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THE BATTLE FOR YOUTH

THE PROS AND CONS OF SO-CALLED "FOUNTAIN OF YOUTH" PRODUCTS AND TREATMENTS

by RICHARD QUINN

In a boxing match, the divergent camps set themselves up in opposite corners. When it comes to the topic of anti-aging or so-called "fountain of youth" products and how they can impact emergency physicians, the camps could easily be described as combatants across the ring. In one corner we find advocates like Paul Kivela, MD, MBA, FACEP, who co-owns a boutique medical spa in Northern California that offers "age-management services" including hormone replacement. In the opposite corner we find people like Adriane Fugh-Berman, MD, director of PharmedOut, a Georgetown University Medical Center (GUMC) project whose mission includes educating healthcare professionals about pharmaceutical marketing practices, including those that push anti-aging services, such as hormone treatments.

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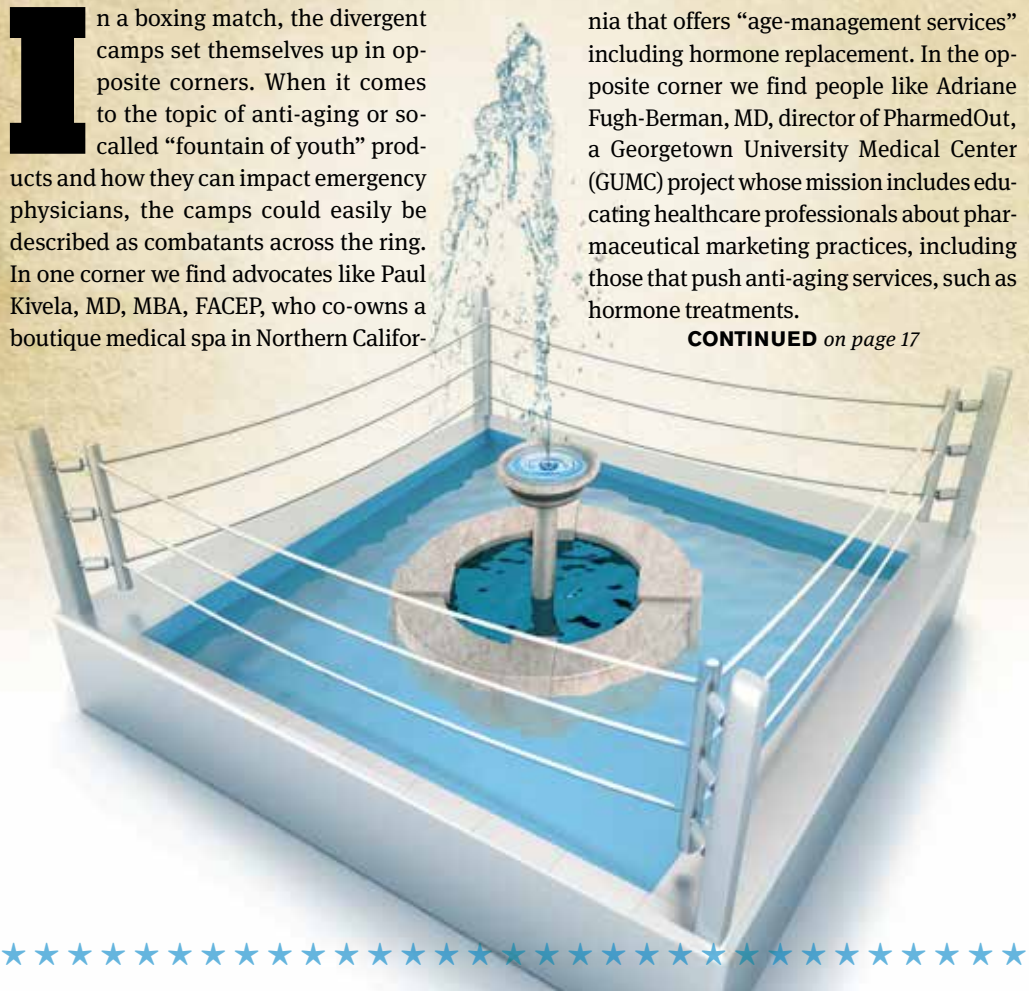

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WELLNESS

Is Hormone Replacement Therapy Too Good to Be True?

by MADELINE ANDREW, MD

The Case

Eric G. was a 39-year-old married man and father of two who worked rotating shifts. He found himself gaining weight; losing muscle; and struggling with decreased drive, stamina, and energy. When he entered a hormone replacement therapy (HRT) program, his body fat was 32 percent, his lean muscle mass was 61,339 grams, and he was in the 99th percentile for his age. Within six months, his body fat was 15 percent, his lean muscle mass increased to 72,679 grams, and he was in the 10th percentile for his age. He said, "Now that my transformation is complete, I'm able to work without limitations, have boundless energy and stamina, and approach all aspects of my life with newfound confidence."

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ADVANCE DIRECTIVES

Potential Pitfalls of Living Wills, DNR, and POLST

A simple checklist can overcome confusing terminology and poor understanding of DNRs to help make sure patients' wishes are followed SEE PAGE 13

Council Committees Application and Selection Begins

Volunteer to serve on an ACEP Council committee and lend your experience and expertise.

Members will be appointed to the following committees: 2015 Steering Committee; 2014 Tellers, Credentials, and Elections Committee; 2015 Council Award Committee; and 2014 Reference Committees for the 2014 Council meeting in Chicago. A brief description of each committee and access to the needed forms are available at www.acep.org/council. The application deadline is July 30th, 2014.

An application form is needed for the Steering Committee and a separate form for the other Council committees. Once the link is clicked, it will direct you to the log-in page where your ACEP log-in and password are required. Note that you must be a councillor or alternate councillor to serve on a Council committee.

Once you submit the form, you should see a message that confirms your submission.

Please contact Mary Ellen Fletcher (mfletcher@acep.org) if you have any questions. Reference Committee appointments will be finalized in August 2014, and all other Council committee appointments will be finalized in October 2014.

BRIEFLY

Comment Period Open for Draft Thoracic Aortic Dissection Clinical Policy

A Clinical Policies Subcommittee of ACEP has completed a draft clinical guideline: "Clinical Policy: Critical Issues in the Evaluation and Management of Adult Patients with Suspected Acute Nontraumatic Thoracic Aortic Dissection." The draft is now open for comments until May 28, 2014. To view the draft policy and comment form, go to www.acep.org/content.aspx?ekfrm=96266.

For questions, please contact Rhonda Whitson at rwhitson@acep.org.

ACEP's Partner Offers Medical Translator App

Canopy, ACEP's newest affinity partner, is offering its popular Medical Translator app to help health care providers instantly work with patients in any language—Spanish, Chinese, Arabic, Korean, and more. The iPhone/iPad app is being made **free** to ACEP members. Search for "Canopy Medical Translator" at the App Store to download. Do this quickly, as there are a limited number of free licenses for ACEP members. *Note:* Switch to the "iPhone Only" option at the top left of the App Store if you're searching from your iPad.

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For more information and for the access code, go to www.canopyapps.com/partners/acep.

MAY 2014 Volume 33 Number 5

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SEND YOUR THOUGHTS AND COMMENTS TO ACEPNOW@ACEP.ORG

THE BREAK ROOM

Truly Dangerous Drugs

Having practiced EM for over 35 years, I respectfully take issue with Professor Ducharme's reference to marijuana as a "gateway" drug ["A Rational Approach to the Opioid-Seeking Patient," March *ACEP Now*, p. 22]. In my experience, that reference is used as a substitute for more scholarly arguments as to why cannabis should remain illegal. The substitution of safer drugs for more harmful ones (heroin, alcohol, tobacco) is a well-established principle in medicine. Why not offer the population a safer alternative? We don't know how many people use less of these drugs, finding cannabis more safe (except for the legal issues), but I suspect many. It might be found that teens (who shouldn't be using any mind-altering substances) are using less alcohol and tobacco having cannabis available. The Colorado and Washington experience may answer many of these questions. If any substances should be illegal, they're alcohol and tobacco (450,000 deaths/year), the true "gateway" drugs. In my many years in the ER, I've seen maybe one or two patients with cannabis problems, but many days I've seen that many (or more) alcohol/tobacco-related problems. Why not have the "default" position on cannabis be legal and render the really dangerous drugs illegal if throwing people in jail is the best way to drug-educate the population?

David Spilker, MD
Monterey, Calif.

Post Physical Exam World

It seems easier being retired from clinical practice and living outside the United States to see big-picture changes in our specialty. I recently read Dr. Shari Welch's "Death of the Physical Exam" article [February *ACEP Now*, p. 30]. She is on target about the value of the ED exam in everything from chest pain to UTIs, especially her observation that a focused history "gets you 99 percent of the way" to a diagnosis. She concludes that a faux physical exam will make the patient feel better (better patient satisfaction score?).

My thoughts go in a different direction. I am reminded of a scene in the Mel Gibson movie *Payback*, where he extracts information from his double-crossing partner and then asks him for a match to light his cigarette. When the scumbag responds that he doesn't have one, Mel asks, "Then what are you good for?" right before he blows him away.

I think EMDs should ask what exactly is their unique role in the brave new world of emergency medicine populated by MLPs, ever-improving diagnostic technology, protocols and pathways, clinical computer apps, etc., etc. Such introspection might help in pursuing skill sets needed going forward in their careers since clearly "the laying on of the hands" won't be one of them.

Robert T. Fitzgerald, MD, FACEP
Nueva Gorgona, Panama

Council to Hold Elections for the President-elect and ACEP Board

Ongoing coverage from the ACEP Council: From LAC until the last vote is cast

May is always an exciting time, as the slate of ACEP election candidates has been released. The Legislative and Advocacy Conference (LAC) marks the beginning of the campaign season, which will culminate in the election of a new President-elect and members of the Board of Directors at ACEP14 in Chicago.The ACEP Council officers, Steering Committee and the Candidate Forum Subcommittee are responsible for making certain the campaign and elections process is fair and balanced, transparent and informative. This process is designed to ensure that all candidates have fair and equal opportunities for exposure, debate of the current issues impacting emergency medicine, and earning Councillor's votes.

As with other Council processes, our elections have evolved to include additional opportunities to "meet" the candidates and get updates on their progress as they run for office. This year, the Council goes bare, as *ACEP Now* takes the mystery out of this madness.

Stay tuned to *ACEP Now*, your official source of accurate ACEP elections updates!

AOA-ACGME MERGER

Proof of Equality or a Loss of Identity?

When it comes to post-graduate education, MDs and DOs finally find even ground

BY J.D. POLK, DO, MS, MMM, CPE, FACOEP

A landmark announcement came in March 2014, with the American Osteopathic Association (AOA), the American Association of Colleges of Osteopathic Medicine (AACOM), and the Accreditation Council for Graduate Medical Education (ACGME) jointly announcing their memorandum of understanding (MOU) aimed at a consolidated graduate medical education (GME) system. I am going to give a synopsis that merges frequently asked questions, press announcements, and discussions from both houses.

What Does This Mean for GME?

There are a great number of questions regarding what this actually means. Essentially, participation in a single accreditation system ensures quality, promotes consistency and efficiency, and strengthens the medical profession as a whole. It does not mean that DOs are no longer learning osteopathic principles or that the MD and DO professions are uniting. The rumor mill has been fraught with "the end is nigh" for osteopathic medicine, which quite frankly is very wrong and shortsighted. What this MOU really means is that the two groups agree that a single standard for quality and consistency is in the best interest of both entities as they look forward to future changes in health care. A unified voice on GME access and funding issues strength-

CONTINUED *on page 6*

ens the influence of all physicians for advocacy on GME issues in Washington, DC, as well as on state and local levels. Everyone agrees that the Affordable Care Act will increase the need for primary care physicians, and yet GME slots and Medicare dollars remain frozen. As partners in GME, we become a much more powerful advocacy group with a nonconflicted voice.

Furthermore, a single accreditation system preserves access to training programs for DOs wanting to transition into an ACGME program after their first year of accredited training, plus strengthens the ability of the ACGME to have more primary care and rural residency training programs. The ACGME has been better at creating specialty programs, whereas the AOA has been better at meeting primary care needs and those of rural America. Uniting the two GME systems brings the best of both worlds together. This provides access to numerous fellowship programs for DOs and numerous primary care programs for MDs. There are MDs who will want to do a residency that was historically osteopathic for myriad reasons, such as to acquire extra training in physical medicine, but I imagine another will be location. If you are an MD and your family is from Metropolis, your parents live in Metropolis, your spouse wants to live in Metropolis, and the only radiology residency in Metropolis is the former osteopathic residency at Metropolis General, then it may quickly find its way to the number-one spot on your match list.

Implications for Educators and Students

How will this impact educators? A contentious issue exists for most DO-trained residency directors in that residency directors in the new combined system will have to be ACGME-trained or paired with an ACGME director for an undetermined time. Many DO directors see this as a slight to their training and acumen, but it is really just to ensure a smooth transition to a unified system. Norman Vinn, DO, president of the AOA, provided an excellent analogy: "If you were a manager at Microsoft and the director of Windows 7 and went to work for Apple, chances are that you would be paired up with someone who knew the Apple system for a while until you knew their system well. It isn't about whether Windows 7 was inferior to Apple or whether your training at Microsoft was equivalent but rather about knowledge of how the system operates." There will be many bumps in the road that will be worked out by a plethora of task forces or committees. In my tenure in the government, politics, and medicine (principal

deputy assistant secretary for health affairs and deputy chief medical officer and chief of space medicine for NASA, etc.), I have yet to see a perfect policy from the get-go. They all get tweaked over time as you discover unintended consequences or challenges.

After implementation, all training programs will be ACGME-accredited. Osteopathic principles will not be thrown out with the bathwater; in fact, just the opposite will happen. Osteopathic principles will be recognized and codified in the single accreditation system, and there will be training programs with an osteopathic dimension under ACGME accreditation. A Neuromusculoskeletal Review Committee and an Osteopathic Principles Review Committee will be developed. Osteopathic primary care programs have been routinely filled and serve the rural communities well, with osteopathic medical school graduating 50 percent or more of physicians headed to primary care. The ACGME will not want that to disappear; nobody wants that secret sauce of minting primary care physicians to disappear.

The questions I get from medical students usually center around the match and board examination. The match is administered by the National Residency Match Program (NRMP) and not the ACGME. Consequently, this is an issue that can be resolved only when NRMP claims a seat at the table. However, if all programs are considered ACGME-accredited, a system with one match seems inevitable. Regarding the examination process, I am sure students would prefer to have a single exam.

