LMWH** for those with pulmonary embolism and consider fibrinolytics, IR, and surgical-based therapies. Initiate **early antibiotics** in pneumonia, and don't forget to obtain **tracheal and sputum samples**. Aggressive efforts to narrow the differential diagnosis and initiate prompt treatment are crucial to ensure survival in the cancer patient with respiratory distress. ■

References

1. Pastores SM, Voigt LP. Acute respiratory failure in the patient with cancer: diagnostic and management strategies. Crit Care Clin. 2010 Jan;26(1):21-40.
2. McCurdy MT, Shanholtz CB. Oncologic emergencies. Crit Care Med. 2012 Jul;40(7):2212-22.
3. Jacob S, *et al.* Pericardial effusion impending tamponade: a look beyond Beck's triad. Am J Emerg Med. 2009 Feb;27(2):216-9.
4. Restrepo CS, *et al*. Imaging findings in cardiac tamponade with emphasis on CT. Radiographics. 2007 Nov-Dec:27(6): 1595-610.
5. Ho, A. *et al*. Timing of tracheal intubation in traumatic cardiac tamponade: A word of caution. Resuscitation. 2009 Feb;80(2): 272–274.
6. Erkens PM, Prins MH. Fixed dose subcutaneous low molecular weight heparins versus adjusted dose unfractionated heparin for venous thromboembolism. Cochrane Database Syst Rev. 2010 Sep 8;(9):CD001100.
7. Fengler BT, Brady WJ. Fibrinolytic therapy in pulmonary embolism: an evidence-based treatment algorithm. Am J Emerg Med. 2009 Jan;27(1):84-95.
8. Cortellaro F, *et al.* Lung ultrasound is an accurate diagnostic tool for the diagnosis of pneumonia in the emergency department. Emerg Med J. 2012 Jan;29(1):19-23.

EMF/Emergency Medicine Action Fund Grant

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The University of California San Francisco

Are "avoidable" ED visits really avoidable? Use of the NYU ED algorithm for an unintended purpose: denying payment.

A resident's guide to getting involved in wilderness medicine

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A 4:00 am midwinter radio call from EMS blares, "60-something-year-old male found down, minimally responsive, temperature unobtainable." You prepare for your hypothermic patient and think about rewarming modalities, such as passive, active external, or active internal rewarming. Ideas of sepsis, metabolic disorders (hypoglycemia, hypothyroidism, hypoadrenalism, hypopituitarism), hypothalamic and CNS dysfunction (head trauma, tumor, stroke), drug use, burns, and environmental exposure run through your head.

The critically ill patient arrives and you begin treatment, surrounded by a well-prepared emergency department staff.

But what if you looked around and saw no one but the patient – and miles of wilderness? What would you do? How would you save the patient without the support of a hospital staff and an endless supply of medications and equipment?

For those of you who are terrified by this scenario, stop reading. But **if you seek adventure, want to push the boundaries, and long to test your inner and outer strengths, read on.**

There is no better time to jump into wilderness medicine than during residency – this is when we have the easiest and most abundant access to resources and personnel. In addition to attendings and guest lecturers, there are niche groups, societies, and organizations you hear about almost by accident. The *variety* of the opportunities can be overwhelming, with no clear starting point.

So where do you begin? Since merely listing the opportunities out there would take up much of the magazine, we'll highlight and discuss the Top 10.

1. Be involved locally

Start by getting involved with wilderness groups in your area – the local ski patrol, climbing gym, mountain bike association, or search and rescue team. You can find other like-minded individuals anywhere in the country. As a medical professional, your training and insight can be a valuable resource to these groups. Look for ways to share wilderness medicine with them – and be open to what they can teach you. This is your chance to network with those who share your passion for the outdoors. They'll help you discover the myriad of opportunities in your own backyard.

2. Become a fellow in the AWM

As the field of wilderness medicine evolved, there was no formal way to recognize those with significant wilderness medicine knowledge and experience. The **Wilderness Medical Society (WMS)** developed the **Fellowship in the Academy of Wilderness Medicine (FAWM)** to identify those who achieve a demanding set of requirements, training, and experience in wilderness medicine.

"There is no better time to jump into wilderness medicine than during residency – this is when we have the easiest and most abundant access to resources and personnel."

To achieve fellow status, a candidate must accumulate a minimum of 100 credits in eligible activities and experiences over a five-year period. The motivated resident can earn many, if not all, of these credits *during* residency. It's not your typical to-do list – the fellowship requirements provide a wonderful structure for gaining the valuable experiences you've been searching for. Cost to become a candidate for the fellowship is $225. Besides the AWM, there are 11 institutions providing post-residency fellowships in wilderness medicine.

3. Organize a formal wilderness medicine group at your residency

Wilderness medicine groups are becoming an integral part of medical schools and residency programs. Some residencies offer well-organized wilderness medicine electives. Some include a formal specialty track. Others offer an official post-residency fellowship associated with their program.

Most, however, have nothing official – *yet*. If your residency has an established wilderness program, get involved and make it better. If there isn't a wilderness program, talk to your fellow residents to gauge their level of interest. With help from faculty, *you* can establish an official wilderness medicine program! Creating a formal process ensures opportunities exist for you, your fellow residents, and your successors.

4. Get involved with a committee

There are a handful of wilderness medicine organizations to join. One of the largest and most active is the aforementioned WMS. Membership for residents is $100. The newly formed **EMRA Wilderness Medicine Committee** is another active group – and the only one providing *resident*-specific information and leadership opportunities.

ACEP and SAEM have their own wilderness medicine sections, which you can join for free or at minimal cost.

Look at their websites for an outline of membership benefits. Joining an organization, however, is just the price of admission; what matters most is *what you do once you're in*. One of the best ways to get involved is to join a committee within an organization, attend the meetings, and get to work. This will get you involved with other people in the field and provide opportunities to participate in education, publications, research, and any other areas of interest.

