

The Fast Track

Summer 2017 Issue

An Emergency Medicine Publication

LOSING TOUCH

A CASE FOR INTIMACY IN AN AGE OF TECHNOLOGY

HOW TO SURVIVE

THE FIRST TWO YEARS OF MEDICAL SCHOOL



The Fast Track

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Letter from the Editor

Welcome back for another great edition of *The Fast Track*! As students become residents and residents become young physicians, we are all experiencing the excitement, and angst, of taking that 'next step.' While we provide many case reports and medically-focused articles, providing guidance to residents and students through these transitions has always been a priority for us at *The Fast Track*.

We have several articles in this edition to help you out with that 'next step' including "How To Survive the First 2 years of Medical School," "Getting Through Core Clerkships," "Owning that Away Rotation in Residency," and "Be Afraid. Be very Afraid." However, we do more than just provide articles on the topic. We are an avenue to have your voice heard!

While some may see publishing an article as a resume builder to that 'next step,' we see it as an opportunity to help. Every edition, our editors not only proofread, but work with authors to improve the quality and clarity of their writing. How many publications offer that?

Lastly, with the transition of the resident and student chapters to the Resident and Student Organization (RSO), *The Fast Track* will be changing its platform. Once the RSO website is up and running, we will be publishing articles in a blog-type format allowing articles to be linked and shared on social media. This will improve the readability of our publication as well as increase readership. As for the printed version, we are planning to publish it once a year for ACOEP's Scientific Assembly as a 'Best Articles of the Year' edition, where we will print the 10-15 best articles published in *The Fast Track* over the past year.

We know that this is an exciting time for you! Just know that we are with you every step of the way!

Best,

Dhimitri Nikolla, DO, PGY-II
ACOEP-RC Secretary
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INTERESTED IN CONTRIBUTING?

Let us know: FastTrack@ACOEP.org

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PRESIDENTIAL MESSAGE

Resident Chapter

Summer is upon us! It's an exciting time as our senior residents are on to their next chapter. While goodbyes are never fun, a new year also means it is time to welcome a new group of interns to the ACOEP family.

This summer our family will continue to grow as we combine forces with the student chapter to form the new Resident and Student Organization (RSO). By working more closely with the students, we hope to continue to improve our conference offerings and provide you with high quality lectures, hands-on experiences, and networking opportunities. In addition to an awesome conference agenda, be on the lookout for the new RSO website set to go live at the end of the summer. Our hope is that our new interactive site will be your go-to spot for up-to-date information and resources. As if that wasn't already enough, *The Fast Track* team also plans to debut a new platform that will have everyone wanting to get their articles published! With so many new and exciting changes, it is important to "like" our Facebook page and follow us on Twitter to stay up to-date on the transition process!

To the graduating seniors, we hope to continue to see you at conferences in the future. Don't forget to check out the New Physicians in Practice group for advice on your transition to becoming an attending. To the new interns, you are about to embark on the hardest and most rewarding year of your medical training. Whether you are graduating residency, just starting, or somewhere in between, remember that ACOEP is always here for you! We look forward to your suggestions and feedback as we continue to shape the new RSO. As always, if you need anything at all, please feel free to contact us.

Thank you,
Kaitlin Bowers, DO
ACOEP Resident Chapter President
ACOEP Board of Directors



PRESIDENTIAL MESSAGE

Student Chapter

Welcome back,

So much has happened in the past few months since I sat down to write this letter for the previous issue. First of all, huge congratulations to our fourth-year readers who matched to emergency medicine residencies! Every year the data suggests that this is no easy task to accomplish, so be proud of your achievement. I trust you are enjoying your post-match life and taking time to celebrate yourselves and those who supported you prior to the new joys of intern life.

As a student chapter, we have been busy providing students with exposure to the excitement and challenges of emergency medicine. Our recent symposium at Albert Einstein Medical Center in Philadelphia, PA, was recognized by the attendees and lecturers alike as a huge success. This year at ACOEP's Spring Seminar in Bonita Springs, FL, we enjoyed an excellent array of lectures from attending physicians within the College and an informative US lab conducted by members of our resident chapter- a preview of things to come as we unite more frequently with the residents at these combined events. We are grateful to the students that made the effort to travel to both these events. Judging from the feedback we received, students felt it well worth their while. Once again, a huge thank you to all the faculty and residents that made these occasions so special.

In just a few short months we hope to host our very first summer symposium at Ohio Valley Medical Center. This event will focus on the popular subspecialty of wilderness medicine and will offer another opportunity to discover all that ACOEP can offer students as we travel on this journey to becoming emergency medicine physicians. Be sure to sign up early and follow us on Facebook and Twitter. We want to accommodate as many students as we can, so let us know you are coming!

We are also just months away from ACOEP's Scientific Assembly in Denver, CO. This event already promises to be exceptional, featuring keynote speaker and YouTube sensation ZDoggMD. I encourage you to make plans to be there, with student-focused events happening November 4-6. Perhaps you've been thinking about getting involved with the ACOEP Student Chapter, newly combined with the Resident Chapter into the Resident Student Organization (RSO). We will be holding our inaugural elections at the fall conference! Stay tuned for information on available positions and duties to be posted on our new RSO website.

The transition to the RSO presents interesting new opportunities for us all. The website will allow us to develop *The Fast Track* into a more interactive online format. There is no better time to write an article for this publication. Send questions and articles to fasttrack@acoep.org. In an increasingly competitive match scenario, gain experience in writing for a publication. How about presenting at the next FOEM case competition? I encourage you all to seek new and innovative ways to involve yourself in the world of emergency medicine. It is a sensational time to be a part of the future of this field.

All the best,

Dominic Williams, OMS-IV

ACOEP Student Chapter President

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Losing Touch

A Case for Intimacy in an Age of Technology

Dominic Williams, OMS-IV
LECOM - Bradenton

His fingers move expertly over the abdomen. Lightly at first, trying to appreciate the superficial structures just under the exposed skin, and then applying firmer pressure as he searches for clues to the patient's ailment further beneath the surface. His gaze is fixated over his glasses, slid halfway down his nose, as he searches the patient's face for signs of pain. "There?" he inquires as his hand pauses over the descending colon at the level of her umbilicus. The patient's wince gives her sensation away.

This man is one of my idols. His physical examination skills are par none. A gruff New Yorker that has found his way from the Bronx to a community hospital in Florida. His no nonsense approach to medicine and willingness to cut to the chase makes him admired by his peers, and appreciated by nurses. The mid-level providers that work with him know that abdominal pain, in and of itself, is not a reason to CT an abdomen. "But why?" is the familiar cry. "What did you find on the exam?" He is not against the technology he later confides, but a CT can never replace your physical examination, of that he is adamant.

As osteopathic students, we went through hours upon hours of training in the art of palpation and manipulation. Indeed, our founder was renowned for his own ability to heal through touch in a time when the art of medicine was limited to an arsenal of treatments that tended to harm rather than heal patients. Although it's difficult to imagine A.T. Still scrolling through the images of a CT, one would hope to think that he would have embraced many of the diagnostic capabilities of the modern age. The osteopaths of old would surely recognize their limitations when compared to the MRI, but would they have relinquished the art of physical examination as quickly as we are willing to today? Perhaps not. Would they cheapen

the patient's experience by examining their abdomen over clothes, or barely glancing at a rash? And yet, let us dwell for a moment on the opposite side of the argument. Does every patient need to be stripped to minimal clothing and exposed to the doctor within moments of meeting them? If the diagnosis and outcome is unaltered by the lack of touch—are there situations where this is better for the patient? Can trust and confidence be created in other ways?

Every osteopathic medical student is educated in some form of clinical examination skills. In fact, to complete our education we must overcome the infamous COMLEX-PE and demonstrate our competency in the arena of the patient exam. Yet, we are also told of the inconsistencies of the physical examination; the futility of Homan's sign, the inaccuracies of palpating a liver, and when we're truly honest—the near impossibility of detecting subtle murmurs in a noisy emergency department (or is that just me?). How do we balance the importance of the physician-patient relationship with the time constraints, limitations, and inaccuracies of the physical examination? How do we forge a close relationship in the most effective way to put the patient at ease and gather information efficiently?