Examinations are in multiple parts, and some cover distinct content. It is doubtful that those exams (COMLEX and USMLE) will merge anytime soon. Even if they do merge years down the road, a grandfather clause will be necessary to catch those who are part way through either examination process, and there will need to be at least an additional component for the DO students to test them on distinct osteopathic principles and practice. Conversely, if MDs seek a DO residency, an examination to test them on those distinctive principles will be necessary as well.

DOs have had one unfair advantage over their MD counterparts: they could do either an AOA or ACGME residency, whereas the MDs could only train in an ACGME residency program. That will also change. DO and MD graduates will have access to ACGME-accredited training programs, including those with an osteopathic principles dimension. Prerequisite competencies (recommended by the new Osteopathic Principles Review Committee) and a recommended program of training for MD graduates may be required for entry into programs that have an osteopathic principles dimension, especially in primary care and physical medicine and rehabilitation. The same will apply to international medical graduates.

Osteopathic principles are becoming less foreign and are already being incorporated into many allopathic institutions. Most folks assume that manipulation is the hallmark difference between the two professions. This is a common misconception. Manipulation is something that DOs learn for sure, but the bulk of the differences are philosophical: that the body is a unit and the holistic approach to the patient, nutrition, and preventive medicine in addition to the manual medicine component. More and more of the allopathic schools and residencies are incorporating nutrition, holistic approaches, empathy training, and preventive medicine into their curriculums. In some respects, the entire approach to patient care, and the health care system itself, has begun to embrace and adopt many of the osteopathic principles.

Power in a United Front

The single system presents an opportunity to advocate, especially with members of Congress, for appropriate public support for funding the best-trained future physician workforce. As efforts are taken to cut GME funding, the single accreditation process is a clear reflection of the collaborative work being done by the AOA, AACOM, and ACGME to remove any perceived inefficiencies of maintaining two accreditation systems. Improving GME, with a focus on achieving demonstrated quality improvement, will produce the greatest benefit.

This epic endeavor also should break down old walls that separated the two professions. A DO who did an ACGME residency will no longer be ostracized by the osteopathic community, and an MD who has extra training in holistic patient care will no longer be seen as "on the fringe."

We may find we have more in common than we thought, and our focus will then be on patient outcomes rather than initials and inconsequential differences. The letters behind your name or the organization that accredited your training program do not translate to the bedside. Patients need competent, caring physicians, and this new system is on track to produce them.

DR. POLK is dean of the College of Osteopathic Medicine at Des Moines University in Des Moines, Iowa.

RVU Killers:
It Pays to Document Well

With physician compensation increasingly tied directly to relative value units (RVUs), your chart needs to empower coders to recognize the high-intensity work taking place at the bedside

BY KELLY APRIL TYRRELL

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An interview with reimbursement and coding expert Michael Granovsky, MD, CPC, FACEP

When it comes to compensation, good documentation is a physician's best friend.

Increasingly, emergency physicians find that anywhere from 30 to 50 percent of their compensation is based on RVU production. Some groups have even adopted 100 percent RVU-based compensation models, said Michael Granovsky, MD, CPC, FACEP, president of Logix Health, a national ED billing company. Without adequate and thorough documentation of evaluation and management (E/M) services, providers risk losing RVUs and having payments reduced for the care they provide.

It pays for physicians to take notice.

As much as 89 percent of the revenue in the ED comes from the E/M codes level 1 (92281) to level 5 (92285) and critical care.

An emergency physician would expect to be compensated less for seeing a patient with a simple bee sting than for seeing a patient with severe chest pain. However, the physician who does not adequately document the chest pain case may find it downcoded. A level 5 downcoded to a level 3 represents a loss of 64 percent of the RVUs and is roughly equivalent to providing a level 4 service for free.

The insurance companies will not see the patient's chart, thus it is up to physicians to empower coders with adequate documentation to report the appropriate code for services provided. The number-one way to ensure this is to provide the documentation required by the Medicare 1995 documentation guidelines appropriate for the care delivered (see Table 1).

It's important to note that doesn't mean overdocumenting.

"You can't take an ankle sprain and document it excessively, and it magically becomes a level 5," said Dr. Granovsky. "We are seeing a significant increase in audit activity targeting the overuse of macros."

Three primary elements factor into determining the E/M level of a case: history, physical exam, and medical decision making.

History is composed of chief complaint; history of present illness (HPI); review of systems (ROS); and past medical, family, and/or social history.

The minimum number of HPI elements for E/M levels 4 and 5 is four, and failure to meet this is the single most costly documentation error. Dr. Granovsky recommended that the rich clinical detail in the HPI become one of the tools physicians use to paint a clear clinical picture in what otherwise might be a bland electronic medical record (EMR) history and physical exam.

"So when a patient comes back to the ED or is admitted upstairs or evaluated by a third party, there are robust clinical details," he said.

Case-specific detail is what really makes a patient come to life, Dr. Granovsky said. It also demonstrates the high quality of care and offers stronger medical-legal protection.

Level 4 E/M cases must include at least two of the possible 14 ROS elements. At least 10 must be documented for a level 5. Many EMRs have large macros; be sure to add in pertinent positive and negative systems.

At least one past medical, family, or social history element must be documented for a level 4, and two are required for a level 5. Don't forget the history caveat applies if a patient's history cannot be obtained; however, the circumstances that prevented it should be documented.

There are 12 organ systems available under the physical exam, and eight are required for a level 5. If a patient is too ill for a full history and physical, the acuity caveat may be invoked by documenting the conditions that prevented obtaining a complete history and exam. The caveat is specific to the 99285 code and appears right in the CPT definition.

Too often, physicians miss the documentation mark. For instance, consider this chart: A 49-year-old male presents with left-sided chest pain for two hours' duration; he reports nausea but no vomiting. He had a full physical two years ago, and he was seen by his primary physician last week, had a normal exam, had lab work, and was told that his blood pressure is high.

All of the appropriate clinical information is there, but the case would be downcoded from a potential level 5 because there are only three HPI elements, causing the provider to loose a majority of the RVUs.

Appropriate documentation shouldn't be an overwhelming task once physicians learn the rules and work toward efficiency, Dr. Granovsky said. The ACEP website, www.ACEP.org, also contains a robust set of frequently asked questions, and ACEP hosts a five-day reimbursement course for interested physicians.

KELLY APRIL TYRRELL is a freelance journalist based in Wilmington, Del.

Table 1. Medicare 1995 Guidelines Typical Requirements

LEVEL	HPI	ROS	PAST/FAMILY/ SOCIAL HX	PHYSICAL EXAM
99281	1–3	0	0	1
99282	1–3	1	0	2
99283	1–3	1	0	2–4
99284	4	2–9	1	5–7
99285	4	10	2	8

Table 2. 2014 ED RVUs

CPT CODE	2014 RVUs
99281	0.59
99282	1.16
99283	1.73
99284	3.30
99285	4.85
Critical Care	6.27

CHOOSING WISELY

Shared Decision Making in Emergency Medicine

Choosing Wisely with your patients, not for your patients

BY CATHERINE A. MARCO, MD, AND CHADD KRAUS, DO, MPH

During ACEP's annual conference in Seattle last fall, the College released its five recommendations for inclusion in the Choosing Wisely campaign. These recommendations were the culmination of almost two years of dialogue with members and a structured process undertaken by an expert panel of practicing emergency physicians and experts in cost-effectiveness, quality, patient safety, and clinical processes.[1]

The mission of Choosing Wisely—a multiyear effort of the ABIM Foundation with more than 80 national, regional, and state medical specialty societies as well as consumer groups—is to promote conversations among physicians and patients about using appropriate tests and treatments and avoiding care when harm may outweigh benefits.

Although the Choosing Wisely campaign has brought renewed attention to critical decision making, our responsibility as emergency physicians extends far beyond these five recommendations and must include patients' perspectives on the care they receive.

Shared Decision Making

Shared decision making (SDM) is an important practice in emergency medicine. Although the ED environment poses challenges to communication and decision making, a recent study demonstrated that SDM is feasible and offers benefits to patients in the ED setting.[2] Professional training and decision aids for patients can promote the adoption of SDM in the health care setting.[3]

ACEP's Code of Ethics for Emergency Physicians states:

> *To choose and act autonomously, patients must receive accurate information about their medical conditions and treatment options. Emergency physicians should relay sufficient information to patients for them to make an informed choice among various diagnostic and treatment options. Emergency physicians, when speaking to patients and families, must not overstate their experience or abilities, or those of their colleagues or institution.*

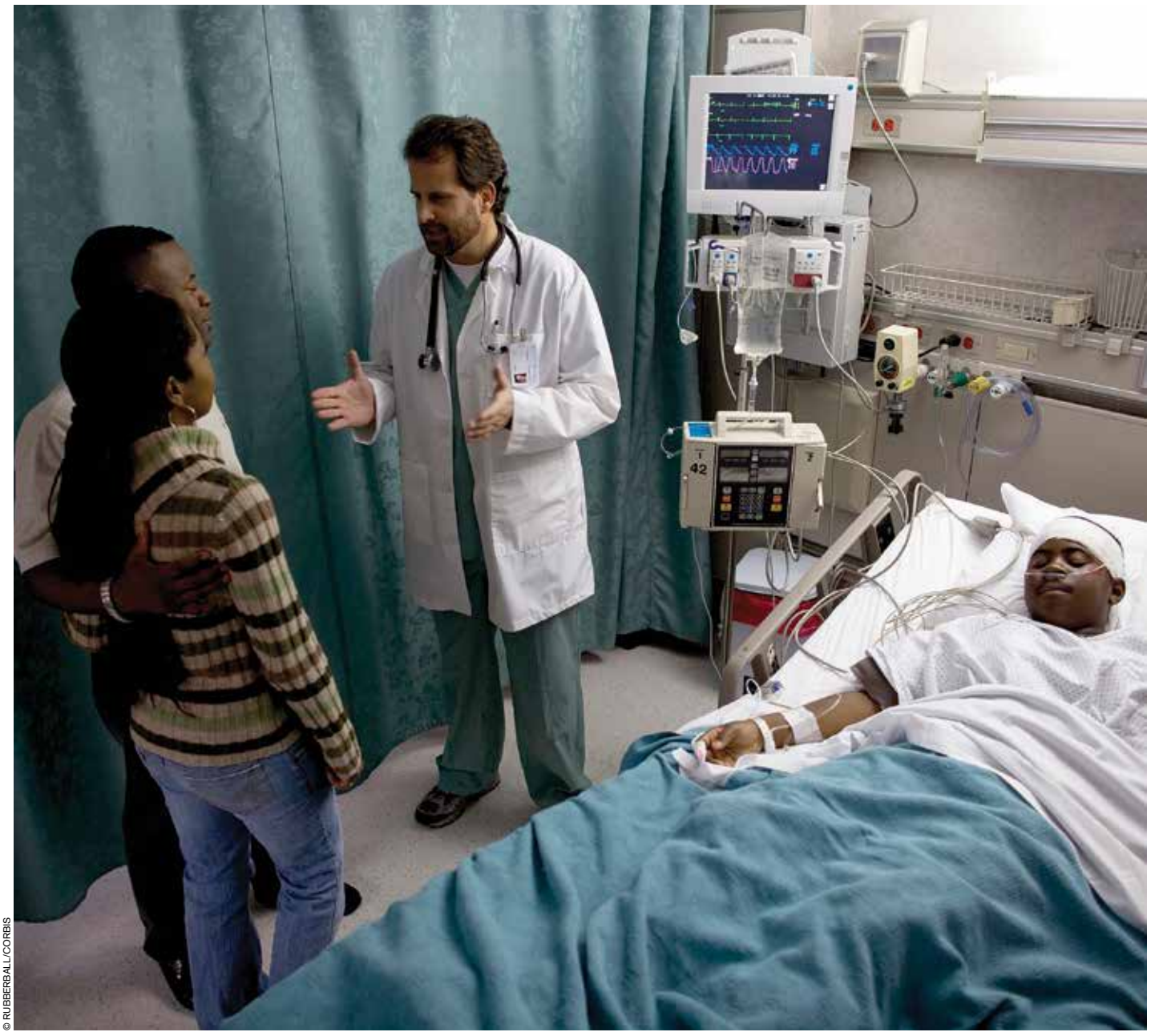
Table 1 illustrates an approach to SDM regarding diagnostic testing in the ED.

Each of the five issues raised by the Choosing Wisely campaign is amenable to SDM. A conversation between the emergency physician and the patient should bring together the physician's recommendation combined with the patient's individual goals and preferences.

CONTINUED *on page 10*

Table 1. The following five Choosing Wisely recommendations were approved by ACEP's Board of Directors

1. **Avoid computed tomography (CT) scans of the head** in emergency department patients with minor head injury who are at low risk based on validated decision rules.
2. **Avoid placing indwelling urinary catheters** in the emergency department for either urine-output monitoring in stable patients who can void or for patient or staff convenience.
3. **Avoid delays in engaging available palliative and hospice care services** in the emergency department for patients likely to benefit.
4. **Avoid antibiotics and wound cultures** in emergency department patients with uncomplicated skin and soft tissue abscesses after successful incision and drainage and with adequate medical follow-up.
5. **Avoid instituting intravenous (IV) fluids before doing a trial of oral rehydration therapy** in uncomplicated emergency department cases of mild to moderate dehydration in children.



Stewardship of Resources

Stewardship of resources is an important professional responsibility. Balancing the responsibility to be wise stewards of resources with the responsibility to make the correct diagnosis in the ED can be challenging. According to ACEP's Code of Ethics for Emergency Physicians, emergency physicians shall act as responsible stewards of the health care resources entrusted to them.[4] The Code of Ethics goes on to explain:

> *Both society and individual emergency physicians confront questions of justice in deciding how to distribute the benefits of health care and the burdens of financing that care among the various members of the society. Emergency physicians routinely address these issues when they assign order of priority for treatment and choose appropriate diagnostic and treatment resources. In making these judgments, emergency physicians must attempt to reconcile the goals of equitable access to health care and just allocation of health care with the increasing scarcity of resources and the need for cost containment.*

A recent article proposed six areas of interventions to reduce the cost of emergency care: laboratory tests, high-cost imaging, medication administration, intravenous fluids and medications, hospital admissions, and post-discharge care.[5] Another recent article proposed the development of accountable health communities (AHCos) to review local data on health, quality of care, and costs of care, as well as to create goals and actions to contribute to a sustainable health system.[6]

Balancing the responsibility to be wise stewards of resources with the responsibility to make the correct diagnosis in the ED can be challenging. According to ACEP's Code of Ethics for Emergency Physicians, emergency physicians shall act as responsible stewards of the health care resources entrusted to them.