5. Get certified

Become official and pursue additional training. We can always use one more certification, right? Organizations such as the **Wilderness Medicine Institute (WMI)** and **Aerie** offer several certification courses ranging from a two-day Wilderness First Aid (WFA) course to the Wilderness EMT (W-EMT) course, which takes more than a month to complete. One of the most popular courses is Advanced Wilderness Life Support (AWLS), a multi-day course that includes lectures and hands-on experience. Completing one of these courses will give you a strong foundation in current wilderness medicine topics. Check them out and find one that will work for you.

6. Give a lecture

Of the many opportunities in wilderness medicine, one of the most accessible is the opportunity to teach. When completing required presentations in residency, choose a topic in wilderness medicine. As you connect with local outdoor groups, offer to do a lecture for them.

Wilderness medicine topics make for fun and very entertaining presentations. Groups – medical and non-medical alike – will find them interesting and useful. Tailor your presentations to the experience and educational level of your audience. There are plenty of resources to prepare an up-to-date and evidence-based presentation, including the authoritative tome *Wilderness Medicine* by Dr. Paul Auerbach, the *Wilderness & Environmental Medicine Journal*, and prepared lectures available from WMS.

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WildernessMedicine

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7. Use your elective rotations wisely

In wilderness medicine, nothing is as valuable as hands-on experience. If you're serious about this specialty, using elective time to pursue medical experience in a wilderness setting is a great option. This can be done as part of an official wilderness medical course, an international medical mission, or something you arrange on your own.

Both the ACEP Wilderness Medicine Section and WMS have current lists of elective opportunities for residents and students. Other groups such as WMI offer courses and medical expeditions. *Note*: Set up your elective time early, as opportunities are popular and spots fill quickly.

"…if you seek adventure, want to push the boundaries, and long to test your inner and outer strengths, read on."

8. Research

All residencies require an academic project. The opportunities to do research in wilderness medicine are wide open. If you're not sure where to start, just think of your favorite outdoor activities and identify associated medical issues. Likely, some of the medical care is based on anecdotal evidence, at best. Think of a way to test the validity of what is being done –you have yourself a project! The field of wilderness medicine needs strong evidence-based research. Likewise, there are ample opportunities for presentation and publication of quality studies.

9. Attend a conference

Major academic conferences are hosted and supported by the WMS and are held throughout the year. Wilderness and Travel Medicine is another popular provider of conferences and medical expeditions. There are also a number of smaller, local conferences hosted by medical schools and other outdoor groups.

Attending a conference provides invaluable opportunities to network and learn about wilderness medicine topics from world-renowned experts. *Note*: Conferences tend to be held in the most beautiful areas in the country, so plan on sneaking in some skiing or hiking.

10. Get out and enjoy the wilderness

Residency training is busy, and finding time to travel and enjoy the outdoors can be tough. Go climb a mountain, run a river, or hit the slopes. Just remember, one of the best ways to stay involved in wilderness medicine is to keep your passion alive. ■

To find more ways to get involved and links to organizations mentioned in this article, visit the EMRA Wilderness Medicine Committee webpage at www.emra.org.

Websites

ACEP Wilderness Medicine Section: www.acep.org/wildernesssection

Aerie: aeriemedicine.com

AWLS: awls.org

FAWM: wms.org/fawm

SAEM Wilderness Medicine Interest Group: beta.saem.org/saem-community/interest-groups

WMI: nols.edu/wmi

WMS: wms.org

WMS Conferences: www.wms.org/conferences/default.asp

Wilderness and Travel Medicine Conferences: wilderness-medicine.com

YPS-EMRA Call for Posters

for the ACEP Leadership and Advocacy Conference

May 19, 2013

Washington, DC

Young Physician Section and EMRA

Abstracts will be accepted January 28, 2013 – March 29, 2013.

Presenters will be notified by April 15, 2013

Questions, more information and Abstract submissions should be sent to academicaffairs@acep.org

2013 ACEP Leadership and Advocacy Conference

May 19-22, 2013

Washington, DC

Leadership and Advocacy Residents and Young Physicians

May 19, 2013

11:00 am-12:00 pm	EMRA Health Policy Committee Meeting *(All EMRA and ACEP Young Physician Section Members invited to attend)*
12:30 pm - 12:40 pm	Welcome and Introduction Michael Gerardi, MD, FACEP, *ACEP Vice President*; Cameron Decker, MD, *EMRA President*
12:40 pm - 1:15 pm	Introduction to Advocacy Resources Sarah Hoper, MD, JD, *EMRA Legislative Advisor*
1:15 pm – 1:50 pm	Current Issues in Health Policy Nathaniel Schlicher, MD, JD, and Alison Haddock, MD *Past EMRA Legislative Advisors, Co-Editors, EMRA EM Advocacy Handbook*
1:50 pm - 2:25 pm	Quality Measures – Impact to EM Physicians Jesse Pines, MD, MBA, FACEP, *Center for Healthcare Quality, Washington DC*
2:35 pm - 3:50 pm	Advocacy Journal Club *Facilitated by Aisha Liferidge, MD, FACEP, University of Maryland Medical Center, EMRA Board of Directors, YPS Leaders and GW Fellows*
4:00 pm – 6:00 pm	Delivering Powerful Presentations Presented by The Communications Center
6:00 pm - 7:00 pm	Resident and Young Physician Section Reception *Underwritten in part by Team Health and Ortho-McNeil*

2013 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, 2013

For more information and sponsorship forms, please visit www.emra.org

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

PEER (Physician's Evaluation and Educational Review in Emergency Medicine) is ACEP's Gold Standard in self-assessment and educational review. These questions are from the latest edition of PEER—PEER VIII—which made its debut at the 2011 Scientific Assembly. To learn more about PEER VIII or to order it, go to www.acep.org/bookstore.

