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.

CONTINUED on page 17

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.”

CONTINUED on page 19
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


For questions, please contact Rhonda Whiston at rwhiston@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. For more information and for the access code, go to www.canopyapps.com/partners/acep.

WHAT ARE YOU THINKING?

SEND EMAIL TO ACEPNOW@ACEP.ORG; LETTERS TO ACEP NOW, P.O. BOX 619911, DALLAS, TX 75261-9911; AND FAXES TO 972-580-2816, ATTENTION ACEP NOW.
ACEP proudly recognizes these groups that have all eligible emergency physicians enrolled as members.

For more information about how your group can participate in the 100% Club, please contact Kelley Govan at 800-798-1822, ext. 3168, or kgovan@acep.org. Visit www.ACEP.org/grouprecognition for program details.
Truly Dangerous Drugs

Having practiced EM for over 35 years, I respectfully take issue with Professor Durcan’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 500,000 questions. If any substances should be illegal, 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.

Send your thoughts and comments to ACEPNOW@ACEP.ORG

The Break Room

Post Physical Exam World

I 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
Nuestra 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 Councilor’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!

Indications and Usage

Pradaxa® (dabigatran etexilate mesylate) capsules is indicated:

- to reduce the risk of stroke and systemic embolism in patients with non-valvular atrial fibrillation;
- for the treatment of deep venous thrombosis and pulmonary embolism in patients who have been treated with a potent anticoagulant for 5-10 days;
- to reduce the risk of recurrence of deep venous thrombosis and pulmonary embolism in patients who have been previously treated

IMPORTANT SAFETY INFORMATION ABOUT PRADAXA

Before you receive PRADAXA:

Increased Risk of Stroke with Discontinuation of PRADAXA

- Consider the benefits and risks of neurological impairment. If neurological compromise is noted, urgent treatment is necessary. Consider the benefits and risks before neural intervention in patients who are or will be anticoagulated.

WARNING: (A) PREMATURE DISCONTINUATION OF PRADAXA INCREASES THE RISK OF THROMBOTIC EVENTS. (B) SPINAL/EPIDURAL HEMATOMA

Premature discontinuation of any oral anticoagulant, including PRADAXA, increases the risk of thrombotic events. If anticoagulation with PRADAXA is discontinued for a reason other than pathological bleeding or completion of a course of therapy, consider coverage with another anticoagulant (B) SPINAL/EPIDURAL HEMATOMA

Spinal or epidural hematomas may occur in patients treated with PRADAXA who are receiving neuraxial anesthesia or undergoing spinal puncture. These hematomas may result in long-term or permanent paralysis. Consider these risks when scheduling patients for spinal procedures. Factors that increase the risk of developing epidural or spinal hematoma in these patients include:

- a history of traumatic or repeated epidural or spinal punctures, placement/removal of an epidural catheter or epidural or spinal anesthesia/analgesia or lumbar puncture, monitor frequently for signs/symptoms of neurological impairment, i.e., midline back pain, sensory and motor deficits (numbness, tingling, or weakness in lower limbs), bowel and/or bladder dysfunction, consider administration of platelet concentrates where thrombocytopenia is present or long-acting antiplatelet drugs have been used.

For patients with moderate renal impairment (CrCl 30-50 mL/min), consider reducing the dose of PRADAXA to 75 mg twice daily when dronedarone or warfarin are administered.

Now can be used for:
- Reduction of the risk of stroke and systemic embolism in patients with NVAF
- Treatment of DVT and PE
- Reduction in the risk of recurrence of DVT and PE

Please see boxed WARNING and accompanying brief summary of full Prescribing Information. N/V: non-vascular. DVT: deep venous thrombosis. PE: pulmonary embolism.
**AAO-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, FACEP

A landmark announcement came in March 2014, with the American Osteopathic Association (AOA), the American Association of Colleges of Osteopathic Medicine (AAOM), 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 short-sighted. 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

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**IMPORTANT SAFETY INFORMATION ABOUT PRADAXA (cont’d)**

**CONTRAINDICATIONS**

- PRADAXA is contraindicated in patients with:
  - active pathological bleeding;
  - known hypersensitivity reaction (e.g., anaphylactic reaction or anaphylactic shock) to PRADAXA;
  - mechanical prosthetic heart valve

**WARNINGS & PRECAUTIONS**

- Increased Risk of Stroke with Discontinuation of PRADAXA
  - Permanent discontinuation of any oral anticoagulant, including PRADAXA, in the absence of adequate alternative anticoagulation increases the risk of thrombotic events (PRADAXA) for a reason other than pathological bleeding or completion of a course of therapy, consider coverage with another anticoagulant.
  - Consider administration of platelet concentrates where thrombocytopenia is present or long-acting antithrombotic drugs have been used.