The nuances of the physician-patient relationship are not a new topic. Some 50 years ago in the *Journal of the American Medical Association*, Dr. Bogdonoff and his cohorts bemoaned the difficulties of the modern age.¹ The challenges faced back then, although somewhat different to those we face today, can be synthesized to a very familiar tune. Do more, for more people, in less time. The age of the generational physician was at an end. No longer did one doctor birth you, care for you, and your parents, and finally sign their death certificates at the necessary time. The intensity of that relationship is near impossible to replicate in the current practice models available and certainly not feasible in the emergency department. The authors, in their attempts to solve the issues of their day, write "what is needed is more precise, predictable, and efficient technique."¹ Modern day media has recruited physicians from think-tanks at Harvard and Massachusetts General to host call-in shows and allow the patient population to bemoan the apparent lack of physician concern and connection.² The public has noticed the paradigm shift from the physical to the digital—it's our decision as future physicians and practicing clinicians to decide how best to reclaim that territory for the betterment of our patient care and the legacy of our clinical practice.

The dynamic of the emergency department means that speed and efficiency are of the essence. And yet cold calculated mechanism will not produce the satisfaction of our patients and neither presents the manner in which we, as aspiring physicians, wish to practice. What is required by our encounters with patients is quality. Quality in terms of patient confidence, quality in terms of information attained, and quality in the care we provide. A proper focused examination for instance will dictate a more directed course of testing, saving the patient unnecessary distress and costs. The downstream effects of this are that more resources are made available for other patients, and those that present the greatest challenge can now have more effective care. How does this translate into the reality of a shift in the emergency department?

Dr. Abraham Verghese is an educator at Stanford University, and claims that the most important innovation in the medical field at this time is the human hand.³ Perhaps you've seen his TED Talk on the importance of touch in the physician-patient relationship?⁴ He describes the importance of the physical examination as more than an information-gathering experience. He proposes that the physical examination is an intimate ritual between clinician and patient.⁵ He describes in detail his experiences with patients and notes the element of time that he spends with them. In the emergency department, we seldom have that luxury; if you are in a patient's room for more than fifteen minutes it is typically because the patient is actively attempting to die. How do

emergency department clinicians maximize the efficacy of physical examination in the time sensitive environment in which they labor? Dr. Verghese leads a team of faculty, residents and students known as the Stanford Medicine 25 team. Their goal is summarized on their website as "We believe that caring for the patient starts at the bedside with observing, examining, and connecting with our patients."⁵ The videos provided on their website are fascinating and easily watched in small segments. From an emergency medicine perspective, I can immediately think of the role that a more proficient musculoskeletal exam may place on our disposition of the many patients that enter our department following extremity trauma. As a student to my peers, I would highly recommend reviewing these techniques to better win your patient's trust as you examine their ailments.

The importance of touch is undeniably true in the well-being of young lives. Recent studies in Poole, England show that simple crocheted tentacles of an octopus can calm premature infants in the NICU.⁶ The research, which originates in Northern Europe, theorizes that the tentacles remind the neonates of their mother's umbilical cord. These neonates showed improved oxygenation, more steady heart rates, and better development.⁶ It is well documented that children that are not properly comforted and cared for will develop reactive attachment disorder that takes many years of therapy and support to overcome the lack of parental responsiveness suffered by these young lives.⁷ Multiple studies have concluded that individuals respond to stress more favorably if they have a comforting touch made available to them.⁸ Human connection begins most rapidly and intimately through the use of appropriate touch.⁹ What greater need is there for an immediate relationship than for the scared, anxious, and pained patient that is laying on your stretcher? Touch is an indelible part of the human experience and provides a swift and meaningful way to move from the subjectivity of 10/10 pain to the objective findings of crepitus and flail segments.

Touch can also incorporate more than the human hand. Nobody would argue that the touch of a stethoscope was not part of the realm of physician touch—then why not the ultrasound probe? Anecdotally, I have heard physicians explain that patients like "knowing their insides are getting checked," but there is now data to show that point of care ultrasound breeds confidence in patient care. In a recent study from 2014, Howard, et al. noted that the satisfaction scores were higher in those patients where ultrasound was utilized, and demonstrated an increased trust in the physician care.¹⁰ Additionally, the data correlates with a prior study suggesting that the diagnostic capabilities of the physician are high, that lengths of stay are shorter, and that these

perceptions of quality care persist in follow-up calls to the enrolled patients.¹¹ As students of emergency medicine, we should continue to seek out opportunities to gain familiarity in the uses and benefits of point of care ultrasound. The “stethoscope of the future” fits well into the role of blending physical examination and modern technology in a quality physician-patient encounter.

Perhaps as significant as what we say, is what we don’t say. The art of non-verbal communication is of equal prominence. ACEP’s Emergency Medicine Practice Committee has come up with a series of recommendations of things to do and not do.¹² Allow me to share a few of them now, but for a more complete list I would recommend perusing their website, noting that each of them have study data to back up the recommendations. Each of these is an article in and of itself.

The first is the introduction of yourself to those in the room—this interaction will set the tone for your visit. Don’t make assumptions regarding those in the room. This is more than a privacy issue. I have witnessed the embarrassment of a physician attempting to recover after assuming the

nothing critical is happening to them, but can increase satisfaction by reducing impossible expectations as early in the visit as possible.

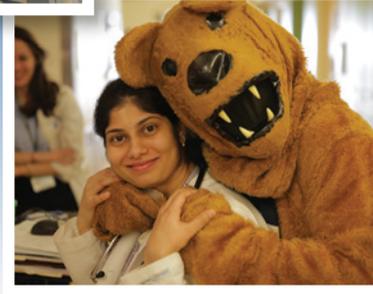
The last piece of advice I gleaned from my research is practice. Practice—not because COMLEX-PE demands you do so. Practice—because you are a student of medicine, not a button clicker made impotent by a power outage. Take pride in your clinical skill: it will guide you in your decision making, endear you to your patients, and empower you to harness all the information on offer. To return to A.T. Still and his storied boast to have “palpated miles and miles of necks”—I know that each of us has something more to learn. As students, we need to learn what normal feels like, sounds like, looks like, and dare I say, smells like! Our examinations should be more thorough and more complete, utilizing the well patient for the benefit of the sick in future examinations. Now is not the time for short cuts or skipped steps in our patient encounters. Now is the time for us to hone our abilities and confidence, to develop near instantaneous rapport with the diverse population that we serve. Now is the time to reverse

“FROM HANDSHAKES TO EYE CONTACT, STETHOSCOPE PLACEMENT TO SPINAL PALPATION AND BEYOND, WE OWE IT TO OUR PATIENTS TO MAKE THEM FEEL VALUED THROUGH OUR WORDS, OUR NON-VERBAL CUES, AND OUR ACTIONS”

young woman beside the patient was a daughter and not a wife! Allowing visitors to define themselves gives you the opportunity to repeat your name and role within the department. Positioning yourself in the room is of the utmost importance. We must take a moment to consider the perception of the way that we present ourselves—are we towering over a patient looking down on them? Are there physical barriers to reaching out and providing a reassuring touch? Can we ensure that we sit on the patient’s eye level to initiate a plan of care based on shared decision making? These techniques take mere moments but make a huge difference to patient perspective. One of the key phrases in the patient encounter is “what’s your biggest concern?” As the article points out this concern may not even be related to the chief complaint. This simple question, delivered in the setting of active listening, can help unravel the patient’s turmoil with what’s happening to them. This concept goes hand in hand with managing the patient’s expectations for the visit. How often do we greet patients in the emergency department that have already seen a specialist for their symptoms, and yet today, within the timeframe of your shift—they’re expecting answers? Reiterating the purpose of the emergency department—to rule out emergency conditions—can help allay the fears of the patient that

the trend in losing faith in physicians. It starts with us.