1. In a patient who presents with diplopia, unilateral ptosis, inability to adduct, depress, or elevate the eye, and intact pupillary responses to light and accommodation, the most likely diagnosis is:
   A. Botulism
   B. Diabetic mononeuropathy
   C. Myasthenia gravis
   D. Thyroid ophthalmopathy

2. A 55-year-old man with a history of severe osteoarthritis presents with joint pain of several months' duration despite taking several over-the-counter and prescription pain relievers. He also reports worsening abdominal pain for the past month. On examination, the patient is icteric and has right upper quadrant tenderness. Which of the following is most important in determining appropriate treatment?
   A. Abdominal CT scanning
   B. Alkaline phosphatase and gamma glutamyltransferase level testing
   C. Aspartate aminotransferase and acetaminophen level testing
   D. Right upper quadrant ultrasonography

3. Which of the following types of burn has the potential to cause the most severe corneal injury?
   A. Acid
   B. Alkaline
   C. Infrared
   D. Ultraviolet

4. A mother brings in her 5-day-old son because she is concerned about his color. She says he has not fed well for the past 24 hours and always seems to be breathing hard. Vital signs are blood pressure 73/44, pulse 120, respirations 65, and temperature 37.2C (99°F). Physical examination reveals perioral cyanosis and duskiness of the face and trunk. Immediate management includes:
   A. 100% oxygen by nonrebreather mask
   B. Isotonic crystalloid fluid 20 mL/kg
   C. Phenylephrine 5 mcg/kg IV bolus
   D. Synchronized cardioversion at 0.5 to 1 J/kg

5. A 27-year-old man presents immediately after vomiting at lunch and then aspirating. He has an occasional cough but otherwise feels well. He is afrebile with a respiratory rate of 18 and oxygen saturation 96% on room air. Lung sounds are clear, and there are no signs of respiratory distress. Chest radiograph is clear. What is the next step in management?
   A. Administer antibiotics
   B. Administer steroids
   C. Observe the patient for a few hours
   D. Perform bronchoscopy

Answers
1. B 2. C 3. B 4. A 5. C

continued from cover

Landmark articles series: Managing MI

The data starts to get interesting when the authors evaluate re-infarction, stroke, and bleeding risk. As one might expect, **streptokinase was associated with an increased risk of bleeding requiring transfusion, but *not* a decreased risk of re-infarction (unless combined with aspirin)**. Conversely, **aspirin reduced both re-infarctions and stroke, but wasn't mired in the messy side effect of major bleeding**. So while most of us were still watching *Sesame Street*, these folks figured out that aspirin saves lives. And that's why we give it out like candy.

Paper #2 – Should we send NSTEMI + UA to the cath lab?

Article two comes from *The Cochrane Library*, written by Hoeing, et al.: "Early Invasive vs. Conservative Strategies for Unstable Angina and non-ST Elevation Myocardial Infarction in the Stent Era." This was a retrospective analysis of several papers, which attempted to determine if sending patients with NSTEMI or unstable angina (UA) to the cath lab (instead of treating them medically and observing them) would be worth the trouble. In other words, is it worth waking up the interventional cardiologist at 3am to perform a cardiac catheterization?

The endpoint measurements were all-cause death: Fatal MI, MI, and refractory angina (what we in emergency medicine colloquially call "badness"). The results showed that performing **cardiac catheterization in NSTEMI/UA patients reduced mortality and MI at two-five years**, and **decreased both refractory angina and hospitalizations at up to one year**. Not too bad; but it's not all sunshine.

It's suggested that **NSTEMI/UA patients double their risk of peri-procedure MI** and **increase their risk of bleeding by 1.7 if they undergo an invasive procedure**. This analysis also had difficulty applying its data to women. Data also wasn't risk-stratified according to the individual. And don't forget the relative risk reduction – 0.75 for mortality and 0.67 for angina at one year (pretty good, but not perfect).

In this analysis, however, only one study used **glycoprotein IIb/IIIa receptor antagonists** (like abciximab and eptifibatide), which are now routinely used in clinical practice – they were associated with a **significant benefit when used with the early invasive approach**. All in all, though, the analysis looked at nearly 8,000 patients, so it's still a solid and applicable study.

So now, after you've decided to direct your NSTEMI patient to the cath lab, what do you do for the patients you have left over? To answer that question, we move on to the next study.

Paper #3 – How about heparin?

This is another *Cochrane Review*, written by Magee, et al, in 2008. Their aim was to determine the usefulness of heparin in NSTEMI. It's become standard practice to "heparin-ize" STEMI patients in the emergency department. Until this study, there hasn't been great data on whether to give heparin to the less-than STEMIs: NSTEMI or unstable angina (UA).

Looking at 3,118 patients, Magee drew the following results in "Heparin vs. Placebo for Acute Coronary Syndrome": **Heparin or LMWH did *not* reduce mortality in NSTEMI/UA patients** when compared to placebo. **It did, however, reduce progression to MI**. Statistical number-crunching revealed that 33 patients were at the number needed to treat (NNT) to reduce progression to MI with heparin, but for every 17 patients treated, you get one episode of minor bleeding – the number needed to harm (NNH).

Basically for every patient in whom you stop an MI, two others will bleed – albeit a minor bleed. That's a 2:1 risk-to-benefit ratio for no improvement in mortality; but, all things considered, it might be worth the risks to administer heparin. ■

Hopefully, with this information, you'll be on your way to being more like "that" guy. If not, at least you won't be getting that poor cardiologist out of bed when he should be sleeping. Just remember: "According to Hoeing, et al…"

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New Brunswick, NJ

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Call for 2013 EMRA Spring Award Nominations

It's time to nominate yourself or a colleague for an EMRA Award. Visit the emra.org website for application instructions. Deadline for submission is March 15. Awards will be presented at the EMRA Award Reception, Friday, May 17, during the SAEM Annual Meeting in Atlanta.

EMRA Travel Scholarships to SAEM
EMRA will sponsor six $500.00 travel scholarship for active resident members to attend the 2013 SAEM Annual Meeting.

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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 a residency director who serves as a role model for residents and exemplifies those qualities residents value in a mentor.

Assistant 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.

ACEP RESEARCH FORUM

Abstract Submissions

October 14-15, 2013
Seattle, WA

Abstracts Due
April 26, 2013

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

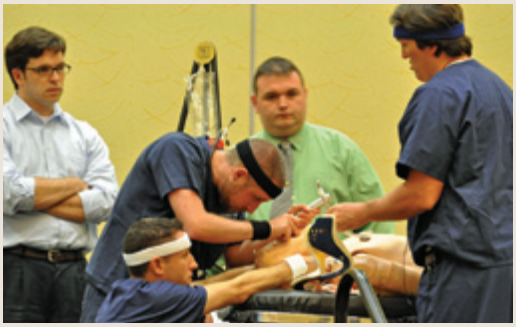
The **Best Medical Student Paper Award** will be given to a medical student who is the primary investigator of an outstanding abstract presentation.