Unique Challenges in Emergency Medicine

Choosing Wisely poses particular ethical considerations in the emergency department, where the patient-physician relationship is unique. Patients do not select the emergency physician who sees them in the emergency department; no prior relationship exists between them.

The ED is a venue of episodic interactions between patients and physicians without the expectation of an ongoing patient-physician relationship such as patients have with primary care providers. In addition to the lack of a longitudinal relationship, patients and emergency physicians interact in a time-limited environment. Emergency physicians must rapidly evaluate, intervene, and diagnose potentially life- and limb-threatening conditions while attempting, when possible, to engage patients and families in a patient-centered SDM process of care.

ACEP's Choosing Wisely recommendations were developed with a practical understanding of these unique emergency department challenges.

DR. MARCO is professor of emergency medicine at Wright State University Boonshoft School of Medicine in Dayton, Ohio. **DR. KRAUS** is a resident in emergency medicine at Lehigh Valley Health Network and served as a member of the Cost-Effective Care Taskforce that helped develop ACEP's recommendations for Choosing Wisely. They both currently serve on the ACEP Ethics Committee.

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The EM-HM Transformation

Emergency medicine a natural fit for hospitalist medicine

BY THOMAS R. COLLINS

On a recent Friday, Pattie Malone, MD, worked the emergency room at Ocean Beach Hospital, a 25-bed, critical-access facility in Ilwaco, a small city in the extreme southwestern corner of Washington State. She admitted a patient, but once the patient was admitted, that wasn't the end—their paths would cross again.

When her regular ED shift was done, Dr. Malone, a doctor with EmCare, put on a second hat: She became Ocean Beach's hospitalist, too, rounding on inpatients over the remainder of the weekend.

"It actually can enhance patient quality and safety because I am taking care of this person who I saw the day before, and so I build momentum," Dr. Malone said. "I admitted the patient the day before, I knew the goals of admission, I know the criteria for discharge and what I'm looking for."

Ranks of Hospitalists Growing

It's becoming more and more common for emergency physicians to work simultaneously as hospitalists in the nation's smallest hospitals—generally those with no more than 10,000 to 12,000 ED visits per year. It's a subset of a trend toward a single company providing a hospital with both emergency physicians and hospitalists.

With so many hospitals already hiring contract management groups to staff their emergency departments and many also hiring companies for their hospitalists, the single-source model is an automatic progression for enterprising contract management groups when hospitals are looking extra hard for ways to streamline their operations and cut costs.

Another major factor is the shortage of hospitalists and the rising cost to a hospital of paying hospitalists, said Mark Hamm, CEO of EmCare Hospital Medicine. EmCare began as an emergency medicine company and branched into hospital medicine about five years ago.

"If you look at supply and demand, there's not enough hospitalists—there's about 50,000 hospital medicine opportunities for about 30,000 physicians," he said. "What that's doing is driving up the cost of hospital medicine."

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By handling both the hospitalist and emergency medicine services, EmCare said it could help hospitals save money by providing improved efficiencies. EmCare does work at 585 total facilities, providing emergency medicine at 477 of them. Of those, 115 use EmCare for both ED and hospitalist service. And 32 are "Complete Care" clients, who use single doctors as both emergency doctors and hospitalists. In 2012, EmCare had 126 client "starts," with 34 using both EM and HM. In 2013, there were 187 starts, with 45 using both services.

A Team Approach

EmCare uses specially designed software in its "Door to Discharge" program to integrate emergency and hospital medicine services, meant to improve physician collaboration, increase "throughput" times from the ED to an inpatient bed, and reduce incidents when patients leave the ED without getting treatment. Throughput times using the model average about 45 minutes. "They don't sit in the ER for three to four hours," Hamm said. "We're changing the efficiencies of the hospital."

At TeamHealth, based in Knoxville, which serves more than 860 facilities and physician groups and began as an emergency-medicine company, about 50 hospitals have signed on for both emergency medicine and hospital medicine services.

"We have seen an increase over the past few years in interest from hospitals who want a combined ED and HM program," said Tracy Young, TeamHealth's marketing and communications vice president.

John Proctor, MD, MBA, president of TeamHealth Central Group, said there's a big advantage in "having those two groups of physicians function as colleagues who are accountable to the same folks and are striving for the same goals."

TeamHealth uses a proprietary "integrated scorecard" that jointly assesses emergency medicine and hospital medicine. "I think it's important to look at things not in silos," said Jasen Gundersen, MD, MBA, president of TeamHealth Hospital Medicine. The scorecard looks at things like observation rate, throughput times, and patient experience.

> It's becoming more and more common for emergency physicians to work simultaneously as hospitalists in the nation's smallest hospitals—generally those with no more than 10,000 to 12,000 ED visits per year. It's a subset of a trend toward a single company providing a hospital with both emergency physicians and hospital medicine physicians.

"The single biggest thing we see from the balanced scorecard from our dashboard now is just a much cleaner and stronger understanding between the two service lines of what happens on the other side and a much larger sense of ownership of the entire continuum," Dr. Gundersen said. "The ED folks can see what's happening on the inpatient side, and the inpatient docs can see what's happening on the ED side."

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Quality Improvements

There's been a "significant improvement" in readmission rates in places where the two sides are under TeamHealth, he said. There's also been an improvement in throughput times. And as patients wait less in the ED to go to a room, there's a trend—though not yet statistically validated—toward improvement in Hospital Consumer Assessment of Healthcare Providers and Systems (HCAHP) scores.

The corporate emergency-medicine landscape is seeing more entrants into hospital medicine all the time. Atlanta-based ApolloMD began providing hospitalists to hospitals in the middle of 2013.

"Many of our clients were actually asking that we provide both services," CEO Mike Dolister, MD, said. "Hospitals are asking for this type of synergy much more than they were even a year ago."

The key is the throughput time, and having the two sides tied together improves that, Dr. Dolister said: "Because the throughput has such a significant impact on clinical quality in a variety of clinical scenarios, when we improve the throughput, we know it improves the quality and patient experience."

The Hybrid Model

The ultimate integration, of course, is the emergency physician who also takes care of patients who've been admitted, the "hybrid" model. This is almost exclusively done in thinly populated rural areas. The work is usually performed by physicians with a family medicine background or internal medicine background, and who also have emergency medicine experience.

With just a single physician present in a hospital, the possibility of acute situations arising in both an inpatient room and the ED does exist, but choosing the right facility for the model is crucial. "If you properly design the program based on the volume and acuity of the patients in both the EM and the HM programs, these situations should be rare," he said. "Of course, you can't always predict volume and acuity. And if you have the ability to flex up and flex down, that would be great, but you can't always do that."

At TeamHealth, the decision on whether to use a single doctor as emergency provider and hospitalist is calculated carefully. "We use a very algorithmic approach to how we staff and manage these programs," Dr. Gundersen said. "We have not had an issue arise, but that's because we've really looked at it mathematically."

"Agreements with hospitals protect physicians from having to maintain a presence in the inpatient ward, and outlines how an acute situation in the inpatient arena might be handled in that scenario," Dr. Proctor said.

The hybrid model is an advantage to the emergency physician who makes extra money for seeing the inpatients. "It can be advantageous and attractive to the emergency physicians and it's something that they volunteer to do when they're interested," said Dr. Proctor of TeamHealth.

At Ocean Beach Hospital, Dr. Malone emphasizes that the hybrid model makes sense: the volume is low, with a half-dozen or so inpatients a day, and the ED visits only total about 7,000 a year.

"This is not for high-volume places, this is not for anything other these community critical access hospitals that really don't have the high volume," she said. "It's not overwhelming. It is absolutely doable and that's why it's being done."

THOMAS R. COLLINS is a freelance medical writer based in West Palm Beach, Fla.

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ADVANCE DIRECTIVES

Potential Pitfalls of Living Wills, DNR, and POLST

A simple checklist can overcome confusing terminology and poor understanding of DNRs to help make sure patients' wishes are followed

BY FERDINANDO L. MIRARCHI, DO, FACEP

Until recently, the risks posed to patient safety by the various incarnations of advance directives were unknown and thus undisclosed, producing unintended consequences. The TRIAD (The Realistic Interpretation of Advance Directives) series of studies has disclosed this patient safety risk as reality on a nationwide scale. The risk is attributable to variable understanding and misinterpretation of advance directives, which then translates into over- or under-resuscitation.

So what limits advance directives? With 90 million of them in existence in the United States, these limitations can lead to deleterious effects on patient care and safety.[1] These are a few of the more commonly cited limitations:

1. Their use has been mandated but not funded.
2. There is no standardization or clarification of terms.
3. There is variable understanding among providers.
4. They are often not available at the time of need.
5. Informed discussion takes place in the primary care physician's office.

Standardization is a powerful safety tool. In TRIAD III, high percentages of participants reported receiving training about advance directives, but they received no benefit. The most compelling reason is lack of standardization. To facilitate understanding, the following terms need to be defined and standardized:

- Terminal illness defined by law
- Reversible and treatable condition
- An "effective" living will
- An "enacted" living will
- Do not resuscitate (DNR) order
- Physician Orders for Life-Sustaining Treatment (POLST) document

For clarification, the living will's presence does not mean it should be followed. It simply indicates that this document is "effective" (ie,

CONTINUED *on page 14*

it's valid and legal).[2] An "enacted" or "activated" living will is one that has been activated by the triggers in the document, a terminal or end-stage medical condition, or a persistent vegetative state.[2] This enacted living will now requires adherence to its instructions. Legally defined, a terminal or end-stage medical condition is when patients are expected to die of their disease process despite medical treatment. Therefore, the living will does not dictate the care of critically ill patients who present with a reversible and treatable condition such as congestive heart failure or chronic obstructive pulmonary disease; rather, it applies when those same patients are permanently unconscious and have exhausted all treatment options.

A DNR order refers to an actual physician order that directs providers not to intervene with CPR if patients are found pulseless or apneic.[3,4] Unless patients have suffered a cardiac or respiratory arrest, the DNR order is not enacted.[3,4] A POLST is a medical order set that is transferrable among various health care settings and, in some states, the pre-hospital setting. It requires a physician's signature and is often completed by trained nonmedical personnel.[5] This active order guides patients' care when they are found in cardiac arrest as well as in non–cardiac arrest scenarios.

> For clarification, the living will's presence does not mean it should be followed. It simply indicates that this document is "effective" (ie, it's valid and legal).

Despite legal and societal definitions of DNR, TRIAD research reveals that medical providers understand DNR as synonymous with an order to provide comfort and end-of-life care.[6-8] This raises serious concerns with providers' understanding of how to carry out patients' wishes.

Primary care physicians obtain initial DNR orders and guide advance-care planning, but they do so at a time when the situation and environment are too artificial for patients to fully consider the implications of their decisions. After all, if you are asked, "If your heart stops, do you want it restarted?" what would your response be? That question is far from a full, informed discussion about prognosis and what resuscitation entails. As emergency physicians, we are not involved in the informed-consent process of the DNR order or

Table 1: ABCDEs of the Living Will, DNR, or POLST[2]

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Ask patients or surrogates to be clear as to their intentions for their advance directive (living will, DNR order, or POLST form).

Be clear as to if this is a terminal condition despite sound medical treatment or persistent vegetative state versus a treatable critical illness.

Communicate clearly if you feel the condition is reversible and treatable with a good or poor prognostic outcome.

Design a plan and discuss next steps. For example, say, "Your mom is critically ill. We can give her a trial of instituting life-sustaining care for 48 to 72 hours, and if there is no benefit, we can withdraw care and treatment."

Explain that it's OK to withhold care and treatment or withdraw care so long as it's in keeping with the patients' perceived wishes. Also, take a moment to explain the benefits of palliative care and hospice.

advance-directive completion. However, we are expected to honor them, even in critical situations, with seconds to minutes to save a life. This creates a situation compromising the safety of patients. Often, we are unaware of whether or not patients are terminally ill and are forced to choose instituting or withholding lifesaving care. If we are correct, then patients' end-of-life wishes are honored, but if wrong, we may inappropriately resuscitate patients or, conversely, allow patients to die!

The American Bar Association has a POLST legislative guide created and approved by both the association and the National POLST Paradigm Task Force. It specifically recommends that POLST documents be reviewed periodically and specifically when: 1) patients are transferred from one care setting or care level to another; 2) there is a substantial change in patients' health; or 3) patients' goals or treatment preferences change.[9] These requirements could easily apply to all types of advance directives, ensuring that patients' wishes are met.

Resources

- **How to Interpret a Living Will**
http://secure.quantiamd.com/player/yabhqcxpi?u=yxjzuqjvk
- **What Do DNR Orders Really Mean?**
http://secure.quantiamd.com/player/yafruujyt?u=yxjzuqjvk
- **POLST: Physician Orders for Life-Sustaining Treatment**
http://secure.quantiamd.com/player/ywebdxfnf?u=yxjzuqjvk
- ***Understanding Your Living Will: What You Need to Know Before a Medical Emergency***
by Ferdinando L. Mirarchi, DO (Addicus Books, 2006)

If we are correct, then patients' end-of-life wishes are honored, but if wrong, we may inappropriately resuscitate patients or, conversely, allow patients to die!

How can we operationalize such a requirement? Our institution uses the Resuscitation Pause, which combines the ABCs (Airway, Breathing, and Circulation) of resuscitation and a hospital process called the Time Out, or surgical pause. At the same time we are performing our initial ABCs, we run through our Resuscitation Pause checklist described in Table 1. This provides us with the opportunity to have an individualized discussion for patients and design an individualized plan of care. We recommend that this process and checklist be incorporated into resuscitations when confronted with all types of advance directives. Remember, resuscitation does not just apply to cardiac arrest patients! Resuscitation applies when patients present critically ill with respiratory distress, myocardial infarction, stroke, sepsis, trauma, gastrointestinal bleeding, etc. A safeguard such as the Resuscitation Pause allows the physician to clarify the intent of the advance directive or POLST and design that individualized plan of care to make sure we get it right for each patient and every time.

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DR. MIRARCHI is medical director of the department of emergency medicine at UPMC Hamot and chair of the UPMC Hamot Physician Network in Erie, Pa.

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What's an Emergency Physician to Do?