Shockingly, a couple of pages of prose and a little thought won’t bring all the answers to the relational problems that have been challenging physicians for decades (and probably longer). The solution, as is commonly the case, lies within the extremes of two positions. To ignore the modern world of technology and the information it provides would be as foolhardy as to rely on it completely. What is clear from the data is that patients require connection, and connection breeds confidence. Not every patient requires an intricate physical examination to care for them effectively. Not every clinical encounter in the emergency department will even afford this opportunity. But, every patient warrants the reassurance created by a ritual intimacy of a physician interaction. From handshakes to eye contact, stethoscope placement to spinal palpation and beyond, we owe it to our patients to make them feel valued through our words, our non-verbal cues, and our actions. As students, let us dedicate ourselves to the nuances of physical exam, of intelligent patient interactions, and continual learning in the art of effective communication and placing others at ease. This is no simple task, but one worthy of a lifetime spent perfecting. Don’t lose touch my friends.



Assistant/Associate Residency Program Director

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Community-Based Site Opportunity

The Emergency Medicine Department at Penn State Health Milton S. Hershey Medical Center seeks energetic, highly motivated and talented physicians to join our Penn State Hershey family. Opportunities exist in both teaching and community hospital sites. This is an excellent opportunity from both an academic and a clinical perspective.

As one of Pennsylvania's busiest Emergency Departments treating over 75,000 patients annually, Hershey Medical Center is a Magnet® healthcare organization and the only Level 1 Adult and Level 1 Pediatric Trauma Center in PA with state-of-the-art resuscitation/trauma bays, incorporated Pediatric Emergency Department and Observation Unit, along with our Life Lion Flight Critical Care and Ground EMS Division.

We offer salaries commensurate with qualifications, sign-on bonus, relocation assistance, physician incentive program and a CME allowance. Our comprehensive benefit package includes health insurance, education assistance, retirement options, on-campus fitness center, day care, credit union and so much more! For your health, Hershey Medical Center is a smoke-free campus.

Applicants must have graduated from an accredited Emergency Medicine Residency Program and be board eligible or board certified by ABEM or AOBEM. We seek candidates with strong interpersonal skills and the ability to work collaboratively within diverse academic and clinical environments. Observation experience is a plus.

For additional information, please contact:

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SPRING SEMINAR RECAP

Rochelle Rennie, OMS-IV
OUHCOM

This year, ACOEP hosted the annual Spring Seminar at the Hyatt Regency Coconut Point Hotel in Bonita Springs, Florida, from April 18-22, 2017. Dedicated student events took place on Thursday, April 20th, and included first through fourth year medical students, with 15 different schools in attendance. The day commenced with breakfast followed by an informational lecture from the Osteopathic Political Action Committee (OPAC) about becoming involved in the organization.



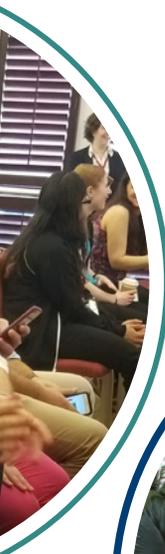
The day then took off with rapid-fire lectures, which are designed to be 30-minute presentations focusing on high yield topics in emergency medicine. The first lecture, entitled "Ultrasound 101: Knobology and why you should learn POCUS," was given by attending physician Andy Little, DO, from Doctors Hospital in Columbus, Ohio. Dr. Little gave an overview of basic ultrasound machinery as well as relevant machine settings that are used, and demonstrated the importance of point of care ultrasound in the emergency department through high yield images. Furthermore, Dr. Little gave out helpful resources such as podcasts and Twitter accounts that medical students can follow for more practice.

Next, ACOEP's Immediate Past President Mark Mitchell, DO, FACOEP-D lectured on "How to Run an Emergency Department." Dr. Mitchell gave some valuable tricks of the trade, while also emphasizing that it is the EM physician's job to set the tone of the department. Therefore, it is important to know your limitations and take the time to talk with your patient in order to set the patient's expectations.

With lectures concluded for the morning, students were broken up into groups of eight for the USACS and Sonosite sponsored ultrasound lab, which was run by ACOEP's resident chapter. During the lab, students were given demonstrations of what a focused assessment with sonography for trauma (FAST exam) entailed. Additionally, students were shown how to use the ultrasound machine as a guide for vascular access. In the small group setting, students were given

crucial hands-on time with the ultrasound machine. They experienced more one-on-one time with their instructors, moved through the different assessments and views at their own pace, and had ample time to interact other students in their group.

The afternoon session began with a rapid-fire lecture from attending physician John Casey, DO, from Doctors Hospital entitled, "Anaphylaxis." This lecture highlighted the physiology, symptoms, and treatment of anaphylaxis, but also discussed what to do when IM epinephrine fails. The next lecture, "Neurological Emergencies: Stroke and ICH," was given by Stephanie Davis, DO, FACOEP, who incorporated personal anecdotes about her experiences into her presentation. She reviewed how to determine strokes and ICH and their treatments, while explaining the importance of understanding how national statistics and studies may or may not relate to your specific patient population. The following lecture, "Management of Acute Psychotic Patients," was given by ACOEP President Elect, Christine Giesa, DO, FACOEP-D. Dr. Giesa kept students engaged with interactive demonstrations on how to safely interview and restrain psychotic patients. She also lectured about excited delirium, a topic that was new to many students. We then had a short coffee break before starting our last lecture of the day, "Respiratory Monitoring." Joseph Beirne, DO, FACOEP, attending ED physician from Missouri Baptist Medical Center, presented this lecture discussing the use of pulse



oximetry as well as its limitations. Dr. Beirne discussed how understanding the different capnography waveforms can be essential in patient care. The student events concluded with a medical Jeopardy match organized by ACOEP's resident chapter. Students were broken up into teams and answered questions on different medical topics, with the winning team members each receiving a Starbucks gift card.

The day ended with a social event at Coconut Jack's restaurant, where students, residents, and attendings were all able to meet and unwind. This was a great opportunity for students to find out more information about different residency programs and also interact with students from other schools. While at Coconut Jack's, we also broke up into teams and played a couple rounds of trivia and shared a few laughs, which was the perfect way to end the day.

One of the best aspects about attending a conference as a student is that there are so many activities that students can be involved in, aside from the specific student events. While at this Spring Seminar, some students took part in the FOEM Case Study Poster Competition, which was a great way to work on presentation skills and pick up some extra cash if you placed first through third. There were also other resident lectures that students could attend and learn

about various topics. One of the events that students were able to participate in during this conference was the Active Shooter Scenario Training. Student volunteers acted as victims, but were also allowed to attend the morning lectures regarding mass shootings. Students, alongside residents and attendings, learned how to use different tourniquets, the role of EMS, police, and fire departments in these situations, and the importance of practicing for these events in the ED. After the morning lectures and demonstrations, we grabbed lunch and boarded a bus to the training site where students glued on fake injuries and covered themselves in fake blood as victims. Physicians then practiced providing care for and removing these victims from the different buildings in a variety of scenarios. It was another great opportunity to network with residents and attendings, as well as fellow medical students. Overall it was a very educational and unique experience.

The ACOEP Student Chapter would like to thank all of our presenters during the Spring Seminar. The lectures provided the medical students with information about important topics that we can use every day, and were greatly enjoyed. We would also like to thank ACOEP's Resident Chapter who graciously put together our ultrasound lab and Jeopardy game; your hard work did not go unnoticed. We appreciate all those who volunteered to make our student events possible.

Don't miss our future events coming soon! Keep a look out for our upcoming new RSO website and follow us on social media to stay in the know for up to date information. Add us on Twitter @ACOEPSC or on Snapchat: ACOEP.

A Sensory Tour of the ED

Einstein Health Regional Symposium Recap

Julie Aldrich, OMS-IV

Campbell University School of
Osteopathic Medicine (CUSOM)



On Saturday, March 25, 2017, the ACOEP Resident and Student Organization (RSO) hosted a regional symposium at Einstein Medical Center, the busiest Level 1 Regional Resource Trauma Center in Philadelphia. Regional symposiums are one-day events designed for medical students of all levels who are interested in emergency medicine. Registration for the Einstein symposium maxed out, with students from thirteen different schools in attendance.