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
2013 ACEP Research Forum

Call for Teams! EMRA Resident SimWars @ SAEM 2013 Competition

We are recruiting teams to compete in the EMRA Resident SimWars Competition, which will be held at SAEM, May 17 in Atlanta, GA. The purpose of the competition is to allow residencies from various institutions, to demonstrate their skills in teamwork and communication during the management of simulated cases in front of a live audience. Each team will consist of four residents from the same residency program. We recommend one senior resident at the minimum. If your residency program would like to compete, please submit entries to **simwars@gmail.com** and include the following information: 1) Name of your residency; 2) Program Director; 3) Team member's names and PGY year; and 4) Email addresses for all team members.



Deadline: March 11, 2013

Risk management pitfalls for sodium disorders

From the October 2012 issue of Emergency Medicine Practice, **"Sodium Disorders In The Emergency Department: A Review Of Hyponatremia And Hypernatremia."** *Reprinted with permission. To access your EMRA member benefit of free online access to all EM Practice, Pediatric EM Practice, and EM Practice Guidelines Update issues, go to www.ebmedicine.net/emra, call 1-800-249-5770, or email ebm@ebmedicine.net.*

1. **"The extended-care facility sent the elderly patient here for treatment of her urinary tract infection."**
   Often, the elderly patient cannot provide a good history on arrival to the ED. Always check electrolytes in elderly patients with underlying medical problems.

2. **"The patient was significantly dehydrated from her gastrointestinal illness, so 2 large-bore IVs were established, and I ran normal saline in on the pressure bag as fast as possible."**
   Never correct sodium disorders too rapidly. Be aware that normal saline is not always the initial fluid of choice in hyponatremia or hypernatremia.

3. **"After the marathon, the runner presented to the medical tent complaining of headache and nausea. The medic gave her a 32-ounce bottle of water and a 16-ounce bottle of sports beverage and told her to drink them both quickly."**
   Always consider hyponatremia in any runner or endurance athlete with altered mental status. After a long endurance event, altered behavior, nausea, vomiting, and headache may not be secondary to dehydration.

4. **"The patient is currently undergoing chemotherapy for lung cancer and presented to the ED with cold-like symptoms. She was found to have a sodium of 116 mEq/L. On review of her records, her sodium at her last oncology clinic visit, 2 weeks prior, was 119 mEq/L."**
   Never raise serum sodium by more than 10 to 12 mEq/d in patients with chronic hyponatremia.

5. **"The patient presented with fatigue, weakness, diarrhea, loss of appetite, and weight loss. Her sodium was found to be 126 mEq/L on evaluation. She said she had been craving salty foods for the past month and had also noticed some significant hair loss."**
   Always consider adrenal insufficiency in hyponatremia patients who are either dehydrated, acidotic, and/or hyperkalemic.

6. **"The patient presented from her dormitory with seizure activity, and her sodium was found to be 131 mEq/L. I began intravenous fluid replacement to correct her hyponatremia, but I didn't evaluate her for meningitis."** Mild to moderate hyponatremia (sodium 125 mEq/L to 135 mEq/L) does not cause altered mental status or seizures. Look for another cause.

7. **"A diabetic patient presented via ground EMS with altered mental status and tachycardia. Her venous blood gas, obtained immediately, revealed a blood sugar of 650 mg/dL and a sodium of 118 mEq/L."**
   Hyperglycemia can cause hyponatremia; correct the glucose elevation, not the sodium fall. The body tries to maintain stable osmolarity in the setting of profound hyperglycemia.

8. **"The patient's sodium improved from 120 mEq/L on arrival to 130 mEq/L at the time the admission request was initiated. She was transferred to the observation area to await her bed upstairs in the medical wing. The nurse called me to report that the patient was significantly hypotensive and having stroke-like symptoms. "**
   Always check sodium hourly in patients with severe hyponatremia.

9. **"He came to the ED with a blood sugar that was very elevated, but his serum sodium was normal."**
   A significantly hyperglycemic patient with a normal sodium level is very dehydrated and has hypernatremic dehydration.

10. **"He was brought to the ED from a bar because his friends were concerned that he had something slipped into his drink. They informed the emergency clinician that, although he drinks frequently, he had never acted this drunk before."**
    Remain cautious when diagnosing alcohol intoxication without further evaluation. Sodium abnormalities frequently occur in heavy alcohol abuse and MDMA (ecstasy) dependence. ■

EB MEDICINE Improving Patient Care Pediatricpearls

Risk management pitfalls for biomarkers

From the October 2012 issue of Pediatric Emergency Medicine Practice, **"The Role Of Biomarkers In Common Pediatric Emergency Department Complaints: An Evidence-Based Approach."** *Reprinted with permission. To access your EMRA member benefit of free online access to all EM Practice, Pediatric EM Practice, and EM Practice Guidelines Update issues, go to www.ebmedicine.net/emra, call 1-800-249-5770, or email ebm@ebmedicine.net.*

1. **"My patient recently underwent chemotherapy, but I would like to use a biomarker to help facilitate the diagnosis."**
   Studies examining the diagnostic ability of biomarkers nearly always exclude immunocompromised patients. Practitioners should not apply biomarkers to the clinical scenarios discussed in this review if the patient is potentially immunocompromised.

2. **"I know he has been on antibiotics for the last 24 hours, but I am still going to draw a PCT level."**
   In nearly every study addressed here, patients were excluded if they had received antibiotics recently. Applying biomarkers, particularly PCT, in these settings is not recommended and can falsely reassure the practitioner with their very low values.

3. **"I thought that a normal WBC and a normal CRP ruled out acute appendicitis."**
   While this may be true in the adult literature, this statement is untrue in the pediatric population. A normal WBC and normal CRP significantly decrease the posttest probability of having an acute appendicitis, but it does not rule out the disease.