- Risk of Bleeding
  - PRADAXA increases the risk of bleeding and can cause significant and sometimes fatal bleeding. Promptly evaluate any signs or symptoms of blood loss (e.g., a drop in hemoglobin and/or hematocrit or hypotension). Discontinue PRADAXA in patients with active pathological bleeding.
  - Risk factors for bleeding include concomitant use of medications that increase the risk of bleeding (e.g., antiplatelet agents, heparin, finasteride, and other P-gp inhibitors), anticoagulant treatment, and history of substantial bleeding.

- Reversal of Anticoagulant Effect
  - A specific reversal agent for dabigatran is not available. Hemodialysis can remove dabigatran; however clinical experience with hemodialysis for reversal of dabigatran effect is limited. Consider administration of platelet concentrates where thrombocytopenia is present or long-acting antithrombotic drugs have been used.

**Spinal/Epidural Anesthesia or Puncture**

When neuraxial anesthesia (spinal or epidural anesthesia) or spinal puncture is employed, patients treated with anticoagulants are at risk of developing an epidural or spinal hematoma which can result in long-term or permanent paralysis. To reduce potential for bleeding and to prevent potential for distal ischemia, the procedure should be performed in a facility with expertise in performing neuraxial anesthesia and with the ability to provide immediate treatment for spinal cord injuries. Promptly evaluate any signs or symptoms of neurological impairment.

**Thromboembolic and Bleeding Events in Patients with Prosthetic Heart Valves**

- The safety and efficacy of PRADAXA in patients with bisected mechanical prosthetic heart valves (recently implanted or implanted more than 3 months prior to enrollment) was evaluated in the phase 3 RE-LY trial. RE-LY was terminated early because of significantly more thromboembolic events (valve thrombosis, stroke, transient ischemic attack, and myocardial infarction) and an excess of major bleeding events (predominantly post-operative pericardial effusions requiring intervention for hemodynamic compromise) for PRADAXA vs warfarin. Therefore, the use of PRADAXA is contraindicated in patients with mechanical prosthetic valves.

**Drug Interactions**

- For patients on PRADAXA 150 mg, avoid concomitant use of P-gp inhibitors. For patients with CrCl <50 mL/min, avoid use of PRADAXA and concomitant P-gp inhibitors.

**ADVERSE REACTIONS**

- The most serious adverse reactions reported with PRADAXA were related to bleeding.

**NHF**

- Most frequent adverse reactions leading to discontinuation of PRADAXA were bleeding & gastrointestinal (GI) events.
  - Pradaxa 150 mg resulted in higher rates of major and any GI bleeds compared to warfarin.
  - In patients ≥75 years of age, the risk of major bleeding was greater with PRADAXA vs warfarin.

- Patients on PRADAXA 150 mg had an increased incidence of GI adverse reactions. These were commonly dyspepsia (including abdominal pain upper, abdominal pain, abdominal discomfort, and epigastric discomfort) and gastritis-like symptoms (including GERD, esophagitis, erosive gastritis, gastric erosion, hemorrhagic gastritis, hemorrhagic erosive gastritis, and ulceration).

**DVT/PE**

- Rates of any GI bleeds were higher in patients receiving PRADAXA 150 mg vs warfarin.

- In the active-controlled studies, there was a higher rate of clinical myocardial infarction (MI) in PRADAXA patients (25 [0.66/100 patient-years]) vs warfarin (5 [0.17/100 patient-years]) (P < 0.0001).

- GI adverse reactions were similar in patients receiving PRADAXA 150 mg vs warfarin. They were commonly dyspepsia (including abdominal pain upper, abdominal pain, abdominal discomfort, and epigastric discomfort) and gastritis-like symptoms (including GERD, esophagitis, erosive gastritis, and erosive gastritis).