The theme of the symposium was “A Sensory Tour of the Emergency Department.” The morning began with breakfast followed by four rapid fire lectures. Each 30-minute lecture focused on the ‘quick and dirty,’ high yield topics pertinent to EM physicians. The first lecture, “Using Sound for Visual Diagnosis—An Intro to Point of Care US,” was given by Neeraj Gupta, MD, one of Einstein’s ultrasound attendings. Dr. Gupta walked students through the physics of how ultrasound works, some basics on the machinery itself, and then step-by-step analysis of high yield images. Next was Assistant Program Director, Chaiya Laotepitaks, MD, AAEM, FACEP, who delivered a lecture titled “Visual Diagnosis Potpourri.” Students were taught how to diagnose common chief complaints using sight alone. Images ranged from skin lesions to rashes to burns, and even some rather embarrassing radiographs where students were encouraged to guess what foreign body was inserted where! The third rapid fire lecture, “The 6th Sense—Psychiatry in the ED,”

was presented by Steven Joseph, MD,, who used movie clips to illustrate common psychiatric diagnoses. Dr. Joseph also gave students tips on how to quickly and efficiently develop an assessment and plan when these patients present to the ED with psychiatric complaints. Erin Sabolick, DO, finished off the rapid fire series with the lecture “When Our Senses Fail—Spinal Cord Trauma,” which included a review of neuroanatomy as well as how to effectively and safely treat patients with suspected spinal cord injuries.

With the lecture series concluded, students enjoyed a pizza lunch and the opportunity to have an open and uncensored Q&A session with Inspira Program Director Curt Cackovic, DO, Aria Clerkship Director Kimberly Groen, DO, and Einstein Program Director, Deborah Pierce, DO, MS. Dr. Pierce began the discussion assuring students no topics were off limits. Students were able to ask questions regarding each program’s board score cut-offs for granting auditions and

interviews, as well as examples of application "red flags." They also answered questions addressing the timing and number of audition rotations to complete and gave advice on how to stay competitive even if your scores, audition dates, or medical school affiliations aren't ideal. Students were also given time to speak one-on-one with the program directors if their specific questions were not answered during the Q&A session.

Attendees were then split into small groups for an afternoon rotating through hands-on lab sessions, each continuing the theme of "A Sensory Tour of the ED." In the "tactile" lab, Einstein residents taught students the indications for different types of splints. Students were then given the opportunity to practice splinting their partners with tips and feedback from



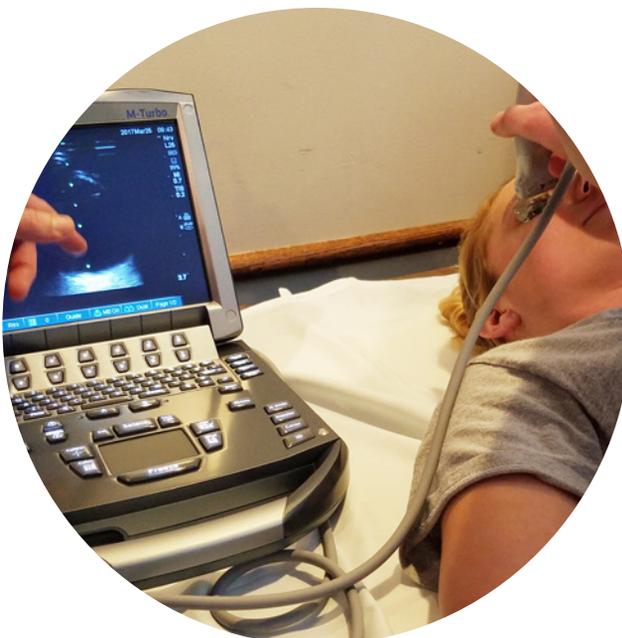
the residents. Toxicologists Gerald O'Malley, DO, and Rika O'Malley, DO, engaged the sense of smell with their "Sniffing Pub Crawl." Here 15 test tubes were set up around the room, each with an accompanying vignette. Students had thirty seconds to read the patient presentation, sniff the "toxin" in the tube and pick the suspected toxin from a provided word bank. For example, one presentation read, "Child drank unknown liquid in his grandparent's farmhouse. He is now obtunded, diaphoretic, pupils are pinpoint. He is drooling

and has started to vomit. The stains on his shirt smell like this..." Students sniffed a test tube containing garlic which is similar to the smell of organophosphates. Students continued improving their sense of sound and sight with an ultrasound lab. FAST and eFAST exams were reviewed, as well as ways to use ultrasound to diagnose ocular injury. Students were given additional time and one-on-one instruction for capturing some of the more challenging cardiac views. Students were also able to participate in two ACLS simulations with the ability to practice skills like the insertion of intraosseous (IO) access.

Exhausted and exhilarated attendees then relaxed, traded stories, and enjoyed the company of new friends at Smokin' Betty's restaurant in downtown Philadelphia after an action-packed day of learning, practicing, and networking and students returned home wiser than when they arrived.

ACOEP would like to extend abundant thanks to Einstein's Undergraduate Medical Director, Megan Stobart-Gallagher, DO, FAAEM. Dr. Stobart-Gallagher went above and beyond in organizing this symposium to ensure all students received more than their money's worth. Dr. Stobart-Gallagher, Dr. Pierce, and the other residents and attendings, graciously donated their time to teach and mentor students. The symposium was a great success and would not have been possible without the immense effort and generosity put forth by the Einstein team.

Join us at our next event! Follow us on Facebook and Twitter @ACOEPSC, and on Instagram @Acoep.RSO for details.





BE AFRAID. BE VERY AFRAID.

Alexander Torres, DO, PGY-4
Comanche County Memorial Hospital

Transitional career phases are, without a doubt, an emotional rollercoaster filled with anxiety, nervousness, and fear, to name just a few. As an emergency medicine physician, you will be continuously challenged throughout your career, no matter how seasoned you become. There is no doubt that you possess the intelligence and strength to succeed in emergency medicine, but whether you are a medical student, resident, or even an attending physician, you should be afraid. Why?

The rapid shift from medical school to internship is terrifying. No matter how many pages you read or how well you try to prepare, no intern truly feels ready to start their first day of post-graduate training. The thought that “things have to get easier,” helps you to persevere throughout the year, yet every minute of every shift has the potential to produce a nerve-racking experience. So, things must get easier, right?

Fast forward to assuming the responsibilities of an upper-level resident. The time flew by, and although there were days you thought would never end, internship is successfully completed. Now you are known by the nurses, attendings, and hospital staff and it seems everything should be easier, but it’s not. The accountability and duties intensify, such as documentation, managing an increased number of patients, working on research projects, and supervising interns and medical students. Again, every minute of every shift has the potential to produce a nerve-racking experience. You have your senior residents and attendings to back you up, so it can’t be too scary, can it?

Now you are the senior, maybe even the chief resident. You have surmounted the early years; graduation and attending status is in sight. By the time you realize that you have been given additional responsibility, there is nothing easy about it. You are required to teach the junior residents, interns, and medical students. You are expected to begin functioning near junior-attending level, as well as make schedules, prepare for your national board exam, interview for jobs or fellowship, and prepare for possible permanent relocation. Once the year-long, daily circus show is over and you have successfully completed all these seemingly impossible tasks, it is graduation day. You’ve made it! You are going to be an attending physician. So, things must get easier, right?

But wait, now you have essentially reverted to intern-status. As a new attending, you are the expert in charge, but you are terrified. There are no senior residents to supervise you. You are residency trained and have been well prepared, so why should you be terrified? Because every minute of every shift has the potential to produce a nerve-racking experience.

As an emergency medicine physician, you frequently hear the familiar phrase, “just when you think you have seen it all...” In this specialty, there is no way to truly prepare for everything that you will encounter. You must believe in yourself, your training, and trust your skills needed to save lives. You will encounter a “zebra” diagnosis or an “ED thoracotomy,” and be terrified time and time again. As physicians, especially in emergency medicine, you are privileged to great opportunities and possess unparalleled skills to perform a job that very few are able to accomplish. Be grateful. If you have successfully completed medical school and residency, and your residency program director felt you were competent enough to practice independently, that is a great achievement.