4. **"In that child with hip pain, I didn't think I needed a blood culture if the CRP and ESR came back normal."**
   A low CRP and low ESR decreases—but does not exclude—the likelihood of a septic joint. While joint cultures are the gold standard in diagnosing septic arthritis, joint aspirates can be negative and many of these infections are hematogenously spread. For these reasons, always get a blood culture in any patient who has septic arthritis in the differential diagnosis.

5. **"If the PCT level comes back normal, I don't need to do a lumbar puncture, even though he's got a fever and headache."**
   Biomarkers must be applied appropriately. A normal PCT can help differentiate bacterial from viral meningitis, but it cannot exclude other etiologies of headache and neck pain. This statement is an inappropriate application of PCT in this clinical setting.

6. **"I am going to get some labs and send this kid home quickly. He's only had pain for a couple of hours."**
   Biomarkers are an adjunct to the emergency clinician's decision-making process, not a replacement. The duration of symptoms should factor into the clinician's assessment. Refer to Table 1 for biomarker time to onset.

7. **"If the child has hip pain, a high ESR, and elevated WBC, it has to be a septic joint."**
   Not true. Some studies only show a PPV ranging from 72% to 93% with these 3 criteria. If the child also has a fever, then the PPV is much higher and septic arthritis is much more likely.

8. **"So the child has viral meningitis. Send him home."**
   Before sending home any child with meningitis, assess the overall clinical picture. Viral meningitis patients, while not requiring antibiotics, can be very ill and require hospitalization.

9. **"The CRP and ESR are normal. It can't be a septic joint."**
   Studies finding patients with a normal CRP, normal ESR, normal WBC, no limp, and no fever have still shown a PPV of septic arthritis ranging from 0.2% to 16.9%.

10. **"The 2-week-old girl has a fever but looks great. The PCT is normal. I think I'm just going to send her home with her mom."**
    Most authors agree that this vulnerable population (≤ 30 days old) should always be admitted for observation if they are febrile. ■

Emergency Medicine

from Bookshelf to Bedside

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Opportunity for 2013 for BP/BC EM physician at 27,000 volume ED in Council Bluffs, Iowa. This is a highly appealing ED in a suburban town in minutes from Omaha Nebraska. An excellent package is offered with guaranteed hourly rate plus additional incentive, family medical plan, employer-funded pension, CME/expense account, shareholder status at one year with no buy-in, and additional benefits. As Nebraska's largest city and a leader on many "best cities" lists, Omaha is home to Fortune 500 companies, celebrated jazz and theatre, several universities, and a world famous zoo. For additional information contact Rachel Klockow, Premier Physician Services, (800) 406-8118, e-mail rklockow@premierdocs.com, fax (954)986-8820. ■

Nevada, Henderson and Las Vegas: Full-time and part-time opportunities for Pediatric Emergency Medicine Physicians. Join an outstanding team of fellowship-trained/board-certified Pediatric Emergency Medicine Physicians at two sites. University Medical Center is a Level I Trauma Center seeing 31,000 pediatric ED pts./yr. with excellent back up, PICU, and 24-hour in-house intensivist coverage. There is also an associated pediatric residency (36 residents). Time will be split with shifts also at St. Rose Dominican Hospital's Siena Campus, which is situated in an upscale suburban area. EMP offers democratic governance, open books, and excellent compensation/bonus, plus shareholder status. Compensation package includes comprehensive benefits with funded pension (up to $33,000/yr.), CME account ($8,000/yr.), family medical/dental/prescription/vision coverage, short and long term disability, life insurance, malpractice (occurrence) and more. Contact Bernhard Beltran at 800.359.9117, e-mail bbeltran@emp.com. ■

Nevada, Las Vegas: St. Rose Dominican Hospitals. Open books, equal profit sharing, equity ownership and no buy-in! Work in modern, highly regarded community hospitals seeing 26,000 – 51,000 emergency patients per year. Emergency Medicine Physicians (EMP) offers democratic governance, open books, and excellent compensation/bonus, plus shareholder status. Compensation package includes comprehensive benefits, family medical/dental/prescription/vision coverage, short and long term disability, life insurance, malpractice (occurrence) and more. If you have ever considered living in Las Vegas now is your chance; this rare opportunity will fill quickly. I urge you to contact me, Bernhard Beltran, at your earliest convenience directly at 800-359-9117 or email your CV to bbeltran@emp.com for immediate consideration. ■

New Hampshire, Lakes Region: 25 person Democratic, Independent ER Physical group looking for BC/BP ER Physician for 2013. ED volume 35,000 y/triple MD coverage. Excellent compensation package, beautiful lakes and mountains. 1.5 hrs to Boston, 1.5 hrs to NH/Maine coast. Contact Dr. Sandra Maruszak, Lakes Regional General Hospital, smaruszak@lrgh.org or 603-527-2819. ■

New York, Long Island, Albany and Cortland: Brookhaven Memorial Hospital is in Patchogue on the southern shore of Long Island and sees 74,000 ED pts/yr. Cortland Memorial Hospital is a modern, full-service

THE UNIVERSITY OF TEXAS
MD Anderson Cancer Center

EMERGENCY MEDICINE FACULTY POSITIONS

The University of Texas MD Anderson Cancer Center has established the first academic Department of Emergency Medicine in a comprehensive cancer center and is presently recruiting faculty. MD Anderson is the nation's foremost comprehensive cancer care center as rated by U.S. News & World Report's "Best Hospitals" survey. The MD Anderson family includes more than 18,000 members, including 1,500 faculty, each playing a critical role in our mission to eliminate cancer.

Tenure Track Research Faculty Position: We are seeking applicants for one tenure-track research faculty position to complement our ongoing research. The applicant should have a doctoral degree in a health-related field and a record of excellence in research as demonstrated through publications and the ability to obtain extramural grant research. A successful candidate will be expected to develop an original, creative, and independent research program and have the opportunity to participate in ongoing research with world-class clinical and laboratory researchers. Candidates with independent, extramural funding preferred. MD Anderson provides extensive opportunities for collaboration and depart-mental research priorities include pain, palliative care, health services research and epidemiology. Interested applicants should send a cover letter, CV and list of three references.