BY CATHERINE A. MARCO, MD, FACEP, EILEEN BAKER, MD, FACEP, JOHN JESUS, MD, AND JOEL GEIDERMAN, MD, FACEP

Case: *A 79-year-old woman with metastatic lung cancer presents to the ED with severe dyspnea. Assisted ventilation appears necessary. The family is in attendance and under the impression that she will benefit from chemotherapy and/or radiation. According to the family, no one has discussed her prognosis or an advance directive with either the patient or them. Should this patient be immediately intubated?*

There is strong evidence to suggest that physicians have poor training in end-of-life (EOL) care discussions and that, even when they do occur, the quality of the discussions is generally poor.[1] Complicating the situation further is that patients and their families do not always absorb medical information communicated to them when patients are acutely ill. Family members frequently do not know and cannot accurately predict patients' EOL care preferences, and patients have preferences that change over time and across differing clinical scenarios.[2-4]

Individual goals of treatment should be established. Preferences should be gathered in regard to specific interventions and procedures rather than asking if patients or surrogates want "everything done." Many patients may choose to limit critical and resuscitative interventions at the EOL but may be concerned about symptoms, such as pain, anxiety, nausea, or dyspnea.[5,6] Establishing goals of treatment that are consistent with patients' values is an important task when caring for patients at the EOL.

Anticipating the support needs of families of patients near or at death in the ED is important in facilitating the natural grieving process that will occur if patients die. This may have more impact than the actual medical care provided to critically ill patients at the EOL. To that end, resources such as social services and pastoral care may be helpful.

How to Approach the Case of the 79-Year-Old Woman

Rapid acquisition of information is essential. A review of the medical history, including any information that would allow the emergency physician to formulate a prognosis and understand the patient's EOL care preferences, ideally in conjunction with the primary care provider, is important to emergency decision making. The ED presents significant challenges to effective communication about critical decisions, including time constraints, a loud and unfamiliar environment not always conducive to patient privacy, and the necessity for rapid decision making.

If possible, the emergency physician should have a candid and accurate discussion with the patient and family regarding current condition, prognosis, recommended interventions, and alternatives. In the event that information concerning the patient's EOL care preferences is unavailable and surrogate decision makers need more time to make decisions regarding goals of therapy, the medical condition should be stabilized to provide them with the opportunity to determine the best treatment plan to achieve patient-centered goals. For the case at hand, stabilization for the purposes of temporizing may include noninvasive positive-pressure ventilation and medical therapy. If intubation is indicated, the decision to extubate can always be undertaken when further information is available about patient-centered values and goals of medical therapy.

The emergency physician should have a candid and accurate discussion with the patient and family regarding current condition, prognosis, recommended interventions, and alternatives.

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DR. MARCO is professor of emergency medicine at Wright State University Boonshoft School of Medicine in Dayton, Ohio. She currently serves on the ACEP Ethics Committee. **DR. BAKER** works clinically for Riverwood Emergency Services Inc. She is assistant professor of emergency medicine at the University of Toledo College of Medicine and Life Sciences. She currently serves on the ACEP Ethics Committee. **DR. JESUS** is assistant professor of emergency medicine at Christiana Care Health System in Newark, Del. He currently serves on the ACEP Ethics Committee. **DR. GEIDERMAN** is a professor of emergency medicine and emergency department co-chairman at Cedars-Sinai in Los Angeles. He currently serves as chair of the ACEP Ethics Committee.

THE BATTLE FOR YOUTH

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In the middle is the question, do the benefits of hormone treatments (such as Botox injections, human growth hormone [HGH], and testosterone), skin treatments (Juvederm, laser therapy, non-surgical facelifts), and other "fountain-of-youth" products outweigh potential risks? Is the boon that can be increased vitality, faster recovery times from workouts and injuries, or potential weight loss worth the downsides reported in new studies that show increased risks for diabetes, joint issues, and heart conditions from using these products?

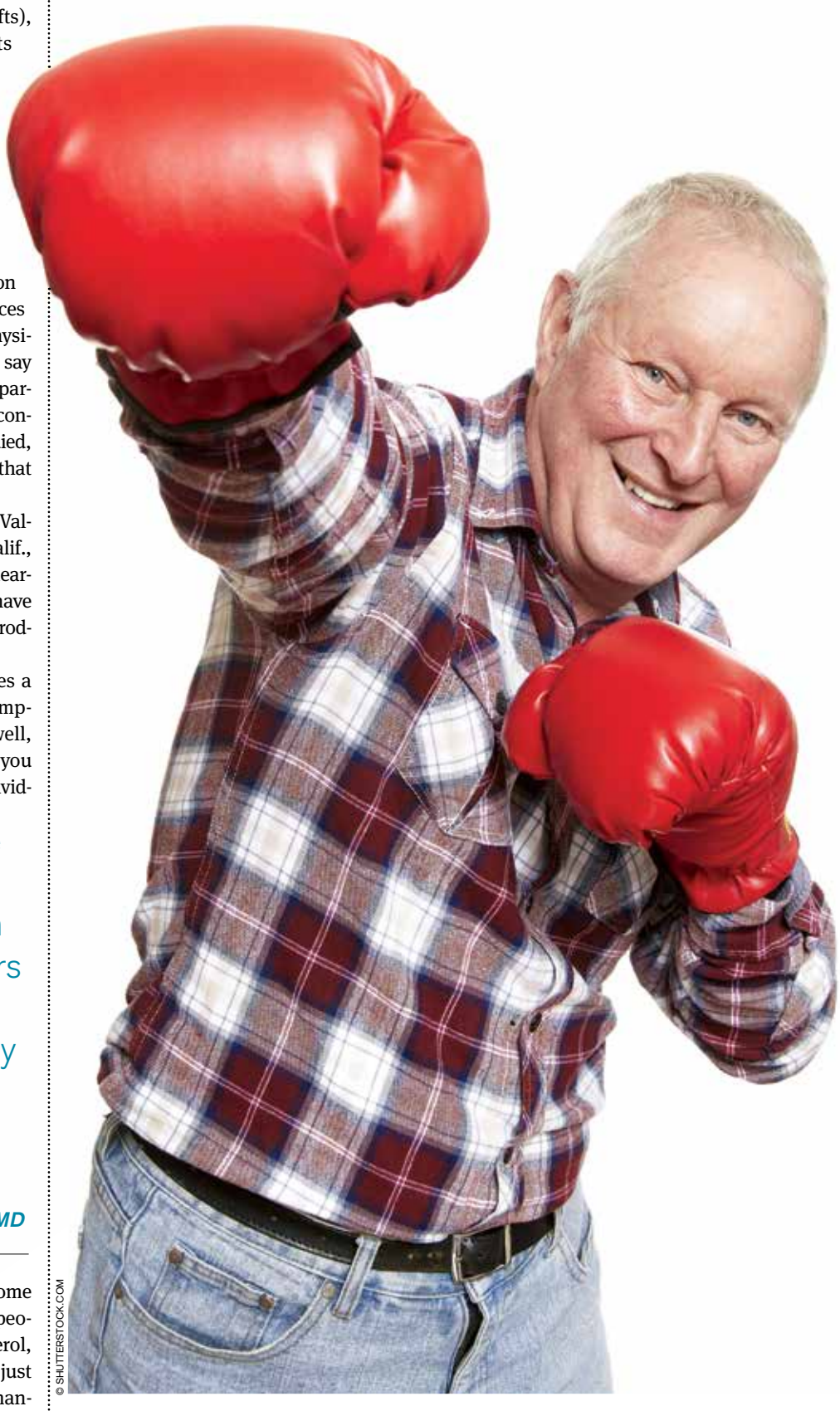
The muddled answer is: it depends on whom you ask. Proponents of said services say that, used correctly and under a physician's care, they can be beneficial. Critics say the treatments—hormone treatments in particular—may have unintended long-term consequences that have not yet been fully studied, and that fighting aging is a losing battle that could have health risks.

Dr. Kivela, managing partner of Napa Valley Emergency Medical Group in Napa, Calif., and co-owner of the Elan Medical spa in nearby Fairfield, said emergency physicians have to decide for themselves if the services or products are right for them.

"I think everybody probably deserves a workup, particularly if you have any symptoms—fatigue, you're not thinking as well, you're not feeling as well as you think you should," Dr. Kivela said. "It's up to the individual to perform at their best, and I think some of these products and services can help people feel better. We blame a lot of cholesterol, high blood pressure, and depression on just getting old, and I think if you optimally manage those hormones, you can help mitigate those conditions."

> "The risk factors for me in the long term, in 20 years? I'll be 80. If I can get a good five, 10 years of quality life, enjoying my children, enjoying my grandchildren, enjoying those around me that I care for—why not?"
>
> *—Juan Fitz, MD*

Dr. Fugh-Berman, an associate professor in the Department of Pharmacology and Physiology and in the Department of Family Medicine at GUMC, said hormone treatments are not panaceas for aging and, like with all medical procedures or treatments, have potential downsides.



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"All of these hormones have risks," she said. "The concept that one can regain youth by mimicking the hormone levels of a young person is a very dangerous proposition."

The issue of weighing risks and benefits of anti-aging products has become more important in recent years as the market has ballooned, reaching nearly $250 billion in 2012, according to a recent report from BCC Research, a publisher of technology-market research reports based in Wellesley, Mass. The report, "Antiaging Products and Services: The Global Market," found that the services portion of the market was $38 billion, or 15 percent of the overall market. But that figure is projected to grow to $61.2 billion by 2018, a compounded annual growth rate of 8.6 percent that outpaces the overall market.

Juan Fitz, MD, assistant medical director of the Emergency Department at Covenant Medical Center in Lubbock, Texas, said that one reason anti-aging therapies, services, and products appeal to his fellow emergency physi-

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The Example of Low T

Dr. Fugh-Berman said it is ironic that some people are extolling the benefits of anti-aging therapies whose long-term ramifications are unclear, even as she questions how the business of anti-aging has gone from "quack therapies" to mainstream medicine in a rather short time.

"It used to be that anti-aging therapies were in the complementary and alternative medicine sphere," she said. "It's crossed over. It's becoming more acceptable in conventional medicine to 'treat aging.' It's a bad precedent. Hormones have risks."

Dr. Fugh-Berman uses the condition of hypogonadism—"low testosterone," or "low t," for short—as a prime example. Self-administered tests for the condition often ask vague metrics, such as questions about whether a man is more tired after dinner or gaining weight as he get older. Being tired after dinner and gaining weight with age are not necessarily signs of problems, Dr. Fugh-Berman said.

> "THE ONLY ALTERNATIVE TO AGING IS DEATH. AGING IS A NORMAL PART OF LIFE AND THAT'S WHAT WE SHOULD BE COUNSELING PATIENTS ABOUT."
>
> *—ADRIANE FUGH-BERMAN, MD*

Yet clinics, boutique spas, and other venues have seen the use of testosterone grow as patients clamor for treatment for "low t" and physicians can make money by treating the condition, she said.

"The establishment of 'low-T syndrome' did not come from an upswelling of support from unconflicted physicians," Dr. Fugh-Berman said. "This is marketing … we should not be giving patients potent pharmacological therapies in an effort to combat aging. The only alternative to aging is death. Aging is a normal part of life and that's what we should be counseling patients about." *–RQ*

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cians is that they have high-stress jobs that can physically and mentally take a toll on them.

Dr. Fitz operates Fitz Anti Aging & Wellness @ Bella Derme, also in Lubbock, which offers Botox injections, laser therapies for skin conditions, and other anti-aging treatments. Actions that reduce stress and give his patients, including other emergency physicians, a more youthful feeling or complexion are more than worthwhile, he said.

"The risk factors for me in the long term, in 20 years?" he said. "I'll be 80. If I can get a good five, 10 years of quality life, enjoying my children, enjoying my grandchildren, enjoying those around me that I care for—why not?"

Dr. Kivela said the key to providing anti-aging services is to specialize in them. Too many physicians, he said, may self-treat without understanding the risks. By way of contrast, he said his wife, Madeline Andrew, MD, took a year off from her psychiatric practice to become a specialist.

"I think there is plenty of evidence-based medicine there to say this is another way of improving your health," Dr. Kivela said. "I'm not telling anyone this is something they should or shouldn't do, but I think it seems to be crazy that someone would not even consider that, given the amount of evidence-based medicine that's out there supporting it."

Is the "Fountain of Youth" Worth It?

Treatment/service/product	Benefits	Risks
Botox	An injectable form of the toxin that causes botulism, anti-aging uses include wrinkle reduction and younger looking skin. It is also used to treat muscle spasms, some eye conditions, and bladder issues.	Overdoses can result in muscle weakness, difficult swallowing, and weak or shallow breathing. Overuses in cosmetic situations can change one's physical appearance, as well.
Testosterone therapy	Can be used topically or via injection. Some argue benefits in older men include improved strength, libido and sexual function, cognitive function, and general well-being.	One recent study of men in the Veteran's Affairs system associated the non-strictly monitored therapy with increased risk of adverse outcomes related to mortality, myocardial infarction, and stroke.
Human growth hormone (HGH)	Can be helpful to treat growth hormone deficiency in adults. Injections can increase bone density, muscle mass, and exercise capacity; and decrease body fat. HGH is also approved to treat AIDS- or HIV-related muscle wasting.	Risks include carpal tunnel syndrome, swelling in the arms and legs, joint and muscle pain and, in men, enlargement of breast tissue. An increased risk of diabetes is also a risk factor.

Sources: FDA.gov; Elan Medical; ACEP News Research

Dr. Kivela believes many of the critics of anti-aging services and products view them through professional athletes, who seemingly monthly make news with issues surrounding unauthorized use of hormones or steroids. The complications and problems occur in patients who are not maintained within physiologic levels.

"But we're not treating professional athletes," he said. "We're treating people that have deficiency conditions, and these are medical conditions that can be treated today. These are not magic bullets but need to be done in conjunction with diet and exercise."

Dr. Fitz adds that emergency physicians are "really informed consumers" who understand the risks of treatments and choose to accept them.

RICHARD QUINN is a freelance writer in New Jersey.

YOU HAVE YOUR HEALTH UNTIL YOU DON'T

WELLNESS

DR. ANDREW has practiced medicine for more than 20 years and is the cofounder of the age management and aesthetic practice Elan Medical in Fairfield, Calif.

Is Hormone Replacement Therapy Too Good to Be True?

A successful HRT program must be in the hands of a skilled physician who acknowledges patients' symptoms and utilizes evidence-based objective measurements to develop a treatment plan that will minimize risk while providing benefit.