SAVING A CHILD'S LIFE

James Chapman, DO
PGY-2, Kent Hospital. Warwick, RI

Frank Overly, MD
Emergency Department Director
Hasbro Children's Hospital. Providence, RI

After working a cardiac arrest, I noticed that there were four new patients to be seen. One of the nurses walked over to me and asked me to see the baby. The chart read "leg swelling." I walked into the room and the baby was crying inconsolably. On examination, the child had an obvious deformity of the femur.

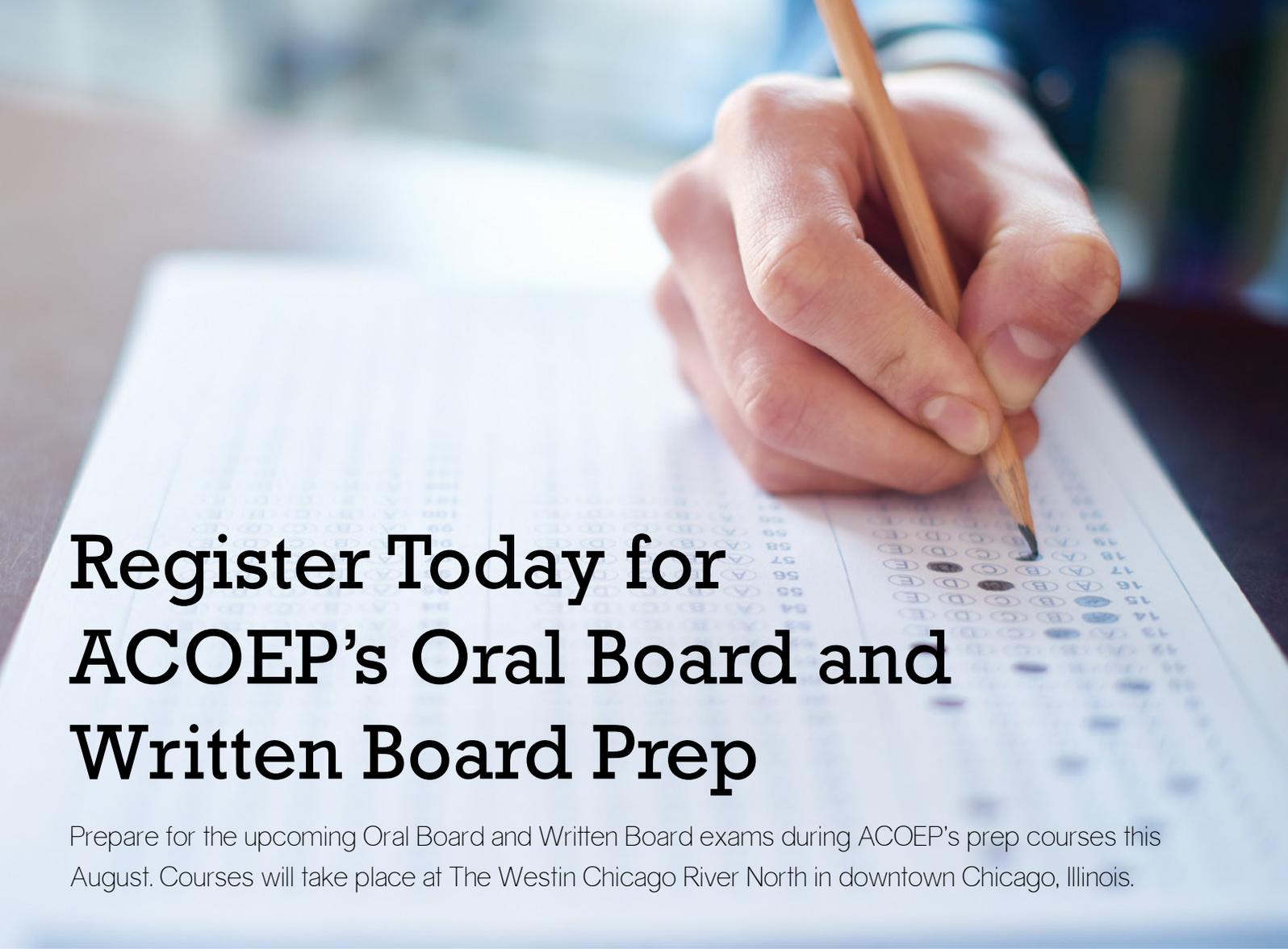
Emergency physicians staff the front lines of medicine. We see everything from an elderly patient coming to terms with the end of their life, to the common cold. Unfortunately, we are often the first to recognize children who have been neglected and abused.

In a 2013 retrospective study of 401 infants, of the 200 found to have definitely been abused, 27.5% had a sentinel injury.¹ While some cases may be obvious, the subtle cases are the ones we can have the greatest impact on. These are the lives we can save.



Here are some tips to improve detection of child abuse:

- 1** Always consider non-accidental trauma in every child with any kind of injury. Maintaining abuse as a top differential in any child with an injury will ensure that it is at least considered. If the injury is in anyway suspicious, we are mandated to report to the local child abuse authority.
- 2** Fully expose every child and perform a full physical exam. If there are any abnormal bruises, marks, or burns, consider abuse. Remember the saying: "If they can't cruise, they don't bruise." This means that if they are unable to move on their own, they should not have any bruises at all. If they can move, when they fall, bruises will reside on bony prominences. Abnormal patterns and locations of bruises should also make one suspicious. In bottle-fed children, it is important to examine the frenulum. If the lingual frenulum is not intact, this should raise a red flag for non-accidental trauma.
- 3** If there is any concern for abuse, report it. We are required by law to report any non-accidental trauma. Each state has a department to manage these inquiries into child abuse. We do not have to confirm abuse in order to file a report. Your local child abuse authority will do a thorough investigation. If they do not find anything, there is no harm done. But if abuse is missed, the consequences could be dire.



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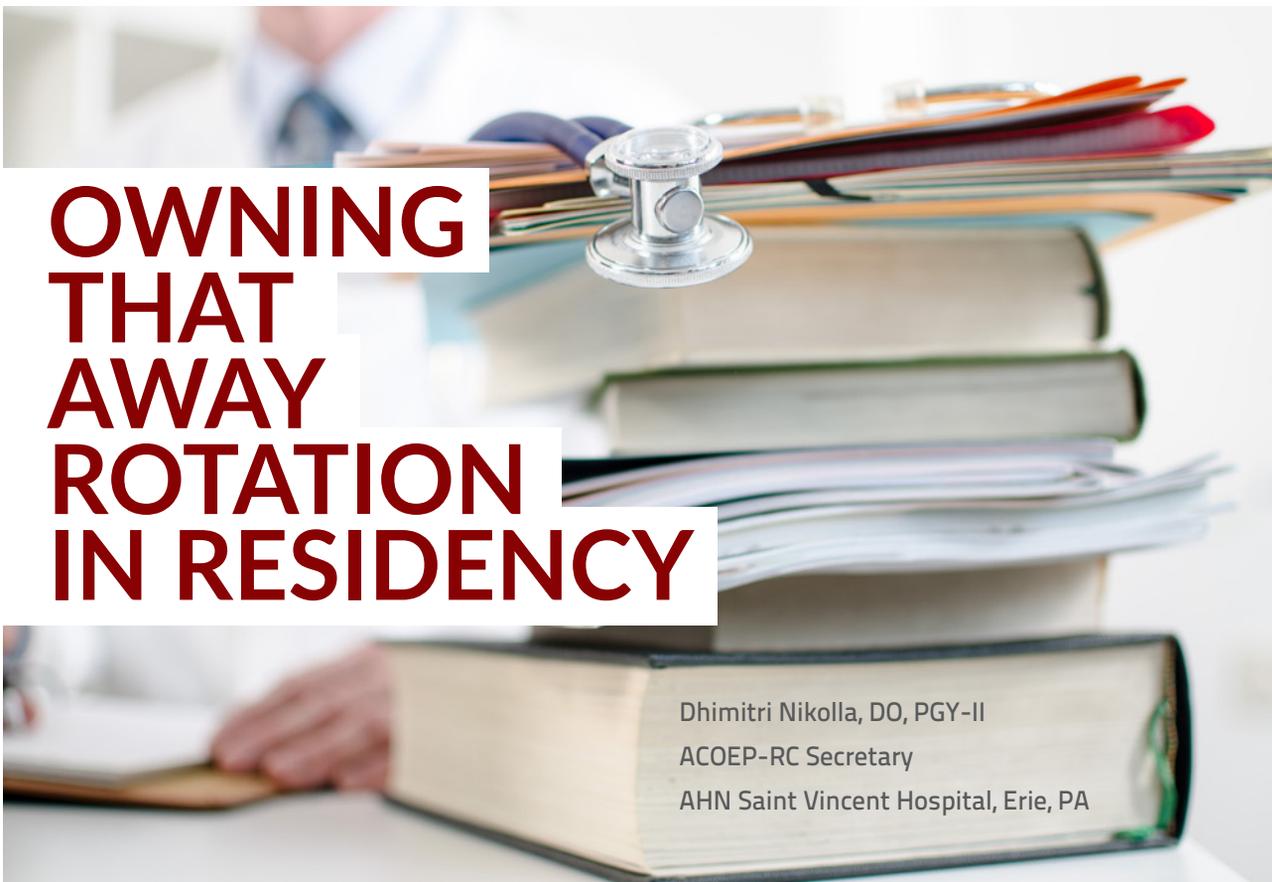
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OWNING THAT AWAY ROTATION IN RESIDENCY