Assistant or Associate Professor- Clinical Track: We are also seeking Emergency Medicine board-prepared or board-certified physicians to join our growing faculty. Responsi-bilities include providing patient care to patients with oncologic emergencies in our 45-bed Emergency Center; educating medical students, residents, and fellows; and engaging in academic pursuits to support the development of oncologic emergency medicine as a distinct sub-discipline. Interested applicants should send a cover letter, CV and list of three references. Competitive candidates will be asked for medical school transcripts and invited for personal interviews.

Oncologic Emergency Medicine Fellowship: The Oncologic Emergency Medicine fellowship provides 12 months of advanced training in the emergency treatment of cancer patients. Trainees may focus on pain management, palliative care, or operations research. Our program is designed to facilitate expertise in the diagnosis and treatment of a wide variety of conditions that are specific to cancer patients presenting to the emergency department as well as to advance scholarship in the growing sub-discipline of oncologic emergency medicine. Eligible candidates should have completed an ACGME-accredited residency program in Emergency Medicine, although candidates with other training back-grounds will be considered on a case-by-case basis. Competitive candidates will be asked for medical school transcripts and invited for personal interviews.

Application Process: Personal statements, curriculum vitae, and three letters of recommendation are required. Qualified candidates for any of the listed opportunities are invited to send their applications to:

Knox H. Todd, M.D., MPH, Professor and Chair, Department of Emergency Medicine, Unit 1468, The University of Texas MD Anderson Cancer Center
PO Box 301402, Unit 1468, Houston, TX 77030-1402, khtodd@mdanderson.org

MD Anderson Cancer Center is an Equal Opportunity Employer and does not discriminate on the basis of race, color, national origin, gender, sexual orientation, age, religion, disability, or veteran status except where such discrimination is required by law. All positions at The University of Texas MD Anderson Cancer Center are security sensitive and subject to examination of criminal history record information. The University of Texas MD Anderson Cancer Center values diversity in its broadest sense. Diversity works at MD Anderson. Smoke-free and drug-free work environment.

UT MEDICINE
HEALTH SCIENCE CENTER SAN ANTONIO

The University of Texas Health Science Center at San Antonio, School of Medicine. Emergency Medicine, is recruiting for highly qualified full-time residency trained academic Emergency Medicine Physicians. Optimal candidates will have an established track record of peer-reviewed research, excellence in education and outstanding clinical service.

University Hospital, the primary affiliated teaching hospital of the University of Texas Health Science Center at San Antonio, is a 498 bed, Level 1 trauma center which treats 70,000 emergency patients annually. The University Hospital Emergency Department serves as the primary source for uncompensated and indigent care as well as the major regional tertiary referral center with a focus on transplant, neurologic, cardiac, diabetes and cancer care. A new, state of the art Emergency Department with 80 beds will open in early 2014.

The successful candidate will join a young, enthusiastic group of academic Emergency Physicians committed to creating the premiere Emergency Medicine residency program and academic department in the state of Texas. Our initial class of Emergency Medicine residents will start in July 2013. Department status within the School of Medicine is anticipated within 12 months. Academic Emergency Physicians with expertise in EMS, Ultrasound, Toxicology, and multiple dual board certified EM / IM physicians currently round out the faculty.

The University of Texas Health Science Center at San Antonio offers an highly competitive salary, comprehensive insurance package, and generous retirement plan. Academic appointment and salary will be commensurate with experience. Candidates are invited to send their curriculum vitae to: Bruce Adams, M.D., FACEP, Director, Center for Emergency Medicine, 7703 Floyd Curl Drive, MC 7840, San Antonio, TX 78229-3900. Email: adamsb@uthscsa.edu All faculty appointments are designated as security sensitive positions. The University of Texas Health Science Center at San Antonio is an Equal Employment Opportunity / Affirmative Action Employer.

Emergencymedicine.uthscsa.edu

facility situated in the Finger Lake Region between Syracuse and Ithaca (34,000 ED pts/yr). Albany Memorial Hospital has a new ED (44,000 pts/yr) and hosts EM resident rotations, while Samaritan Hospital in Troy is a respected community hospital, minutes from Albany seeing 46,000 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, phone 800-828-0898 or fax 330-493-8677. ■

New York, Westchester County: Full-Time, Board Certified ED Physician. Join our expanding Emergency Medicine Group. We staff two ED's, 10k and 40k visits. We are adding emergency physicians in our busier ED. 42 hours per day of physician coverage with additional midlevels in the main ED and in fast track. MediTech 6.0 EHR with dragon dictation for enhanced productivity. Excellent specialty backup, full imaging services, and 24/7 radiology readings. Excellent compensation, 6 weeks paid time off, CME account, 401K, profit sharing, health and disability. We are 15 minutes from Manhattan, in leafy Westchester County with beautiful Hudson River views. Award winning public and private schools, beautiful hiking and biking trails, and more cultural opportunities than one could possibly imagine. For more information about this position, contact Eric Nazziola, MD, MBA, FACEP at email: enazziola@hotmail.com or phone 917-821-2518. ■

North Carolina, Charlotte: EMP is partnered with eight community hospitals and free-standing EDs in Charlotte, Gastonia, Lincolnton, Pineville and Statesville. A variety of opportunities are available in urban, suburban and smaller town settings with EDs seeing 22,000 -104,000+ pts./yr. EMP is an exclusively physician owned/managed group with open books, equal voting, equal profit sharing, equity ownership, funded pension, full benefits and more. Contact Ann Benson (careers@emp.com),

STARTING EMERGENCY MEDICINE CAREERS OUT ON THE RIGHT FOOT

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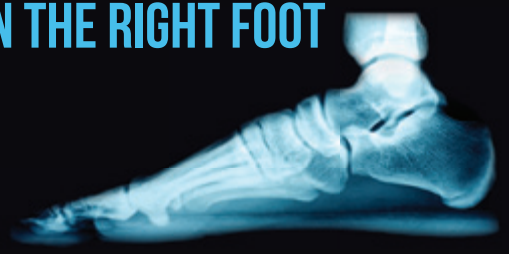

Questcare Partners is a physician-owned and -operated Emergency Medicine organization. We are a truly democratic group with an entrepreneurial vision and dedication to career growth and development. Questcare delivers state-of-the-art emergency care in nineteen ultramodern facilities located throughout Dallas/Fort Worth, El Paso, and San Antonio.