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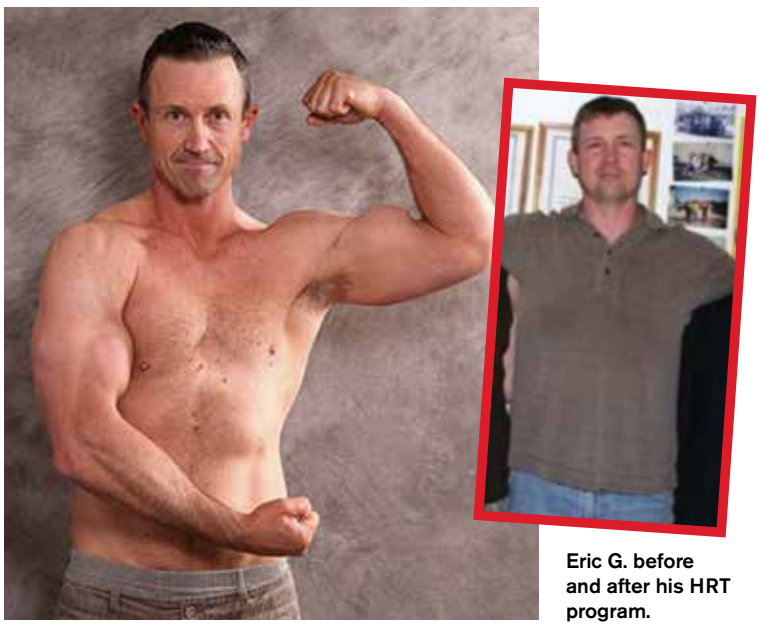
Is HRT a Danger or a Miracle Cure?

HRT, like all medical treatments, has benefits and risks. The endocrine system is complex, and hormones are powerful. In the hands of an unskilled practitioner, HRT can be disastrous and should absolutely be avoided. However, under the careful supervision of an experienced physician, HRT is extremely safe and effective, with benefits far outweighing any risks.

Scientific studies have shown that by age 40, most adults have significantly altered levels of several essential hormones. Patients complain of fatigue, decreased motivation, decreased sex drive, decreased energy, and changes in body composition with decreased muscle mass and increased body fat. These symptoms often lead to high cholesterol and high blood pressure and become more noticeable as time marches on. Patients often chalk them up to simple aging or depression or, worse, attribute them to career burnout or even a failing relationship.

Unfortunately, the medical community reinforces these interpretations and, in fact, erroneously publishes information warning against HRT entirely. Most physicians are familiar with the problems associated with the National Institutes of Health study warning women against HRT and know that the pendulum has already begun to swing back in favor of prudent HRT for menopause.

A study recently published in *JAMA* warned that testosterone replacement was associated with increased risk of stroke and heart attack. However, the men in this study were not prescribed an aromatase inhibitor along with their testosterone. When testosterone therapy does not include an aromatase inhibitor, estrogen will also rise, often to harmful levels. High estrogen is definitely associated with increased risk of blood clotting. Furthermore, testosterone can increase Hg and should be monitored. However, high testosterone alone is not a risk factor for stroke or heart attack. If it were, then these conditions would be more common in men between the ages of 18 and 25 rather than older men. Furthermore, the Kaplan-Meier methodology utilized in this study was less than ideal, skewing the data even more.



Eric G. before and after his HRT program.

Another study recently concluded that low IGF-1 (the active metabolite of human growth hormone) was better than high IGF-1 and projected that death rates were more favorable for those with low IGF-1. However, this study was conducted with a small "N" of women in their 90s, a group in whom death projections are questionable, and again, the statistical methodology was not ideal. Another study evaluated a group of veterans and warned against human growth hormone therapy. However, the authors' conclusions were directly contradictory to what the statistics demonstrated. Informed individuals understand that studies can be crafted and statistics manipulated to prove either side of an argument and that caution should be used prior to accepting anyone's conclusions.

How to Approach HRT Discussions

Inaccurate information can lead doctors to minimize patients' complaints of age-related symptoms and discourage them from considering HRT. Patients often present with the following complaints: "Doc, I just don't feel as good as I used to. It's becoming harder and harder to maintain my weight, and I'm losing fitness no matter how hard I work out. I just don't have the energy or drive that I used to." They are usually met with: "Why don't you eat less and exercise more? If that doesn't work, we can try an antidepressant," or "You can't expect to feel like you did when you were 25! Accept the fact you're getting older; it's better than the alternative."

Physicians who respond in this manner are actually harming their patients by withholding an appropriate referral to an HRT specialist. Most physicians are familiar with menopause. They are less familiar with male-associated andropause and adult-onset human growth hormone deficiency, or somatopause. However, all three are recognized syndromes associated with hormonal shifts. These shifts contribute to a slow but steady decline in energy, loss of muscle mass, increased body fat, weaker bones, loss of skin tone, lapses in memory, and diminished sex drive and activity.

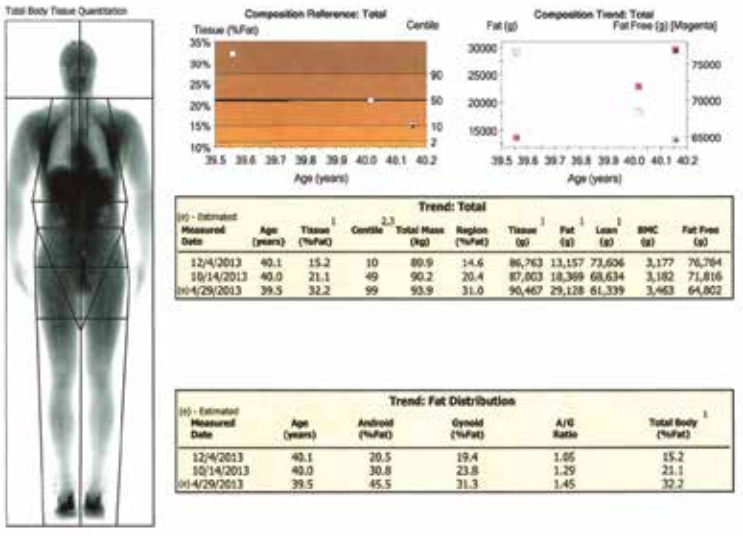
Like diabetes, these syndromes can be successfully treated using appropriate nutrition, exercise, and HRT. Insulin is a hormone that can be lethal when dosed improperly, but no physician would deny a hyperglycemic diabetic insulin because giving insulin is "risky." Physicians are experts at managing the risk-benefit ratio and administering beneficial treatments to patients in need while managing their associated risks.

Careful Planning Is Key

As with any successful medical treatment, a successful HRT program must be in the hands of a skilled physician who acknowledges patients' symptoms and utilizes evidence-based objective measurements to develop a treatment plan that will minimize risk while providing benefit. Objective baseline measurements should include body composition, bone density, digital strength, cardiac fitness testing, and comprehensive metabolic and hormone laboratory testing. These results must be interpreted based on optimal levels rather than disease-based reference ranges published by the lab. It is common for patients to have labs interpreted by their doctor and be told everything is fine. When interpreting the same exact data from a health perspective, key tests may be missing or deficiencies overlooked. These measures are the basis for a personalized, safe, and effective treatment plan.

Like most endeavors in life, the key to executing a successful plan is in the follow-through. Patients must be monitored closely, especially in the first few months. Follow-up laboratory testing is essential within the first eight to 12 weeks. Doses must be adjusted to ensure that replacement is in the appropriate range and not creeping into supraphysiological levels where risks increase. Once dosing has been established, periodic monitoring must be continued. Due to a variety of variables, patients' needs fluctuate over time. Therefore, doses that are appropriate today may not be appropriate in the future.

HRT has moved from the fringe into mainstream medical practice for two primary reasons. First, it works! But equally important is that HRT focuses on maximizing quality of life rather than the number of days of life.



Eric G.'s DXA scan, demonstrating a dramatic decrease in body fat and increase in muscle mass with a short course of HRT.

DR. WEINGART is an ED intensivist. This column is a distillation of the best material from the EMCrit Blog and Podcast (http://emcrit.org).

Prevent Peri-intubation Deaths with Careful Medication Choice

You are considering your next steps in management when you hear the BP cuff cycle...64/34... repeat... 61/30...Heart rate now 40... now 0! You start CPR and resuscitation. Did you cause this? Was this inevitable? What happened?

by SCOTT D. WEINGART, MD, FCCM

The Case

A 65-year-old female presents to the emergency department in respiratory distress. As EMS wheels her into the resuscitation area, it is quite obvious that this patient is unlikely to maintain this effort for an extended period. Pulse ox shows an oxygen saturation of 85 percent on a nonrebreather. She is gasping for air as you place her on a trial of noninvasive ventilation. She is febrile, and a portable chest X-ray shows a large pneumonia as the likely source of infection. The patient's O2 sat now reads 100 percent, but she is clearly tiring. As you are preparing to intubate, the blood pressure recycles, and a reading appears on the monitor: 89/50. Not wanting to wait for the nurse to hang fluids, you ask the nurse to push the standard doses of etomidate and succinylcholine and begin the intubation; the patient is intubated successfully. You are considering your next steps in management when you hear the BP cuff cycle...64/34... repeat...61/30...Heart rate now 40... now 0! You start CPR and resuscitation. Did you cause this? Was this inevitable? What happened?

AMÉLIE BENOIST / SCIENCE SOURCE

Intubation of a patient for general anesthesia for endoscopy.

Inevitable or Preventable?

Peri-intubation deaths are preventable with proper foresight and preparation. Three major sources of mortality during intubation and the peri-intubation period are related to oxygenation, pH status, and hemodynamic instability. With careful consideration of these factors, mortality can be reduced. In this case, failure to address the patient's hemodynamic insufficiency likely led to her arrest. Hypotension during and after intubation has a multitude of causes, but studies have shown that the presence of hypotension is an independent predictor of in-hospital mortality and increased length of stay in the ICU. Patients who experienced hypotension after intubation had an in-hospital mortality rate of 33 percent versus 21 percent for patients who did not. In addition, hypotensive patients had an average stay in the ICU of 9.7 days versus 5.9 days for normotensive patients.

Set up to Fail

The very act of intubation causes a change in breathing dynamics that is deleterious to patients' hemodynamic status. Switching from the negative-pressure ventilation of spontaneous-breathing patients to the positive-pressure ventilation (PPV) of paralyzed, intubated patients causes an instant decrease of venous return by increasing right atrial pressures. Decreased venous return leads to decreased preload, which is integral to maintaining hemodynamic stability in critically ill patients.

GO! GO! GO! STOP!!!!

That is the signal critically ill or distressed patients' bodies are receiving during the intubation period. Most patients intubated in the emergency department are under physiologic stress. Whether for sepsis, fluid overload, respiratory failure, or a variety of other indications, most patients are stressed and working extremely hard to breathe prior to the intubation attempt. Catecholamines are surging throughout the cardiovascular system, augmenting arterial and venous vascular tone, stroke volume, heart rate, and ultimately cardiac output. When any induction agent is given, that sympathetic state is reversed, resulting in a decrease of endogenous catecholamines. This, in turn, removes the cardiovascular support they provide, reducing blood pressure. When combined with the increased right atrial pressure caused by PPV, patients are set up for hypotension—and possibly worse.

Table 1.

Epinephrine 1:10,000
• 10 mL syringe with 9 mL of NS
• 1 mL from the cardiac "amp"
• 10 mcg/mL
• Dose: 0.5–2 mL (5–20 mcg) q 2–5 min
• Onset of action: 1 min
• Duration: 5–10 min

Too Hot, Too Cold…Just Right

While there is no perfect induction agent, some certainly have distinct advantages. Others have effects that clearly make them less desirable in patients who have the possibility of developing peri-intubation hypotension.

Propofol

Most providers would not consider propofol for inducing hypotensive or potentially hypotensive patients because of its justified reputation for causing hypotension. However, in some intensive care units, this may be the only agent immediately available. While not ideal, propofol can be used if dosed correctly in hemodynamically compromised patients. In hypovolemic hemodynamically unstable patients, the amount of propofol available to act on the brain is markedly increased. By reducing the propofol dose to 10 percent of its usual value, propofol can be used to induce hemodynamically unstable patients relatively safely while still maintaining the desired lack of awareness.

Etomidate

This is classically known as a cardiac stable medication. However, studies have shown that it can both drop blood pressure and heart rate, most likely due to the effects on endogenous catecholamines mentioned above. Conversely, a study of etomidate in hemodynamically unstable animals due to hemorrhage actually required the dose of etomidate to be increased to achieve adequate brain levels for lack of awareness.

Fentanyl and Midazolam

In shocked patients, these medications won't take effect for three to five minutes. Even if hemodynamically stable doses of these medications are chosen, it is likely that, at the time of intubation, patients will have no induction effect from this combination.

Ketamine

This is my preferred agent. The much-bandied effect of ketamine to reduce cardiac output in patients who have been catecholamine dependent for long periods of time seems to be spurious and predicated on animal data with dose orders of a magnitude higher than those used in humans. I still recommend reducing the induction dose of ketamine in shocked patients. My preferred dose is 0.5 mg/kg in critically ill hypotensive patients. Ketamine can be used in traumatic brain injuries and patients with normo- or hypotension, but it should not be used in hypertensive brain or vascularly injured patients.

Give More to Get More

Time to paralysis is inversely proportional to cardiac output. Therefore, as the cardiac output decreases in hemodynamically unstable patients, time to full muscle relaxation is increased. To overcome this barrier, the dose of paralytics should be increased. Succinylcholine doses can be increased to 2 mg/kg and rocuronium to 1.6 mg/kg. In addition, medications that augment cardiac output can be beneficial here as well. The medication of choice is push-dose epinephrine. Given in 5–20 mcg bolus doses, it can augment both the patients' blood pressure and cardiac output (see Table 1). For this reason, epinephrine is superior to phenylephrine for the purpose of intubating hemodynamically unstable patients. In such patients, phenylephrine may decrease cardiac output because it only offers vasoconstrictive effects, which may actually increase the length of time to paralysis.

Do You Have a Minute to Talk About Scopolamine?

If hemodynamically unstable patients need to be intubated but you only have a few minutes to prepare, consider pretreatment with scopolamine. By giving 0.4 mg of scopolamine a few minutes prior to induction, multiple advantageous effects can be achieved. Primarily, scopolamine acts as an amnestic agent, rendering patients memory-free if induction turns out to be inadequate. The side effect of scopolamine, tachycardia, can augment cardiac output as well.