Dhimitri Nikolla, DO, PGY-II
ACOEP-RC Secretary
AHN Saint Vincent Hospital, Erie, PA

While many of us spent more time on away rotations than home rotations during medical school, doing an away rotation as a resident may be like learning to ride a bike again. As residents, we work hard every day to not only learn medicine but to learn to see patients as independently possible. We know that someday soon we are going to be the attending responsible for patients and there may not be a colleague at our side to ask for help. While climbing the ladder to autonomy is expected of us at our home program, it can often lead us astray during away or off-service rotations. As EM residents, most of us do a few away rotations, whether it may be Pediatric EM, Toxicology, or Trauma. But, no matter the rotation, here are some tips to get the most out of your away rotation.

BE HUMBLE. As we develop more and more skills and autonomy through residency, we naturally become more confident in our abilities. At our home programs, our attendings know us and our capabilities, and they are likely comfortable giving us autonomy. But, at an away rotation, the attendings don't know us. While we may see patients almost independently at our home program, attendings at an away rotation may not even be comfortable letting us put in orders without discussing the case with them. It is important to learn what is expected of you and perform that job well. If you are unsure what is expected of you, just ask!

BE A STUDENT AGAIN. We all want to be that senior resident running the department, but on an away rotation our job is first and foremost to learn. Dedicate time before or during the rotation to reading pertinent literature even if

it is simply reading (or re-reading) the relevant chapters in Tintinalli's or Rosen's. Likewise, pay attention to how your new attendings approach different clinical situations and how it may be different from how you were trained. You may have seen a hundred children with abdominal pain at your home institution, but a fellowship-trained Pediatric EM physician will likely approach that scenario differently than you were trained. Sometimes, the best way to appreciate this is to take the passenger seat!

Away rotations, whether mandatory or elective, are an awesome opportunity to gain exposure to things you may have very little experience with at your home institution. Do everything you can to learn from those opportunities while doing everything that is expected of you without overstepping your bounds.

Complex Ankle Injury AFTER A FALL

Shravya Budidi OMS-IV, VCOM

Eric S. Wernsman DO, FACOEP, VCOM Emergency Medicine Clinical Faculty

A 67-year-old male patient presented to the emergency department complaining of right ankle pain, tenderness, and the inability to bear weight on his right leg after having fallen on wet steps this morning. The patient characterized the pain as throbbing, sharp, and constant, with radiation up his right leg upon weight bearing. The patient's past medical history was unremarkable; his surgical history revealed a bilateral total knee replacement. Physical examination showed normal vital signs with the patient in pain due to swelling and ecchymosis to the right ankle, but no obvious deformity was noted. Palpation revealed tenderness at the right proximal fibula and the right medial malleolus, with no tenderness noted at the base of the fifth metatarsal. Decreased range of motion in the right ankle joint was also present. The patient complained of pain when the calf was squeezed just above the ankle joint, also known as a positive squeeze test.¹ External rotation also immediately produced pain.

What is the next step in the evaluation of this patient?

- Ankle and foot radiograph
- Ankle and tibiofibular radiograph
- MRI of ankle
- Orthopedic Consultation
- Treat with rest, ice, compression, and elevation (RICE) and follow up in clinic in 2 days

The positive squeeze test and external rotation tests are highly suggestive of a distal tibiofibular injury, while tenderness at the right proximal fibula is suspicious for a high ankle injury. Therefore, a weight-bearing AP, lateral, and mortise radiographs of the ankle and upper leg radiograph was obtained (choice b).² Imaging studies revealed a medial malleolus fracture in the ankle, (see Fig. 1) as well as an oblique fracture of the proximal fibula. This combination of fractures is referred to as a Maisonneuve fracture (see Fig. 2).² After evaluation of the imaging studies was completed, an orthopedic consultation was obtained.

Background/Terminology

Maisonneuve fracture is a unique diagnosis that is a

combination of the disruption of the distal tibiofibular syndesmosis with a spiral fracture of the upper third of the fibula. It also often involves the medial malleolus or the deltoid ligament.^{3,4} The fracture can many times go unnoticed because the injury at the ankle can act as a distractor injury, resulting in the pain at the proximal fibula being overlooked by both the patient and the physician.^{4,5} For this reason, it is important for physicians to examine the joint proximal and distal to the ankle when examining a patient with any ankle injury.^{5,6,7} Maisonneuve fractures result first with an injury to the medial ankle. An eversion force sprains the deltoid ligament or causes an avulsion of the distal medial malleolus.⁸ This initial injury, coupled with an external rotation force, subsequently results in a disruption of the tibiofibular syndesmosis.⁸ The tibiofibular syndesmosis consists of four ligaments: the anterior inferior tibiofibular ligament (AITFL), the posterior inferior tibiofibular ligament (PITFL), the interosseous ligament, and the inferior transverse tibiofibular ligament.⁹ These together serve to link together the distal tibia and fibula. The syndesmosis provides stability while also allowing for the motion of the dynamic ankle joint.⁹ Instability of the ankle joint allows for force to propagate along the interosseous membranes, and the rotational and



Fig. 1: The AP/oblique view of the right ankle showing a transverse fracture of the medial malleolus with only slight displacement of fracture fragments.

valgus stress on the proximal fibula results in a Maisonneuve fracture.⁵ A meta-analysis examined the mechanism of injury in 82 out of 106 Maisonneuve fractures, and concluded that the most common mechanisms of injury included sports-related injuries (46.34%), injuries from slipping on ice, running or walking (32.93%), motor vehicle accidents (14.63%), and falls from heights (4.88%).⁴

Diagnosis

As discussed above, a Maisonneuve fracture is easy to miss if the patient fails to report pain at the proximal fibula. It is important to have a high index of suspicion, especially if a routine ankle x-ray indicates an isolated medial malleolus, deltoid injury, or any disruption at the syndesmosis. These findings should prompt the physician to reexamine and reevaluate for proximal fibular involvement by obtaining a tib-fib xray.³ MRI can be obtained after the initial x-ray to confirm the ligament injury involved in a Maisonneuve fracture.² Furthermore, when a proximal fibular fracture is suspected, it is important to perform a thorough neurovascular exam. The common peroneal nerve is susceptible to damage in a Maisonneuve fracture because of its location behind the head of the fibula, which results in loss of sensation to the tibialis anterior (foot dorsiflexion) and first web space of the foot.³



Fig. 2: AP radiograph of the proximal right tibia and fibula showing a non-displaced spiral-type fracture involving the proximal fibula.