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SHARON HIRST - 214.431.3952
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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,
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Phone (757) 467-4200
Email bestinmed@gmail.com

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Emergency Medicine Physicians, 4535 Dressler Rd. NW, Canton, OH 44718, phone 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, with 74,000 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, phone 800-828-0898 or fax 330-493-8677. ■

Ohio, Cincinnati: New Hospital Opens Soon! Mercy West, a 250-bed hospital will be opening in 2013 with an anticipated ED volume of 50,000-60,000. Located in the western suburbs, this will be a state-of-the-art facility with great opportunities for BP/BC EM physicians. Premier Physician Services provides an outstanding model offering equity-ownership at one year with no buy-in; giving you a voice and ownership in your company. Excellent package includes guaranteed rate plus additional incentives, family medical plan, employer-funded pension, CME/expense account and additional benefits. For additional information contact Kim Rooney (800)726-3627, ext 3674, e-mail krooney@premierdocs.com, fax (937)312-3675. ■

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. Due to recent expansion, Premier also has additional Cincinnati opportunities

It's the perfect fusion of cosmopolitan flair and personality that is the spirit of Tallahassee. It's where college town meets cultural center. Where art and history meet nature. A vibrant combination of outdoor adventure, museums, dining and nightlife. **JOIN US IN TALLAHASSEE.** One of our hospital partners, Capital Regional Medical Center, is seeking a top ER doc. Maybe that's you. Get in touch with us.

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a.lane@titandoctors.com
877.281.3001 x 2242

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available. Contact Kim Rooney, Premier Physician Services, (800) 726-3627, ext. 3674; krooney@premierdocs.com. ■

Wexner Medical Center

Ohio, Columbus: The Ohio State University Wexner Medical Center's Department of Emergency Medicine is offering the following **Fellowship** positions beginning in July 2013: **ACGME Accredited:** EMS, Toxicology. **Non-ACGME Accredited:** Ultrasound, Education, Administration. All fellows will receive appointments at The Ohio State University College of Medicine. Non-ACGME fellows will receive an auxiliary faculty appointment and ACGME fellows will receive a PGY-4 appointment. Fellows must have successful completed an Emergency Medicine residency program and be eligible to obtain an Ohio medical license. We offer a competitive salary with a full university benefit package. A CME allowance and tuition assistance are also provided. Complete descriptions of all fellowship programs can be found at http://www.osuem.com. Send CV and cover letter to Mark G. Angelos, MD, Professor and Interim Chairman, Department of Emergency Medicine, The Ohio State University Wexner Medical Center; mary-jayne fortney@osumc.edu; 614-366-8693. AAEOE. ■

Ohio, Columbus: A very appealing opportunity 30 minutes south of downtown Columbus. Enjoy working in the environment of a rural community hospital with easy access to all the amenities of Columbus. This ED has an annual volume of 34,000 and 40 hours of physician daily coverage. Excellent package offers guaranteed hourly rate plus additional incentive as well as malpractice, family medical plan, employer-funded pension, CME/Expense Account plus equity-ownership at one year with no buy-in! For additional information contact Amy Spegal, Premier Physician Services, (800)726-3627, ext. 3682, e-mail aspegal@premierdocs.com, fax (937)312-3683. ■

Ohio, Dayton: BP/BC EM physician sought to join solidly established, democratic group at 42,000 volume ED in northern suburb. Enjoy working in a collegial environment and outstanding physical plant. Excellent package includes guaranteed hourly plus incentive, malpractice, employer-funded pension, family medical plan, CME, and more. Contact Greg Felder, Premier Physician Services, (800) 726-3627, ext 3670, e-mail gfelder@premierdocs.com, fax CV (937)312-3671. ■

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

Ohio, Lima: Meet your financial and practice goals. Named among Top 100 Hospitals, this 57,000 volume, level II ED will complete an expansive, state-of-the art renovation in 2012. Excellent coverage and great compensation make this opportunity ideal. Package includes guaranteed hourly plus RVU and additional incentives, malpractice, employer-funded pension, family medical plan CME/expense account, and shareholder opportunity at one year with no buy-in. Contact Kim Rooney,

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Premier Physician Services, (800)726-3627, ext. 3674, krooney@premierdocs.com, fax (937)312-3675. ■

Ohio, Marion: Appealing opportunity 45 miles north of Columbus in 48,000 volume ED. State-of-the-art facility has excellent coverage of 62 physician & 18 PA hours daily. Equity-ownership model provides guaranteed hourly plus additional incentive, family medical, employer-funded pension, shareholder status with no buy-in and more. Contact Amy Spegal, Premier Physician Services, (800) 726-3627, ext. 3682, aspegal@premierdocs.com, fax (937) 312-3683. ■

Ohio, Medina and Wadsworth: Combined two-site position at a brand new free-standing ED (~11,000 pts/yr) and established community hospital (20,000 pts/yr). Nice communities are near Akron and the area's most desirable residential communities. Outstanding partnership opportunity includes equal profit sharing, equity ownership, funded pension, open books, full benefits and more. Contact Ann Benson (careers@emp.com), Emergency Medicine Physicians, 4535 Dressler Rd. NW, Canton, OH 44718, phone 800-828-0898 or fax 330-493-8677. ■

Ohio, Parma: Parma Community General Hospital is situated in the SW Cleveland suburbs. State of the art physical plant and equipment serve 48,000 patients per year. Outstanding partnership opportunity includes equal profit sharing, equity ownership, equal voting, funded pension, open books, comprehensive benefits and more. Contact Ann Benson (careers@emp.com), Emergency Medicine Physicians, 4535 Dressler Rd. NW, Canton, OH 44718, phone 800-828-0898 or fax 330-493-8677. ■