**Other Measures Evaluated**

- In NHF patients, a higher rate of clinical MI was reported in patients who received PRADAXA (0.7/100 patient-years for 150 mg dose) than in those who received warfarin (0.6).

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**RE-LY is a trademark of Boehringer Ingelheim Pharma GmbH & Co. KG and is used under license.**

**CONTACT INFORMATION**

- For more information about PRADAXA, please visit www.pradaxa.com.
The risk of major bleeds was similar with PRADAXA 150 mg than with warfarin (hazard ratio 0.90, 95% CI: 0.77 to 1.04). In patients with ages 75 or older, there was a higher rate of major gastrointestinal bleeding in patients receiving PRADAXA 150 mg than in patients receiving warfarin (hazard ratio 1.32, 95% CI: 1.08 to 1.63). The risk of any bleeding was higher in patients receiving PRADAXA 220 mg than in patients receiving warfarin (hazard ratio 1.30, 95% CI: 1.15 to 1.47). PRADAXA was associated with a higher rate of intracranial hemorrhage than warfarin (hazard ratio 1.60, 95% CI: 1.33 to 1.93). PRADAXA was associated with a higher rate of intracranial hemorrhage than warfarin (hazard ratio 1.60, 95% CI: 1.33 to 1.93). PRADAXA was associated with a higher rate of intracranial hemorrhage than warfarin (hazard ratio 1.60, 95% CI: 1.33 to 1.93).
**Deborah Polk** is dean of the College of Osteopathic Medicine at Des Moines University in Iowa. She is frequently cited by osteopathic physicians, and this new system is on track to become the standard, according to many of the osteopathic principles. Osteopathic practitioners advocate for holistic, patient-centered care, emphasizing nutrition, holistic approaches, and preventive medicine in addition to the manual therapies that are part of osteopathic medicine. The same will apply to international medical graduates.

**Brent Polk** is a DO who did an ACGME residency. He believes that the need for both an AOA or ACGME residency, whereas the DOs have had one unfair advantage over their MD counterparts: they could do either their 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. Prequalifying for osteopathic residencies is one of the opportunities recommended by the new Osteopathic Principles Review Committee and a recommended change for 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 practitioners are becoming less foreign and are already being incorporated into many of America’s primary care practices. The assumption that mainly nonwestern folks might use an AOA or 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. Prequalifying for osteopathic residencies is one of the opportunities recommended by the new Osteopathic Principles Review Committee and a recommended change for 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.

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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. 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 AGME to remove any perceived inefficiencies of maintaining two accreditation systems. Improving GME, with a focus on achieving demonstrat-
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 (99281) to level 5 (99285) 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 lose 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.

**Table 1. Medicare 1995 Guidelines Typical Requirements**

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**Table 2. 2014 ED RVUs**

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BY KELLY APRIL TYRRELL
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. The mission of Choosing Wisely—a multi-year 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. Professional training and decision aids for patients can promote the adoption of SDM in the health care setting.

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.
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. 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. 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

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.7

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.

References


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 hospitalist service 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.”

Continued on page 12
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 65 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.

“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 docs can see what’s happening on the inpatient side, and the inpatient docs can see what’s happening on the ED side.”

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 (HCAPPS) 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.

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.

“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 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 ED 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 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 (HCAPPS) 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.
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. 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,
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).

It requires a physician’s signature and is often completed by trained nonmedical personnel. This active order guides patients’ care when they are found in cardiac arrest as well as in non–cardiac arrest scenarios.

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.\(^2\) 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 order to provide comfort and end-of-life care.\(^2\) 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 POLST.\(^2\)

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. This active order guides patients’ care when they are found in cardiac arrest as well as in non–cardiac arrest scenarios.

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**Table 1: ABCDEs of the Living Will, DNR, or POLST**

<table>
<thead>
<tr>
<th>A</th>
<th>Ask patients or surrogates to be clear as to their intentions for their advance directive (living will, DNR order, or POLST form).</th>
</tr>
</thead>
<tbody>
<tr>
<td>B</td>
<td>Be clear as to if this is a terminal condition despite sound medical treatment or persistent vegetative state versus a treatable critical illness.</td>
</tr>
<tr>
<td>C</td>
<td>Communicate clearly if you feel the condition is reversible and treatable with a good or poor prognostic outcome.</td>
</tr>
<tr>
<td>D</td>
<td>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.”</td>
</tr>
<tr>
<td>E</td>
<td>Explain that it’s OK to withdraw 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.</td>
</tr>
</tbody>
</table>

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).