Management

The management of a Maisonneuve fracture varies depending on several factors including the extent of soft tissue injury, disruption of the syndesmosis, and the severity of proximal fibular fracture.⁴ The initial management of Maisonneuve fracture in the emergency department is the same as any other ankle fracture. Open fractures or neurovascular impairment requires immediate orthopedic consultation and treatment. Any fracture dislocations must be reduced immediately.¹⁰ The overall goal of treatment for Maisonneuve fracture is to stabilize the syndesmosis.⁴ The two major indications for operative fixation of an ankle fracture are loss of joint congruency or loss of joint stability. Because of the involvement of the syndesmosis in a Maisonneuve fracture, it serves as an indication for orthopedic consultation. While awaiting orthopedic consultation the ankle can be splinted in neutral position to provide support and pain control, using a short-leg posterior splint. A stirrup can be added for additional medial and lateral support. Remember to place adequate padding prior to splinting if significant swelling or deformity is present to allow for further swelling.¹⁰

The 67-year-old patient in the above case presentation underwent orthopedic surgery with an Open Reduction Internal Fixation (ORIF) of the malleolus fracture. The patient's follow up course was unremarkable.

ADVICE FROM A NEW ATTENDING FOR INCOMING INTERNS

Cara Norvell, DO
Associate Medical Director
Administrative Fellow
Baylor University Medical Center



Fourth-year medical students are preparing to become interns in a few short months. I remember the nervous excitement that built up before the start of intern year. I was ready to start the next step, but worried about what I didn't know. The reality is that most of what you learn about becoming a doctor, you learn in residency. So when I started intern year I didn't know anything. It's a scary but exciting time so I want to share with you some tips on how to make the most out of your intern and residency experience.

First and foremost, trust the gut feeling of "something's not right here." As a new doctor, you won't yet have the experience factor. Over time you develop a gestalt that allows you to very quickly determine "sick" or "not sick." Even early on, though, you will have patient encounters that leave you with the feeling of, "I don't know what's going on with this patient, but something's not right." Trust that. Dig deeper. Ask more questions. Ask for help. Share that feeling with your attending and senior residents that you trust.

Never be too proud to admit you're wrong or to ask for help. Too much pride makes dangerous doctors. It's not about you, in fact. It's never about you; it's about the patient. When the family keeps bringing up a seemingly meaningless concern or they tell you they have that same gut feeling of something is wrong...listen. Often they are your most valuable resource. Remember, if you don't listen and there is a bad outcome it's not the patient that sues, it's the family. Always be willing to reconsider your differentials and dispositions.

On the note of pride, leave it at the door when managing airways.

As emergency physicians, we frequently manage difficult airways. You will have an airway that you fail and then the next person gets it with ease and

then there will also be times when you need to call ENT or anesthesia. There is no pride in airway management. Call for help and do it early. Again, it's about the patient.

Advocate for your patient ... whether to consultants or families. You'll be surprised some of the things consultants will try to brush off. Keep in mind, you saw the patient when they were the sickest and you resuscitated them, so often the patient we present to the consultant may be in much better shape. Advocate for what the patient needs. There are times when it's okay to go right to the top of the chain. If your initial consultant is a resident and the right thing isn't happening for the patient, call the attending.

Put as many splints on as you can. You don't know where you will end up. You may be the only one with this skill, so practice this while you can. Poorly splinted patients often have worse outcomes. Also, remember that if the films are negative and the extremity is still unusually painful, splint it.

If you're going somewhere with other residency programs, always play nice.

If you are consulting them for something that involves a procedure, and you have the time, ask them to teach you their methods. They almost always will be happy to teach you and



potentially prevent a future consult for something that you'll be able to manage on your own.

Before you present your patients, have a differential and a plan, even if it isn't perfect. Making yourself think through the entire ED course is important.

Know what you are going to do with every test you order. There is no such thing as "basic labs." Test and diagnosis with intention.

Follow up on your patients. Come to work early and visit them on the floor. Call some of the patients you discharged and see how they are doing. Not only does this mean the world to them, but you also learn if you were on the right track. It also helps elucidate what happens after admission and what kind of timelines to give patients...because you will always be asked, "How long will I be in the hospital?"

Teach. Nothing makes you aware of what you don't know faster than teaching (medical students, interns, or other residents). When teaching, be willing to admit when you don't know something or when you were wrong.

Find reasons to use the ultrasound. The only way to become skilled at using the ultrasound is to actually use the ultrasound. If someone is getting a formal US, go in ahead of time and do your own. Compare the results.

Moonlight. Working under your own license and making your own decisions is completely different than working under the security of residency, even if the decisions are simple. Use this time to figure out your weaknesses, strengths, and what tightens your sphincter.

Respect those with more experience than you. When people take the time to teach, be willing to learn. You may practice differently in the future, but when you are working under an attending they have the final decision. Be flexible.

Haters gonna hate! Not everyone will like you, and you won't like everyone. You'll have people that you're less than excited to work with. Don't let this affect your professionalism or patient care. And don't avoid calling a consultant, because they have an unprofessional attitude. Do what's best for your patient.

Know your reasons for narcotic use. This problem isn't going away. Figure out where you fall early on. For example, my "inclusion criteria" for narcotic use in the ED are: fracture or

severe trauma, cancer, acute abdomen, and kidney stone.

Recognize your triggers and figure out how to deal with them. Don't let patients hijack your shift. For example, if drug seeking gets you heated, figure out your script with the patient beforehand, just as you would have a plan for a difficult airway. For difficult patients with unrealistic expectations figure out your script. For anything that sets you off, figure out how you can manage it and not get derailed. Remember that it's not personal and it's not about you.

Participate in didactics.

Actually read. Beyond daily didactic reading, I would pick one interesting patient a day or one that I struggled with and read further into that topic.

Pick up the patients that have the "cringe" diagnosis.

For example, I hate feet and eyeball complaints, so I picked them up as often as I could.

Look at every image you order. You have the advantage of the patient in front of you. Radiology misses significant findings that you will miss too if you don't look at your images. Remember that they are reading hundreds of films a day and reading your own films gives you a distinct advantage when you practice alone.

If you were supposed to know it all you wouldn't have to do residency. Don't pretend you're competent when you're not, or that you know something when you don't. Take responsibility for your continued education and for your attitude during the process.

Have fun! Residency is an exciting and challenging time! Even after the experience of medical school, the learning trajectory is incredible. Some days are rough, and you'll be exhausted and worn out at times. But the next few years you get to see and do so much! This really is the coolest job in the world, working with some of the coolest people in the world. Take time for you, enjoy the process, and ask questions!



GETTING THROUGH CORE CLERKSHIPS

Hala Ashraf, OMS-IV
VCOM

With summer in full force, medical students have transitioned into and are now settling into their new roles. Second-years have moved on from preclinical studies to clerkships. Third-years are auditioning at programs of interest and preparing to interview for residencies, and fourth-years are embarking on the next phase of their education as resident physicians.

With each transition, it is important to reflect on how far you have come, and how your experiences have shaped your education thus far. As a soon-to-be OMS-IV, preparing for the Level 2 exam and audition rotations, I have spent a lot of time reflecting on what I learned from my third-year clerkships. As it is with many other schools, my school does not consider emergency medicine to be a core clerkship for OMS-III students. But that does not have to be the end of the world. There is still so much to learn about emergency medicine, no matter what clerkship you are on. The beauty of emergency

in your new role, things aren't so bad. You have got the basic anatomy and physiology down, and now you get to apply it to real patients.

As your preceptors start to give you more responsibility with charting and orders, you can learn to develop treatment plans for your patients with the safety net of having a physician behind you to catch your mistakes before you make them. You get to explore different specialties and hopefully begin to figure out where your best fit may be. And if you already

"WITH EACH TRANSITION, IT IS IMPORTANT TO REFLECT ON HOW FAR YOU HAVE COME, AND HOW YOUR EXPERIENCES HAVE SHAPED YOUR EDUCATION THUS FAR."

medicine is that you never know what pathology is going to roll through those doors. Core clerkships just give you a little view of what happens before and after that ED visit.