Ohio, Toledo: New Opportunity – Premier Physician Services announces new opportunities in suburban Toledo college town. This ED has an annual volume of 26,000; excellent coverage includes resident and MLP support. A director opportunity is also available. Highly appealing compensation package includes guaranteed rate plus RVU and additional incentive; family medical

plan, employer-funded pension, expense account and more including shareholder status at one year with no buy-in. For additional information contact Amy Spegal, Premier Physician Services, at (800)726-3627, ext. 3682, e-mail aspegal@premierdocs.com, fax (937) 312-3683. ■

Hospital Physician Partners.
PARTNERING FOR RESULTS

Oklahoma, Blackwell, Clinton, Durant, Madill, Pryor & Seminole: Hospital Physician Partners has several **new partnerships** with exceptional hospitals throughout Oklahoma. **Full and Part Time** Emergency Medicine opportunities are available for Physicians, **Residents** and Mid-Level Providers. Get in on the ground floor of these new contracts and take advantage of **newly increased hourly rates**! Must be BC/BE in EM. Offering lucrative compensation, paid malpractice with tail, free & discounted CME, **state licensure assistance** and **clinically-led leadership**. Contact Terri Harper: (800) 815-8377 ext. 5296; email tharper@hppartners.com or visit www.hppartners.com. ■

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

Oregon, Salem: Partnership opportunity with independent, democratic, and well established group at 95K annual volume Salem Hospital, Level II trauma center with excellent specialty support. New ER built in 2009, sophisticated EMR, extensive career opportunities. Benefits include scribes, flexible scheduling, CME stipend, malpractice, medical, 401K, and more.

OHIO STATE | Wexner Medical Center

Department of Emergency Medicine
760 Prior Hall
376 West Tenth Avenue
Columbus, OH 43210

The Department of Emergency Medicine at The Ohio State University Wexner Medical Center is seeking physicians for **clinical and academic faculty positions** (rank based on credentials). Teaching opportunities for medical students, residents, fellows and others are abundant as are research and scholarship opportunities. Clinical responsibilities include patient care activity in an Emergency Department (71k annual visits) designated as a Level 1 Trauma Center, Burn Center, Cardiac Center and Stroke Center and/or a Community-based Emergency Department (50k annual visits).

The Ohio State University Wexner Medical Center is one of the largest and most diverse academic medical centers in the country and the only academic medical center in central Ohio. We're internationally known for our superior quality, depth of expertise and leadership in personalized health care. A new Cancer Hospital and Critical Care Tower which includes a new Emergency Department will be completed in 2014 (phase 1) and in 2016 (phase 2). We offer a competitive salary with full university benefits including generous health insurance options, multiple retirement plan options, tuition assistance, group paid malpractice coverage, and CME allowance just to name a few.

Minimum qualifications: MD or DO; successful completion of an Emergency Medicine residency program; Board certified or eligible; Ohio medical license; interest in working in an academic medical center providing clinical care and bedside teaching.

Columbus, Ohio's capital city has it all. From historic communities and suburban living to college crowds and nightlife - Columbus is a friendly Midwestern town with metropolitan style. The city is renowned for its leading technological companies, vast academic resources, thriving industry and eclectic mix of entertainment, dining and shopping.

Individuals from diverse backgrounds are encouraged to apply.
Please send CV and cover letter to Mark G. Angelos, MD, Professor and Interim Chairman.

Must be EM BC/BP. Salem is located 45 minutes south of Portland, in the heart of Oregon's wine country. We love it here and you will too. Send CV, cover letter and recent photo to sepspc@salemhealth.org or call us at 503-561-5634. ■

Pennsylvania, Sharon: Sharon Regional Health System has an extremely supportive administration/medical staff, newer ED, and full service capabilities making this a great place to work, with 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, phone 800-828-0898 or fax 330-493-8677. ■

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

Pennsylvania, York: Memorial Hospital is host to a respected osteopathic residency program and is situated less than an hour from Harrisburg, PA and Baltimore, MD. This site has a new ED and sees approximately 40,000 ED pts/yr. Outstanding partnership opportunity includes equal profit sharing, equity ownership, funded pension, open books, full benefits and more. Contact Ann Benson (careers@emp.com), Emergency Medicine Physicians, 4535 Dressler Rd. NW, Canton, OH 44718, phone 800-828-0898 or fax 330-493-8677. ■

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, phone 800-828-0898 or fax 330-493-8677. ■

West Virginia, Charleston: BP/BC EM physician opportunity within academic environment. Three-hospital system has 100,000 annual ED visits and includes a Level 1 facility. Numerous allopathic & osteopathic residencies including EM. Equity-ownership group provides outstanding package including family medical, employer-funded pension, CME, malpractice, plus shareholder status with no buy-in. Contact Rachel Klockow, Premier Physician Services, (800) 406-8118, rklockow@premierdocs.com, fax (954) 986-8820. ■

West Virginia, Huntington: Work in 2 locations – Top Compensation – Equity Ownership – Why choose between lifestyle and compensation? Established group has very appealing position working between 72,000 volume ED in Huntington, and affiliated free-standing low volume ED in Ironton, Ohio. This opportunity will allow you to earn superior compensation while spending significant time within a slower-paced ED. The busier Huntington ED offers the support of 66 physician hours, 48 MLP hours as well as scribe support. Package includes guaranteed hourly plus RVU, family medical plan, malpractice, employer-funded pension, additional incentive income, shareholder opportunity at one year with no buy-in and additional benefits. A sign-on bonus is also available. Contact Rachel Klockow, Premier Physician Services, (800) 406-8118; e-mail rklockow@premierdocs.com; fax (954) 986-8820. ■

Once there was an EM candidate named _____(YOU)_____.

More than anything, he/she wanted to help the people who lived in

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his/her dream job and lived happily ever after!

At TeamHealth, we know how to listen. We believe it's important to engage our EM candidates and find out exactly what you want out of your career. So help us get to know you. Share your thoughts about your career goals with us at myEMcareer.com, email physicianjobs@teamhealth.com, or call 855.762.1648 and play your way.

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