Optimize Prime

There are other steps that can be taken besides medication choices to maximize patients' chance of survival. Resuscitation fluids, whether blood products for trauma or crystalloid for hypovolemia, should be started prior to the intubation. Don't wait until the induction agent has been given before volume resuscitating patients. Blood pressure goals for pre-intubated patients should be slightly higher than usual. Systolic blood pressure of 140 or mean arterial pressure of 80 for septic patients is ideal, knowing that the intubation itself will cause some degree of blood pressure reduction. To achieve this effect, start an inopressor (eg, push-dose epinephrine) prior to the intubation, along with the fluids that should already be infusing. For hemorrhaging trauma patients, while permissive hypotension is the goal, allowing the pressure to meander higher prior to placement of the endotracheal tube is ideal.

Low and Slow

Once patients are successfully intubated on the vent, what should the settings be to prevent further hypotension from the initiation of PPV? For most patients, a low peep and low tidal volume strategy of 6 cc/kg IBW should be enacted. This will minimize the degree to which venous return and preload are negatively affected. While these settings may place patients at risk for some degree of hypercarbia, such a result is acceptable provided patients are not suffering increase intracranial pressure or other cerebral insult.

Conclusion

Intubating hypotensive patients or patients who have the potential to become hypotensive is a procedure fraught with many pitfalls and possible missteps. Careful preparation and consideration of what harm the provider can conceivably cause can diminish these risks. As previously stated, hypotension during the intubation period has been shown to be an independent risk factor for mortality, therefore it is of utmost importance to take all imaginable measures to reduce its occurrence.

For references and the related podcast, please go to http://emcrit.org/podcasts/intubation-patient-shock.

DR. AUGUSTINE is director of clinical operations at EMP in Canton, Ohio; clinical associate professor of emergency medicine at Wright State University in Dayton, Ohio; vice president of the Emergency Department Benchmarking Alliance; and a member of the ACEP Board of Directors.

The ED as a Diagnostic Center

Trauma centers and the need for cohort data

by JAMES J. AUGUSTINE, MD, FACEP

The utilization of diagnostic testing in the ED has expanded with the growing number of tools available for electrical testing, imaging, and laboratory analysis. This growth has been questioned by many, especially those who pay for the tests. The conflicts over testing have spilled over into the general media, including a recent opinion piece in *The New York Times*, written by a cardiologist and a radiologist, that accuses emergency physicians of "ordering multiple CT scans even before meeting a patient."[1]

Why is more diagnostic testing used, and how does it relate to the patient population served? The ED has a critical role as the diagnostic center for the American medical community. Overwhelming amounts of the diagnostics are performed in the ED, particularly related to patients being admitted to the hospital. Because 68 percent of inpatients are processed through the ED, emergency physicians are responsible for a lot of testing and the patient-flow issues related to those decisions.

The use of diagnostic testing has markedly changed over the past 20 years with the advent of technology that allows imaging using a broad range of modalities (ultrasound, ionizing radiation, magnetic resonance, positron emissions, and more). These remarkable tools provide unprecedented ability to evaluate patients as they present with a wide range of clinical problems.

What the Data Say

The Emergency Department Benchmarking Alliance (EDBA) data survey is based on performance reports of ED operations, with data from 1,030 EDs that saw 40 million patients in 2012.[2] The utilization of diagnostic imaging in the ED is measured in the number of procedures performed per 100 patients seen. The data, reported in cohorts based on type and volume seen in the ED, are in Table 1.

There is little difference in use of plain diagnostic X-rays based on volume. There is about a 50 percent difference in CT utilization based on ED volume, with the range only between 16 and 24 procedures per 100 patients. Pediatric EDs only use the CT imaging about four times per 100 patients.

Trauma centers utilize diagnostic imaging to evaluate patients with critical injuries. Within the EDBA data set, the data are analyzed in separate cohorts of trauma centers. Pediatric trauma centers have very different profiles than general EDs, so they are grouped separately. The cohorts exist in hospitals that are Level I and Level II trauma centers, Level III centers, and all other EDs.

That analysis shows that the higher-level centers see patient populations with higher acuity, admission rates, EMS arrival, and longer processing times. There are also differences in the use of diagnostics commensurate with the trauma level.

CT scans are used more frequently in Level I and II trauma centers than in lower-level centers. Emergency physicians in these EDs should be aware of the differences and, when called upon to study their utilization, compare to cohorts at a similar level of trauma designation and pediatric mix.

MRI utilization across all EDs has now reached about one procedure per 100 patients, but this increases to 1.8 in the Level I trauma centers.

MRI utilization across all EDs has now reached about one procedure per 100 patients, but this increases to 1.8 in the Level I trauma centers.

It is critical that emergency physicians are able to understand and use the data on diagnostic testing from their departments and have comparison data available from their peers. The first step to a rational approach to diagnostic-test utilization is to know where you, and others like you, stand. This will allow better decision making by all parties involved in utilization management.

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Table 1. EDBA Data Survey 2012: Single-Year Cohort

ED TYPE	SIMPLE X-RAY PROCEDURES PER 100 PATIENTS	CT PROCEDURES PER 100 PATIENTS	MRI PROCEDURES PER 100 PATIENTS
More than 100K volume	42	18	1.1
80–100K	48	22	0.9
60–80K	50	24	1.8
40–60K	50	24	1.2
20–40K	48	19	0.8
Less than 20K volume	44	16	0.3
Pediatric	30	4	0.3

Table 2. EDBA Data Survey 2012: Comparison of Trauma and Non-Trauma Centers

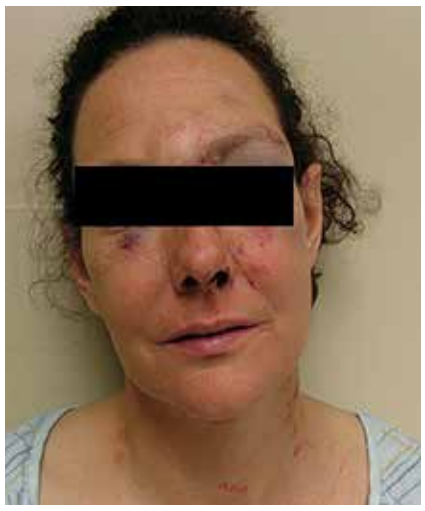
YEAR	LEVEL I AND II TRAUMA CENTERS, NOT PEDIATRIC	LEVEL III TRAUMA CENTERS	LEVEL IV OR NO TRAUMA CENTER DESIGNATION
Number of hospitals	162	127	726
Admit %	22	17	15
Transfers out %	1.0	1.7	2.4
EMS arrival %	22	16	15
Median LOS (mins)	221	173	214
ECGs per 100	31	26	24
X-rays per 100	49	48	48
CT per 100	26	20	19
MRI per 100	1.8	1.1	0.7

BE A MEDICAL DETECTIVE—BONE UP ON YOUR FORENSIC SKILLS

FORENSIC FACTS

DR. RIVIELLO is professor of emergency medicine at Drexel Emergency Medicine in Philadelphia. He is board certified in emergency medicine and has a master of science in forensic medicine from Philadelphia College of Osteopathic Medicine.

Domestic Violence Homicide: What Are the Risk Factors?



Typical injuries from a strangulation attempt.

by RALPH J. RIVIELLO, MD, MS, FACEP

Women are killed by intimate partners more often than by any other type of perpetrator. One in three female homicide victims is killed by her current or former partner. The overwhelming majority of these women are seen in EDs in the year prior to their homicide, making the ED an ideal location for interpersonal violence (IPV) screening and intervention.

Emergency physicians should maintain a high index of suspicion for IPV and screen *all* patients, male and female, who may be at risk. Circumstances that should increase concern for IPV include multiple visits for injuries, multiple injuries in various stages of healing, patterned injuries such as slap marks and defensive injuries, injuries inconsistent with the history provided, and an overbearing significant other. When evaluating injuries, the potential for IPV must be top of mind or it's guaranteed to be missed. Several validated screening tools are available, and EDs should have policies and procedures in place for IPV screening and referral to appropriate local resources. Patients should not be screened in the presence of friends or family members.

If the IPV screen is positive, patients should be screened for risk factors for lethality. Risk factors for domestic violence homicides include attempted strangulation, estrangement from the abuser, and pregnancy. The risk of becoming an attempted/completed femicide (the killing of women) victim is three times higher for women abused during pregnancy and seven times higher for nonfatal strangulation victims. Perpetrator red flags include alcohol/drug abuse, access to firearms, use of firearms during previous domestic violence incidents, and unemployment. Perpetrator problem drinking was associated with an eightfold increase in partner abuse and a twofold increased risk of femicide/attempted femicide.

The emergency physician should thoroughly document injuries, specifically paying attention to location, size, color, and shape. Photographs of injuries can be valuable and should be placed in the medical record per hospital policy. Documentation may be the key to saving a life.

Police reporting requirements regarding IPV vary from state to state, and emergency physicians should know the laws in jurisdictions where they practice.

KEY FACTS:

- All ED patients at risk for IPV should be screened.
- Victims of IPV are at risk for homicide at the hands of their abusers.
- Women are at greatest risk during pregnancy and when attempting to leave.
- Other red flags include strangulation, access to/use of firearms, and drug/alcohol abuse.
- IPV screening and lethality screening in the ED and appropriate referral remain effective tools.

Resources for More Information

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BETTER, SAFER, FASTER ... WHILE REDUCING COSTS

COST-EFFECTIVE CARE SERIES

DR. LIN is an attending emergency physician and a fellow in the Division of Health Policy Research and Translation in the Department of Emergency Medicine, Brigham and Women's Hospital in Boston. She also serves as an instructor at Harvard Medical School.

DR. SCHUUR is vice chair of quality and safety and chief of the Division of Health Policy Research and Translation in the Department of Emergency Medicine, Brigham & Women's Hospital in Boston. He also serves as assistant professor at Harvard Medical School.

Stop the Coagulation Testing Cascade

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Engage other medical specialties and admitting physicians to achieve consensus on tests that are not necessary for hospital admission or preoperative clearance.

by MICHELLE LIN, MD, MPH, AND JEREMIAH SCHUUR, MD, MHS

How many patients have you seen for chest pain in the last year? How many times have you placed a chest pain order set—complete blood count, basic metabolic panel, troponin, other cardiac markers, coags, and aspirin 325 mg? Now consider how many times the results of coagulation testing (particularly in that context) have altered your clinical management. If you answered none, we wouldn't be surprised.

Prothrombin time (PT) was discovered in 1935 and used to better understand the reasons for prolonged bleeding in liver failure. The activated partial thromboplastin time (PTT) was discovered in 1953 and used to evaluate for congenital hemophilia in high pretest probability patients with symptoms of unexplained bleeding.[1] PT contributed to the discovery of warfarin and subsequently has been used to evaluate its therapeutic effect.[2] By the 1960s, these tests were widely available in modern laboratories. In the 1980s, the International Normalized Ratio (INR) was developed to provide a consistent way of expressing the PT ratio, which varied between labs based on the type and batch of prothrombotic reagent used. Together, "coags" have become one of the most frequently performed laboratory tests in the world and in the ED.

But when do they add value? PT/INR and PTT testing occurs frequently in the ED setting despite studies showing that routine testing does not affect clinical management.[3] In 2010, 8.4 percent of ED patients got a PT or INR.[4] While statistics for PTT are not available, in our experience they usually are ordered together with PT/INR.

Estimating the cost of medical tests and treatments is difficult because charges, costs, and payments all differ between institutions, as well as by regions and payers. Medicare reimburses around $5.56 for a PT/INR and $8.50 for a PTT.[5] Commercial insurance companies pay from $10 to $60 per test.[6] Assuming that 8.4 percent of ED patients get a PT and 7 percent get a PTT, at a cost of $25 per test, we could save $250 million by ordering half as many coags in the ED as we do now. This is real money and seems possible to achieve.

What Are Some Common Clinical Scenarios in Which Coagulation Testing Is Unnecessary?

- **Chest pain:** At many EDs, PT/INR and PTT are a routine part of chest pain orders. However, among these patients, the rate of abnormal coagulation studies is very low, and the results do not alter clinical management.[7] One retrospective study of 741 patients presenting to the ED with chest pain found that 81 percent underwent inappropriate coagulation testing (no coagulopathy, liver disease, warfarin use, active bleeding, or STEMI). Of these patients, only 0.3 percent had a clinically significant coagulopathy, and no patients experienced changes in their clinical management.[8] Low-risk patients who are unlikely to undergo emergent cardiac cath and have no indication for coagulation testing (see Table 1) should not routinely get coags.
- **Prior to starting anticoagulation:** PTT is used for monitoring heparin, not for initial dosing, which should be weight-based. Patients receiving low molecular-weight heparin and novel anticoagulants do not require routine PT/INR or PTT monitoring.
- **In combination:** Ordering PTT and PT/INR together is a longstanding tradition that is entrenched by our order sets, blood-drawing habits, and even the language of ordering "coags." It belies the fact that the tests evaluate different processes and can be ordered separately for most indications. See Table 1 for specific indications for each test.
- **Preoperative or pre-procedure:** Coagulation studies are routinely ordered for patients who require surgery or other invasive procedures, but there is no evidence to suggest that abnormal coagulation studies are a predictor of bleeding complications during invasive procedures.[9] In fact, the best predictor is patients' own reported history of bleeding with prior procedures. As of 2003, Medicare does not reimburse providers for PT and PTT testing performed for routine preoperative screening purposes. Changing this is difficult for individual emergency physicians because surgeons may insist. Encourage your medical director to discuss this with the surgery services.

What Can You Do To Reduce Unnecessary Coagulation Testing?

- Remove coagulation tests from electronic order panels, such as those for the evaluation of suspected acute coronary syndrome, admission, or preoperative evaluation. Engage other medical specialties and admitting physicians to achieve consensus on tests that are not necessary for hospital admission or preoperative clearance.
- Require separate orders for PT/INR and PTT.
- Separate or remove the sodium citrate–containing (often light blue–topped) tube from IV-starting kits.

The next time you evaluate a patient who is not bleeding, not on warfarin, and does not have a history of liver disease, think twice before clicking PT/INR and PTT on the order set. Skip the coags if they won't alter the patient's clinical plan. Let's reduce unnecessary testing one light blue–topped tube at a time.