It requires a physician’s signature and is often completed by trained nonmedical personnel. This active order guides patients’ care when they are found in cardiac arrest as well as in non–cardiac arrest scenarios.

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PITFALLS CONTINUED

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 call to cardiac arrest patients! Resuscitation applies when patients present clinically ill with respiratory distress, myocardial infarction, stroke, seizures, 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.®

Resources

- How to Interpret a Living Will
- What Do DNR Orders Really Mean?
- POLST: Physician Orders for Life-Sustaining Treatment
- Understanding Your Living Will: What You Need to Know Before a Medical Emergency by Fernando L. Mirarchi, DoB (Addison Books, 2006)

Table 1: Adverse Reactions Occurring in ≥5% of Patients Receiving XIFAXAN and at a Higher Incidence Than Placebo

<table>
<thead>
<tr>
<th>Reaction</th>
<th>XIFAXAN Tablets</th>
<th>Placebo</th>
</tr>
</thead>
<tbody>
<tr>
<td>Diarrhea</td>
<td>21 (15%)</td>
<td>13 (9%)</td>
</tr>
<tr>
<td>Abdominal tenderness</td>
<td>11 (8%)</td>
<td>4 (3%)</td>
</tr>
<tr>
<td>Anorexia</td>
<td>6 (5%)</td>
<td>3 (2%)</td>
</tr>
<tr>
<td>Depression</td>
<td>5 (4%)</td>
<td>2 (1%)</td>
</tr>
<tr>
<td>Hypertension</td>
<td>5 (4%)</td>
<td>2 (1%)</td>
</tr>
<tr>
<td>Appetite loss</td>
<td>4 (3%)</td>
<td>2 (1%)</td>
</tr>
<tr>
<td>Vertigo</td>
<td>3 (2%)</td>
<td>1 (1%)</td>
</tr>
<tr>
<td>Gastrointestinal symptoms</td>
<td>1 (1%)</td>
<td>1 (1%)</td>
</tr>
</tbody>
</table>

The following table contains reactions of XIFAXAN that have also been reported in the placebo-controlled clinical trials summarized in Table 1. The safety and effectiveness of XIFAXAN 550 mg taken only twice a day for hepatitis C were studied in a 24-week, placebo-controlled, double-blind trial in 101 patients with hepatitis C infection. C. difficile disease occurred in 12 patients and was associated with an increased risk of mortality. C. difficile disease occurred in 12 patients and was associated with an increased risk of mortality. C. difficile disease occurred in 12 patients and was associated with an increased risk of mortality.
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. 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.

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. 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 purpose 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.

References


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.
In the middle is the question, do the benefits of hormone treatments (such as Botox injections, human growth hormone [HGH], and testosterone), skin treatments (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.”

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 medicines at GUMC, said hormone treatments are not necessarily signs of problems, Dr. Fugh-Berman said.

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.”

—ADRIANE FUGH-BERMAN, MD

“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 physicians 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 an example. Self-administered tests for the condition can ask vague metrics, such as questions about whether a man is more tired after dinner or gaining weight as he gets older. Being tired after dinner and gaining weight with age are not necessarily signs of problems, Dr. Fugh-Berman said.

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.

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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?”

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.”

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.

Is the “Fountain of Youth” Worth It?

<table>
<thead>
<tr>
<th>Treatment/service/product</th>
<th>Benefits</th>
<th>Risks</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Botox</strong></td>
<td>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.</td>
<td>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.</td>
</tr>
<tr>
<td><strong>Testosterone therapy</strong></td>
<td>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.</td>
<td>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.</td>
</tr>
<tr>
<td><strong>Human growth hormone (HGH)</strong></td>
<td>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.</td>
<td>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.</td>
</tr>
</tbody>
</table>

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

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The Official Voice of Emergency Medicine
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.

CONTINUED FROM PAGE 1

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.

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. 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 it 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, lactates 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, metabolic 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.
Prevent Peri-intubation Deaths with Careful Medication Choice

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 non-rebreather. 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?

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! 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. Gaseous exchange and pressure changes through 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.

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.