Table 1. Indications to Order Coagulation Studies

PT/INR
• Monitoring of warfarin
• Evaluation for vitamin K deficiency or severe malnutrition
• Assessment of liver failure
PTT
• Monitoring (but not initiation) of heparin
• Assessment of clotting factor function in hemophilia and von Willebrand disease
Both PT/INR and PTT[10]
• Active bleeding without obvious cause
• Evidence of abnormal bleeding on physical examination
• History of abnormal, excessive, or spontaneous bleeding
• Suspected or confirmed disseminated intravascular coagulation
• High-risk patients in whom a clinical history is unavailable

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RATIONAL APPROACHES FOR A NATIONAL PROBLEM

CHRONIC PAIN: THEIR PAIN OR YOURS?

DR. DUCHARME is editor in chief of the *Canadian Journal of Emergency Medicine*, clinical professor of medicine at McMaster University, and chief medical officer of McKesson Canada.

Standardizing Our Approach to Patients Seeking Opioids: Part 2

A test positive for cocaine is a true positive for that drug—and no patients testing positive for cocaine should receive opioids. Patients stating they have a prescription for an opioid but who test negative for that opioid should raise concern about diversion.

by JIM DUCHARME, MD, CM, FRCP

*Last time, we explored the research and statistics on pain management and opioid addiction (*ACEP Now *March, p. 22). In this column, we will explore some standard strategies to use when patients seek opioids in the ED.*

In the management of chronic non-cancer pain (CNCP), the current recommendation is to use "universal precautions" for all patients. Just as we assume in the ED that any patient might have a blood-borne pathogen and so we take universal precautions, the baseline assumption in chronic pain is that anyone can be at risk for diversion or addiction. This does not mean that no patients receive an opioid for pain care; rather, it means that a standardized approach is used for all patients. This type of approach can be used in the ED.

A 37-year-old male presents at 2 am on a Saturday complaining of dental pain and insisting on getting some "Percs" for his pain. What to do?

- **Offer a *valid* alternative**. Dental pain can be severe, and it cannot tell time. During working hours, such patients can get to a dentist, but such service is not available in the middle of the night. Rates of addiction are higher, and there is no way to test objectively for pain. To ensure pain is addressed while also allaying any concerns over diversion, the best option is to offer a dental block with bupivacaine. The anesthetic will last six to eight hours and allow patients to see a dentist in the morning; it is a valid analgesic approach to opioids. You should raise, in a nonconfrontational manner, your suspicions of nonmedical use of opioids with any patients who refuse such therapy and offer to provide support for substance abuse if they admit to that problem. Invalidated concerns of misuse do not mean no management of pain; they mean that the pain should be properly managed with alternatives to opioids. Do not allow patients to suffer because of our (unjustified) suspicions.

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- **Establish the risk of abuse or diversion.** The Opioid Risk Tool is an excellent screening tool for establishing risk of abuse and can be done in one to two minutes. Low-risk patients have less than 0.2 percent risk of abuse.
- **Consider a urine drug screen**. While urine drug screening has many limitations in assessing patients with psychiatric disorders or with altered mental status, it can be of value in patients seeking opioids. A test positive for cocaine is a true positive for that drug—and no patients testing positive for cocaine should receive opioids. Patients stating they have a prescription for an opioid but who test negative for that opioid should raise concern about diversion. Further discussion is required before any consideration of opioids for such patients.

A 44-year-old woman with 10 years of low-back pain and who states she takes a sustained-release morphine preparation (and has done so for four years) comes to the ED saying she has "run out" and needs some pills for the next three days until her doctor gets back in town.

- **Avoid giving a short-acting opioid in the ED**. Injections of short-acting opioids can lead to acceleration of tolerance and create institutional dependency, worsening catastrophizing. There is no upside to this practice. If patients who take opioids for chronic pain have a new pathology requiring additional opioids, the best approach is a PCA pump that is locked—inadequate pain relief in these situations increases risk of abuse in previously stable patients.
- **Do not prescribe opioids at discharge**. Patients on long-term opioids have an identified primary prescriber and should have their opioids prescribed *only* by that provider. They should not receive a prescription to "hold them over" until they see their caregiver; they would receive the identical response from their primary prescriber if they presented before their scheduled appointment and asked for additional opioids. Several guidelines suggest that if you do choose to provide opioids at discharge, it should be a dose with which you are comfortable in a quantity that suffices until the next business day. Even if this option is chosen, it should never be repeated a second time.
- **Make use of any existing state drug database.** This is the only practical way to identify double doctoring and dates of prescriptions. This has had a dramatic effect on physicians' ability to identify patients seeking additional prescriptions and allows for a "level playing field" in the discussion with patients.

Avoid Labelling Patients or Turning Them Away

Patients with addiction disorders have a medical condition requiring care, just as do alcoholics and smokers. It is part of our mandate to identify this condition and offer support. Patients who use drugs intravenously are at high risk for serious infections; addicts are always at risk for overdose or acute withdrawal. Placing signs in the waiting room advising patients that opioid prescriptions are not renewed not only breaches EMTALA regulations but risks turning away very sick patients (with an addiction disorder) who feel they will not be cared for. It also encourages patients in severe pain to leave without receiving care.

Patients with an addiction disorder are not immune to painful conditions. They are not mutually exclusive. Identifying patients as addicts or "drug seeking" often precludes any further consideration of comorbidity. Addiction is but one medical condition, just as is diabetes, and does not prevent the presence of a second illness. To the contrary, they are *more* at risk because of their primary condition.

A Final Suggestion

Most people with personality disorders have less refined interpersonal social skills. They succeed in getting what they want through more obvious manipulation, such as overpraising or creating feelings of guilt or anger. Every physician has to recognize that such feelings are not normal during a patient encounter and should be recognized for what they are: manipulation by the patient. Rather than reacting to those emotions, the physician should recognize them as a sign of a personality disorder and respond accordingly with no emotional responses and the establishment of limits for that encounter. A typical response could be: "I understand that you say you are in a lot of pain. I am going to do everything I can to help you get that pain under control now and after discharge. What I am not able to do, however, is provide opioids for this particular situation. I am certain that we will still be able to take steps to get your pain better controlled."

BARB KATZ is the president of The Katz Company EMC, a member of ACEP's Workforce and Career Sections, and a frequent speaker and faculty at conferences and residency programs. She can be reached at katzco@cox.net.

Residency Coordinators: A Resident's Best Friend or Not?

Those coordinators who preferred to remain anonymous were quite specific about the consequences of not respecting or cooperating with your residency coordinator.

by BARB KATZ

When I entered the business world, my savvy mom (a training and development expert) gave me some crucial advice: make friends with the support people first—they can make you or break you! Residency program coordinators fit quite nicely into that equation. I caught up with several of them to get some interesting insights into how they affect the residents they guide, assist, and support every year.

Two Different Approaches to Coordination

Eve Dinh has been coordinating the emergency medicine residents at University of California, San Francisco for a little less than seven years, and while she says the job keeps her on her toes, she enjoys the wide variety of hats she wears on any given day. Cindy Rush is a veteran, coordinating the residency program at Texas A&M's Scott & White Healthcare for the past 22 years, and sees herself as the ultimate gatekeeper. The other contributing residency coordinators requested anonymity for reasons that will be apparent.

Both women have a different approach to the job based on their experience and longevity. Ms. Dinh keeps the relationship between herself and the residents friendly but professional, while Ms. Rush's residents don't hesitate to call her Mom. Ms. Dinh sees her strongest value to the residents as a facilitator and liaison, a general resource for everything from schedules and procedures to coordinating resident paychecks. Now on her fourth program director, Ms. Rush has retained a nurturing role with her residents, protecting them at every turn, particularly after a very sad incident early in her tenure that took the life of one of them. While Ms. Dinh leaves much of the nurturing role to her program director, Susan Promes, MD, she makes herself available pretty much 24-7 should the need arise. Ms. Rush is a steady supportive wall at the frontlines, even advising residents on the potential dangers of social media and guiding their steps through the residency process.

When it comes to a resident's job search, their approaches also differ. Ms. Dinh will disseminate information as it comes in from various sources. As job information comes in from recruiters and groups, it is put into a binder that residents can access at will. If, however, something comes in and she knows a resident is looking in that specific area, she'll forward it directly to the resident. Ms. Rush's residents will come to her for advice and referrals to those residents who have come before them, many of whom are now hiring or in an administrative capacity. She's a one-woman shopping stop for the Texas job market. Ms. Rush functions as a real career guide, while Ms. Dinh is more of a referral source for incoming information.

Both women agree that a portion of what they do for the residents happens after they find a job. The incredible amount of paperwork that has to be provided for credentialing primarily comes from the coordinator's files. It's a laundry list of documents, from diplomas to vaccination certificates, that would choke a mule. They also handle reference requests and verifications.

The Dark Side of Residency Coordination

By now, if you are a resident reading this, your head must be spinning as you realize what your residency coordinator does for you and what impact that can have on your future. Well, it's not all about service. In many places, the golden rule applies. If you don't treat your residency coordinator with respect and appreciation, best of luck to ya. Those coordinators who preferred to remain anonymous were quite specific about the consequences of not respecting or cooperating with your residency coordinator. They reported having done the following, and any of these could conceivably happen to you:

- Gave your phone number out to every recruiter who calls in
- Kept job profiles from getting to you
- Held up your credentialing paperwork
- Held up your references—even engineering negative reference information

Neither Ms. Dinh nor Ms. Rush would dream of resorting to the tactics mentioned above, but both stated that they can understand the frustrations other coordinators might experience with uncooperative residents.

Residency coordinators have the ability to smooth the path and provide invaluable assistance in a job search—or to make it a very difficult task. But the truth is that residency coordinators are your guides, your champions, your first and best defense, and all the things that make the residency experience a positive and fruitful one. So let me give you a little piece of advice before you depart your program for new jobs and untold riches: don't forget to say thank you to the person who helped you achieve success!

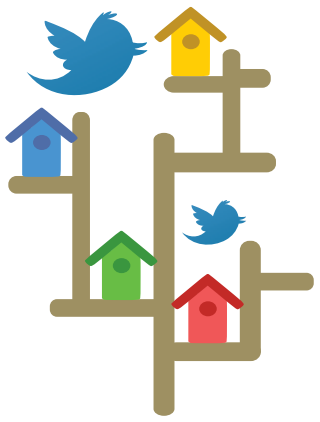
Sarah Hoper, MD, recently joined the staff at Vanderbilt University. She is interested in health policy and is the legislative advisor for the Emergency Medicine Residents' Association (EMRA). EMRA President Jordan Celeste, MD, is a fourth-year resident at Brown University in Providence, RI, and will be heading to Florida this summer to begin practice.

SERVING UP THE BEST EM TWEETS

THE FEED

DR. FAUST is an emergency-medicine resident at Mount Sinai Hospital in New York and Elmhurst Hospital Center in Queens. He tweets about #FOAMed and classical music @jeremyfaust.

Conference Tweets Bring the Latest Research to You



by JEREMY SAMUEL FAUST, MD, MS, MA

ONE OF THE BEST REASONS TO BE AN EMERGENCY MEDICINE *provider on Twitter is to easily keep up with what's happening at top conferences all around the world in real time. March and April 2014 were incredibly active, with tons of live tweeting from several major conferences. This month, I'll run through highlights from five of the top EM-related conferences. Sure, reading the tweets tagged with these hashtags on Twitter is not quite as good as attending the conferences in person, but it's amazing how much we can glean from these tweets, and they just might inspire you to go in person in the future. So on behalf of the tens of thousands of people who benefited from these tweets, I'd like to thank my fellow live-tweeters! If you want to know which conferences are coming up, check out Symplur's health care hashtags page (www.symplur.com/healthcare-hashtags). It lets you know what conferences are coming down the pike and which hashtags to search for on Twitter. In a future column, I'll give tips and links to resources that can help you become an effective conference live-tweeter.*

1 Only in its second year, the Social Media and Critical Care (SMACC) conference (this year held in Gold Coast Australia, thus #smaccgold) attracted 1,300 attendees but created millions of impressions on Twitter. (Disclaimer: I was an unpaid lecturer about how EM providers can best use social media.) While its name makes it sound like a conference about social media, it is actually a conference of cutting-edge critical care junkies who happen to use social media to help spread new ideas like wildfire. Scott Weingart, MD, has called SMACC "the best critical care conference...ever." Unsurprisingly, the number of tweets tagged #smaccgold was in excess of 28,000 during March alone. These were high-yield clinical pearls, links, and often live debates and conversations about the hottest topics being discussed at the conference, including resuscitation team dynamics, palliative care, and stress-inoculation training for residents. Here are some highlights. From UK-based EM physician Richard Body, MBChB (@richardbody): "I love this simple pearl from Victoria Brazil (@SocraticEM): Door-to-balloon times for STEMI halved by building relationships with the Cath Lab. #SmaccGOLD." From REBEL-EM blog creator Salim Rezaie, MD (@srrezaie), "Palliation of dyspnea in advanced COPD: revisiting a role for opioids, http://t.co/zIIasrju7d #FOAMed #smaccgold" links to a *BMJ* article on this ever-changing topic. For stress inoculation in residency training, to whom else can we turn other than my own attending, Dr. Weingart (@emcrit)? He tweeted, "If my residents don't feel like they are being shot at, I have failed." Mission accomplished.

2 Resuscitation is an annual conference focusing on critical care and trauma. Held in Las Vegas, the #resus14 organizers recruited their own official (unpaid) social media team (yes, I was a member) for the sole purpose of pumping out high-yield tweets—and perhaps attracting more attendees next year. One hot topic presented by trauma surgeon Kenji Inaba, MD, was—say it with me—resuscitative endovascular balloon occlusion of the aorta (REBOA). From Texas-based ED attending and trailblazing EM blogger Allen Roberts, MD (@GruntDoc), comes: "Inaba #resus14: REBOA trials are ongoing, not even close to standard of care. Potentially life saving for rural trauma transfers?" The idea of REBOA is to buy time during a transfer or before the OR is ready to save an unstable hemorrhagic patient. The procedure seems to have great promise. It may not yet be ready for prime time in the ED setting, but in the meantime, here's a nice link to a 2011 *Journal of Trauma* article with good information on this new procedure that may go mainstream before long: http://www.ncbi.nlm.nih.gov/pubmed/22182896.

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3 Need a reminder as to why we need great medical educators? Conemaugh Memorial Medical Center Associate Program Director Rob Cooney, MD, MEd (@EMEducation), relays this excellent quotation from #CORD14 (the Council of Emergency Medicine Residency Directors Academic Assembly): "A poor surgeon hurts one patient at a time. A poor educator hurts 250 each time—Ernest Boyer." CORD increasingly focuses not just on what to teach but on how to teach, especially in the #FOAMed era in which an engaging delivery trumps almost anything else. Also from Dr. Cooney is a link to a list of emergency #MedEd graduate degree programs: "Interested in an advanced education degree? Check out http://www.faimer.org/resources/mastersmeded.html #CORD14."