Table 1.

<table>
<thead>
<tr>
<th>Epinephrine 1:10,000</th>
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<tbody>
<tr>
<td>• 10 mL syringe with 9 mL of NS</td>
</tr>
<tr>
<td>• 1 mL from the cardiac “amp”</td>
</tr>
<tr>
<td>• 10 mcg/mL</td>
</tr>
<tr>
<td>• Dose: 0.5–2 mL (5–20 mcg) q 2–5 min</td>
</tr>
<tr>
<td>• Onset of action: 1 min</td>
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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-banded 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 normal blood pressure and injury, but it should not be used in hypertensive or vasoconstricted 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 patient's 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 intubation, multiple advantageous effects can be achieved. Primarily, scopolamine acts as an amnesic 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 P/F? 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.

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The ED as a Diagnostic Center

Trauma centers and the need for cohort data

by JAMES I. 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.”

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 inpatient EDs 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. The utilization of diagnostic imaging in the ED is measured in the number of procedures performed 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 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.

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.

References


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

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

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

<table>
<thead>
<tr>
<th>YEAR</th>
<th>LEVEL I AND II TRAUMA CENTERS, NOT PEDIATRIC</th>
<th>LEVEL III TRAUMA CENTERS</th>
<th>LEVEL IV OR NO TRAUMA CENTER DESIGNATION</th>
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</thead>
<tbody>
<tr>
<td></td>
<td>Number of hospitals</td>
<td>Admit %</td>
<td>Transfers out %</td>
</tr>
<tr>
<td></td>
<td>162</td>
<td>22</td>
<td>1.0</td>
</tr>
<tr>
<td></td>
<td>127</td>
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<td>1.7</td>
</tr>
<tr>
<td></td>
<td>726</td>
<td>15</td>
<td>2.4</td>
</tr>
</tbody>
</table>

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.
Domestic Violence Homicide: What Are the Risk Factors?

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 screening 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.

Resources for More Information

- Zawit MW. Violence between intimates. US Department of Justice, National Institute of Justice and the Centers for Disease Control and Prevention, 1994, NCJ 149259.

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.
COST-EFFECTIVE CARE SERIES

Stop the Coagulation Testing Cascade

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 (aPTT) 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 aPTT 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 aPTT 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 PT/T.5,6 Commercial insurance companies pay from $10 to $60 per test.7 Assuming that 8.4 percent of ED patients get a PT and 7 percent get a PT/T, 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.8 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.9 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: PT 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 PT 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-procedural: 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.10 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 aPTT.

• 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.

References

Table 1. Indications for Order Coagulation Studies

| PT/INR | PTT
<table>
<thead>
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<tbody>
<tr>
<td>• Monitoring of warfarin</td>
<td>• Monitoring (but not initiation) of heparin</td>
</tr>
<tr>
<td>• Evaluation for vitamin K deficiency or severe malnutrition</td>
<td>• Assessment of clotting factor function in hemophilia and von Willebrand disease</td>
</tr>
<tr>
<td>• Assessment of liver failure</td>
<td>Both PT/INR and PTT®</td>
</tr>
</tbody>
</table>

• 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
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.

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 satisfies 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 or altered 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.
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.

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 Proses, MD, she makes herself available pretty much 24/7 should the need arise. Ms. Rush is a steady support 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 advisory 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 Proses, MD, she makes herself available pretty much 24/7 should the need arise. Ms. Rush is a steady support wall at the frontlines, even advising residents on the potential dangers of social media and guiding their steps through the residency process.

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!
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 to the future. So on behalf of the tens of thousands of people who benefited from these tweets, I’d like to thank our 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.

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 dyspea in advanced COPD: revisiting a role for opioids, http://t.co/2Usxejbrd #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.

Resuscitation is an annual conference focusing on critical care and trauma. Held in Las Vegas, the #sus14 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). 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.

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—Educating Your Own Official (Unpaid) Social Media Correspondent: Dr. Weingart”) didn’t even attend #CORD14. But Dr. Weingart’s point is a great one: ultrasound research has exploded in the past decade, but the landscape is still changing.

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 benzo diazepines so often. http://bit.ly/1FPQ0S3 #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 benzodiazepine 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 readers should know about via the feed? Tweet at me @jeremyfaust or email to jfaust@gmail.com.
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