4 Rounding out my tour-de-conferences are two non-EM conferences with substantial EM participation. From the American Institute of Ultrasound in Medicine (#AIUM14), EM attending and ultrasound fellow Lydia Marie Sahlani, MD (@LydMD), relays this from a talk delivered by ultrasound luminary Richard Hoppmann, MD: "Pub med trends: 'ultrasound education' 227 articles to 651 from 2002-2012. Go with the current. Ultrasound hits all major areas. -Hoppmann #AIUM14." Dr. Hoppmann's point is a great one: ultrasound research has exploded in the past decade, but the landscape is still changing.

5 Lastly, from the American College of Medical Toxicologists (#ACMT2014), the very well-published Canadian internal medicine toxicologist David Juurlink, MD, PhD (@DavidJuurlink), tweeted about an interesting abstract from this conference (also published online) on anticholinergic toxicity treatment patterns in a toxicology registry: "Very surprised toxicologists are using physostigmine so rarely and benzodiazepines so often. http://bit.ly/1dFQQ5X #ACMT2014." Indeed only 13 percent of patients in the registry cited received physostigmine alone. Another 9 percent received physostigmine and a benzodiazepine, while 32 percent received benzos as monotherapy. The kicker is that Dave ("only my mother calls me Dr. Juurlink") didn't even attend #ACMT2014 in person! He just followed links from Twitter and tweeted from home. How eco-friendly.

DO YOU HAVE ANY FAVORITE TWEETS THAT *ACEP NOW* READERS SHOULD KNOW ABOUT VIA THE FEED?

TWEET AT ME @JEREMYFAUST OR EMAIL TO JSFAUST@GMAIL.COM.

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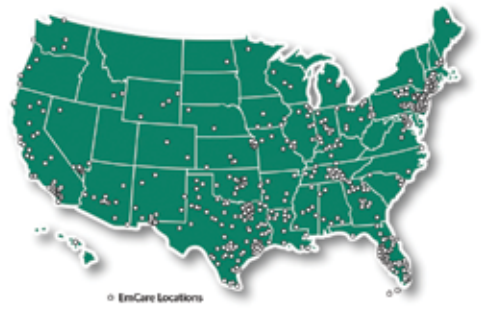

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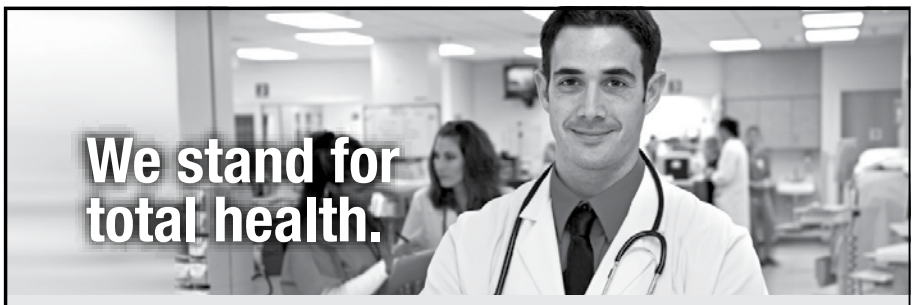

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Candidates are expected to demonstrate aptitude with both clinical leadership and medical education leadership experiences. Prior administrative experience in Emergency Medicine residency leadership roles is required. Candidates must have completed an accredited osteopathic emergency medicine training program and must be ABOEM board certified.

- $40,000.00 Sign on Bonus
- Incentive plan
- Paid health plan
- 401K
- Malpractice
- Life & Long/Short-Term Disability
- HSA Contribution

To learn more about joining our practice, please contact Erin Waggoner at (888) 758-3999 or ewaggoner@4mdocs.com

TEG
The Emergency Group, Inc

The Emergency Group, Inc.
Honolulu, Hawaii

The Emergency Group, Inc. (TEG) is a growing, independent, democratic group that has been providing emergency services at The Queen's Medical Center (QMC) since 1973. QMC is the largest and only trauma hospital in the state and cares for more than 60,000 ED patients per year.

QMC's newest medical center opens in west Oahu in May and is expected to see more than 35,000 ED patients annually.

TEG is actively recruiting for EM Residency Trained, Board Certified or Eligible Physicians. Physicians will be credentialed at both facilities and will work the majority of shifts at the west Oahu facility in Ewa Beach, Hi.

We offer competitive compensation, benefits and partnership track.

Our physicians enjoy working in QMC's excellent facilities and enjoy the wonderful surroundings of living in Hawaii.

For more information, please visit our web site at www.teghi.com or email your CV to teghawaii@gmail.com.

Ohio - Lima

Meet your financial AND practice goals.

Named among Top 100 Hospitals, this 57,000 volume, level II ED completed an expansive, state-of-the art renovation in 2012. Excellent coverage and terrific package with productivity-based compensation plus great benefits.

Contact Greg Felder

Premier Physician Services

(800) 726-3627, ext 3670

E-mail gfelder@premierdocs.com

Texas - Kerrville (San Antonio Area) **$25,000 Sign-On Bonus!**

Terrific modern ED features strong medical director leadership and mid-level support with a winning formula for patient satisfaction! Enjoy beautiful Hill Country scenery, charming music, wine, and food festivals, fine dining, and a true community atmosphere. Nearby San Antonio features professional sports, theme parks, and a multicultural, historic atmosphere.

Emergency Service Partners, L.P. offers productivity-based compensation, generous 401(k) plan, and true physician partnership opportunity.

Contact Tania Dilworth at (512) 610-0376 or e-mail tania@eddocs.com for more details, and mention job #1017-11.

Ohio - Columbus

MEDICAL DIRECTOR

Medical Director opportunity in desirable suburban Columbus location. This 21,000 volume ED has 9-hour physician shifts plus MLP support. Premier Physician Services is seeking an ABEM/AOBEM physician with solid leadership abilities; sharing our commitment first to quality patient care and excellence. In return we offer superb financial and professional opportunity.

Contact Amy Spegal

(800)726-3627, ext 3682

Ohio - Dayton

BP/BC EM physician opportunity within 40,000 volume ED. Located in a north Dayton suburb, this opportunity offers a collegial environment, appealing physical plant and excellent coverage. Excellent compensation package includes great benefits.

For additional information contact

Greg Felder, Premier Physician Services
(800) 726-3627, ext 3670

e-mail gfelder@premierdocs.com.

WEST VIRGINIA - Charleston

EM Physician/Ultrasound Educator

Excellent opportunity within EM Residency program for BP/BC EM physician with ultrasound fellowship or significant proficiency. Three-hospital system has 100,000 annual ED visits and includes a Level 1 facility. Excellent compensation includes great benefits. Charleston offers both metropolitan amenities and outstanding outdoor recreation.

Contact Rachel Klockow
Premier Physician Services
(800) 406-8118

Texas - Bellville (Houston Area)

New openings just 1 hour from Houston!

Rural, low-volume facility open to Family Medicine physicians with Emergency Medicine experience, as well as EM-boarded physicians.

Full-timers enjoy terrific partnership opportunity in as little as one year with Emergency Service Partners, LP, a respected choice in Texas for more than 25 years. We are 100% owned by emergency physicians so we're always looking out for your best interest. Independent contractor status with flexible scheduling plus paid malpractice and tail.

Contact Dana Frers today at

dana@eddocs.com.

The Department of Emergency Medicine at Eastern Virginia Medical School is seeking candidates for a core faculty position.

We have a well-established three year EM residency program (est 1981), a one year ED US Fellowship and an International Medicine Fellowship. Candidates should be residency trained in EM and ABEM/AOBEM board-certified or board-prepared.

The ideal candidate will have experience in graduate medical education and a strong interest in research with a track record of research success. Generous salary, benefits and protected time provided.

Please submit your letter of interest and CV to: Francis Counselman MD, Chairman (counsefl@evms.edu)

Texas - Smithville (Austin Area)

Work within an hour of the popular Live Music Capital of the World!

$20,000 sign-on bonus and full benefits, PLUS true physician partnership opportunity in as little as one year with Emergency Service Partners, L.P. Open to Primary Care/Family Medicine physicians with Emergency Medicine experience. Also ideal for new EM-boarded physicians looking to hone their skills in a single-coverage situation, or experienced physicians looking to slow down.

Contact Lisa Morgan today

(512) 610-0315 or

e-mail lisa@eddocs.com for more details, and mention job #1028-11.

UNIVERSITY OF FLORIDA
College of Medicine - JACKSONVILLE

The University of Florida Department of Emergency Medicine is recruiting motivated & energetic emergency physicians to **join our new UF Health – Northside Emergency Department in Jacksonville, Florida.**

Live and play at the beach. Work and learn with academic colleagues on the cutting edge of simulation, ultrasound, advanced airway management, critical care and wellness. Be part of a growing and supportive academic faculty that will work to help you establish your professional goals.

UF Health – Northside will begin as a 28 bed full-service, free-standing emergency department with six observation beds. There will be comprehensive radiology and laboratory services, and consultation will be available from all UF Health specialty and sub-specialty services. Phase 2 of this project will include the addition of 99 inpatient beds to this facility. This is a rare opportunity to get in on the ground floor of an exciting project, and take care of patients in a beautiful, state-of-the-art emergency department.

Join the University of Florida Faculty and earn an **extremely competitive community-based salary** as a UF assistant or associate professor **in a private practice setting**. Enjoy the full range of University of Florida State benefits including **sovereign immunity occurrence-type medical malpractice, health, life and disability insurance, sick leave, and a generous retirement package.**

All physicians are **ABEM / ABOEM Board Certified / Board Eligible**.

E-mail your letter of interest and CV to Dr. Kelly Gray-Eurom
Kelly.grayeurom@jax.ufl.edu

EOE/AA Employer

THE NATIONAL EMERGENCY MEDICINE BOARD REVIEW

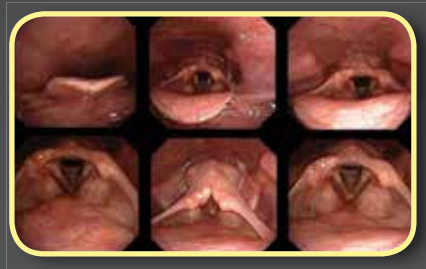
July 14 – 17, 2014
Cosmopolitan in Las Vegas, NV

August 7 – 10, 2014
Marriott Crystal Gateway in Arlington, VA

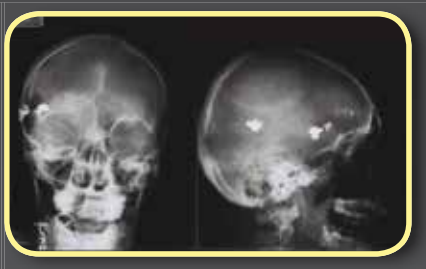
August 18 – 21, 2014
The Paris Hotel in Las Vegas, NV

Attended By Over 1,700 Of Your Colleagues Last Year!

Why Take the National Emergency Medicine Board Review Course? The fact is that taking certifying or recertifying board examinations is a stressful and time-consuming experience. The sheer mass of information that needs to be reviewed, combined with the press of occupational and personal responsibilities makes finding the time to study very difficult. Even with adequate time to study, the volume of material to be studied is staggering: Rosen's 2006 edition is 3179 pages long and the latest edition of Tintinalli has 1917 pages. Bottom line - preparation for these exams can be a daunting process. The National Emergency Medicine Board Review was created 18 years ago to specifically address the needs of busy emergency physicians required to take their certification or recertification examinations and who wanted a highly focused, no-fluff course that delivers the information they need in a concentrated, high-yield manner.







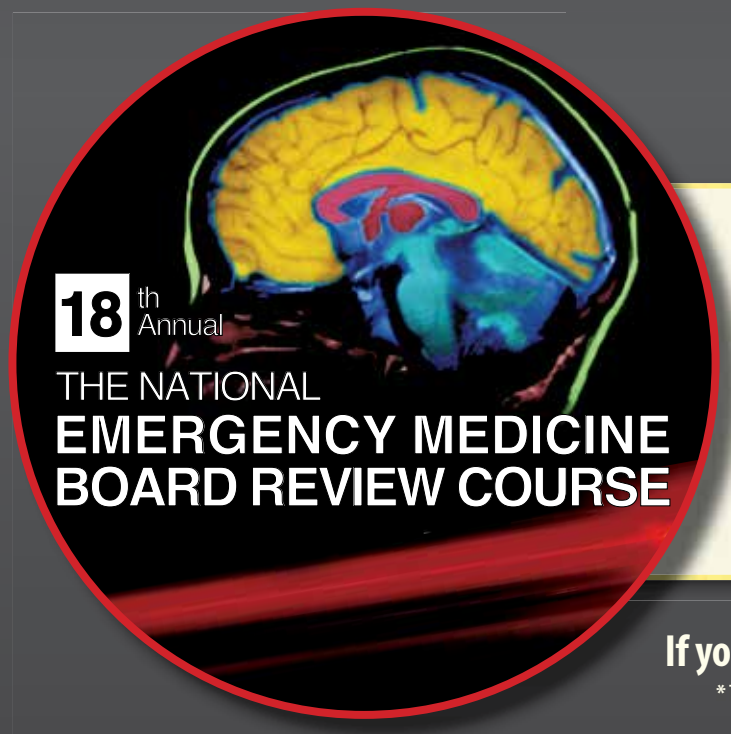
Topics covered include: Cardiology, Dermatology , Endocrine, ENT, Environmental, GI, HEM / ONC, Nephrology, Neuropsych, OB / GYN, Ophthalmology, Orthopedics, Pediatrics, Policies, Procedures & Skills, Pulmonary, Test Taking, Toxicology, and Trauma.

Free Access to Ultrasound Tutorials by EMsono!

Free Access Until the ConCert Exam Week Included!

Participants of the NEMBR live or self-study course receive unlimited access to 1,500+ peer-reviewed internet-based questions from the Challenger Chrome EM Boards Quick Prep question pool ($495 value).

Note: Access to the EM Quick Prep question pool takes 4-7 days.



"Excellent – best I've attended in 30+ years"

"Learning should always be this easy and so much fun."

"Excellent educational opportunity. I highly recommend this course."

"Some of the best lecturers out there. It's hard to keep everyone's interest while reviewing the entire EM core curriculum, but you all pulled it off!"

"This course was a focused educational experience, and I could not think of a better way to prepare for the exam."

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