Third-year students are in a unique position. Most of us probably started our first clerkship as confused, awkward students who felt more in the way than anything else. After spending two years knowing exactly what needed to be done to pass classes and crush boards, we were suddenly thrust into a world where there was no Pathoma and those long uWorld vignettes were now hour-long patient interviews, with differential diagnoses much narrower than A thru N answer choices. But once you get a little more comfortable

know what specialty you want to pursue, third-year is the perfect opportunity to gain exposure to areas of medicine you may not see again once you begin residency. *So, what's the best way to take advantage of this year?*

KEEP AN OPEN MIND. It can be tempting to want to blow off a rotation just because you think you will never end up in that specialty. Ultimately, you never know what you might end up loving, or hating, if you do not give every clerkship a fair shot. At the most, it will only be eight weeks of your life. Dedicate yourself to it, and you may end up surprising yourself.



LISTEN TO EVERY HEART, AND LOOK IN EVERYONE'S EARS.

Pathology will be easier to spot when you know what normal is supposed to look and sound like. After a month of screaming children on pediatrics, looking at the ears of a calm adult should be a piece of cake. Practice your physical exam skills as best as you can while your preceptors still don't expect you to know very much. That way once they do start to expect more, you know what you are doing.

REMEMBER THAT EVERYONE HAS A STORY. Your third year is the time where you get to spend an hour with a patient trying to learn how to elicit a good history. Use this time to get to know the full story. Don't let yourself get so bogged down with life and studying that you forget why you are practicing medicine. Remember, while it may be just another day of work for you, every patient coming through your emergency department is having a bad day.

I asked each of my preceptors for one piece of advice they had for me going into EM, and I think part of me was hoping for some tangible piece of medicine that I could write in my notebook and never forget during a patient workup. Instead, everyone seemed to tell me variations of the same ideas. Never forget why you pursued medicine in the first place. Never let the job keep you from remembering why you care about people. And if you find something you love, chase it with everything you have.

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LEARNING ON THE GO— PODCASTS

Christina Hornack, OMS-III

Edward Via College of Osteopathic Medicine

Everyone has downtime—you have a distant clinical rotation, a long flight, or just need something to listen to while on the treadmill. There always seems to be a few minutes available to stay current with the latest in emergency medicine. Not only that, but repetition is key. Hearing the treatment protocol for epistaxis might not stick the first time, but the more you hear it, the faster you'll be able to recall it when out on that audition rotation. Enter podcasts—short, packed with information, and regularly updated. If listening to podcasts isn't already a part of your routine, it should be. Here are a few favorites, broken down by category.

EMERGENCY MEDICINE LIFESTYLE

EM Over Easy
emovereasy.com

Hosts: Andy Little, DO, Drew Kalnow, DO, Tanner Gronowski, DO

With a combination of wit and wisdom, the gentlemen from Doctors Hospital in Columbus Ohio talk shop, lifestyle, gift guides, and have great guests. Averaging in length at around 20 minutes, with some "short stacks" that are approximately 5 minutes, this podcast is fun and informative. This is a great place to start for anyone just getting into listening to podcasts and interested in emergency medicine.

MEDICAL STUDENTS

**The EM Clerkship Podcast:
Emergency Medicine for Students**
emclerkship.com

Host: Zack Olson, MD

Dr. Olson is a resident at University of Tennessee - Nashville. He narrates excellent podcasts that drive to the heart of what every emergency medicine hopeful should know. Covering topics as necessary as laceration repair, to the more nuanced, like patient satisfaction, this is one podcast I hope to finish before my first day of audition rotations.

CLINICAL KNOWLEDGE AND SKILLS

CORE EM

coreem.net/podcast

Host: NYU Bellevue EM Residency

The stated goal of the podcast "is to deliver core content in the true spirit of Emergency Medicine—to anyone, anywhere, anytime."

EM BASIC

embasic.org

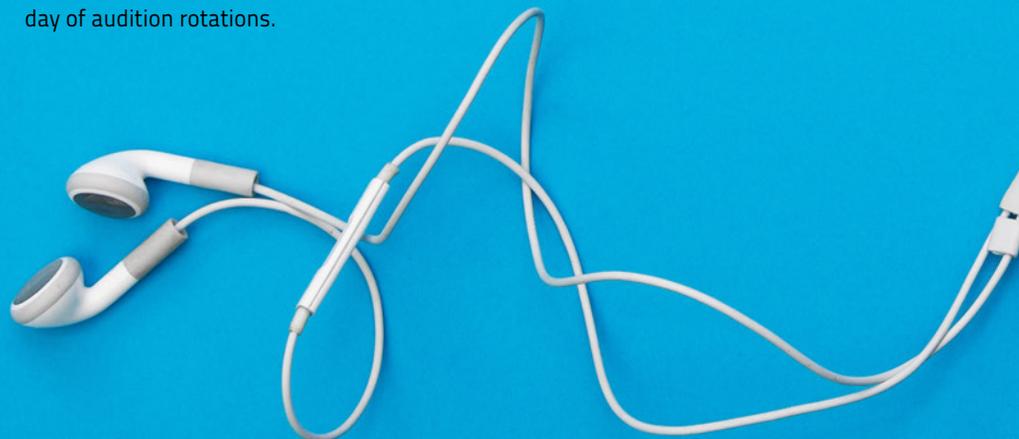
Host: Steve Carroll, DO

Designed for medical students and emergency medicine interns to review the basics of emergency medicine. Each episode starts with a chief complaint and then goes over the most relevant parts of the H&P, the workup, and the essentials of treatment and disposition.

Emergency Medicine Minute
emergencymedicalminute.com

Host: CarePoint

Each episode is recorded in the ED, by the emergency physician on duty. The episodes are inspired by real patient care and discuss current events in EM.



The St. Emlyn's Virtual Hospital Podcast

stemlynsblog.org

Host: A group of FOAMed enthusiasts based in the UK

A virtual hospital that covers relevant topics in emergency medicine.

Urgent Matters

smhs.gwu.edu/urgentmatters

Host: GW School of Medicine and Health Sciences

Urgent Matters deals with patient flow and quality in emergency departments.

EMRAP

www.emrap.org

This podcast is not free, unless you're an EMRA member; however, it covers a diverse range of topics and can be accessed with their standalone app.

ER Cast

blog.ercast.org

Host: Rob Orman MD

Each episode tackles a single issue and attempts to cover all the relevant issues without being overwhelming.

Emergency Medicine Cases

emergencymedicinecases.com

Host: Anton Helman MD and guests

This podcast, based out of Canada, aims to bring the brightest minds together for round table, in-depth discussions on core EM topics with several guest experts, edited to one hour in length.

RESEARCH

EMCrit

emcrit.org

Host: Scott Weingart MD

The purpose of the podcast is to bring ICU level care to the emergency department and allow patients to benefit from better treatment and better prepared physicians. The audience includes medical students, residents, attendings, nurses, paramedics, EMTs, and students.

FOAMCast

foamcast.org

Hosts: Jeremy Faust, MD and Lauren Westafer, DO

A podcast that aims to review FOAM and attempts to tie it to core content, reviews the literature, and provides references.

REBEL Cast

rebelem.com/rebel-cast

Host: Salim Rezaie, MD

REBEL EM stands for Rezaie's Evidence Based Evaluation of Literature in Emergency Medicine. The podcast aims to review two or three papers every month and discusses implications for clinical practice.

The Skeptics Guide to Emergency Medicine

thesgem.com

Host: Ken Milne, MD

Meet 'em, greet 'em, treat 'em, and street 'em, the SGEM podcast is trying to turn traditional education models on its head. The goal is to bring cutting edge, but valid and reliable information to the trenches of emergency medicine.

Miscellaneous

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Host: Gerry O'Malley, DO

A podcast focused on toxicology, with an emphasis on "the world of the weird"; this podcast will not only teach you a thing or two about toxicology, it just might entertain you as well.



Life and Times OF A Former HPSP Medical Student

Capt. Joshua da Silva, DO, USAF

“Wait...so you’re in the Air Force, but you don’t fly planes?” Surprisingly, I have been asked this question more than I ever had thought I would when I was commissioned five years ago. Although asked mostly by those outside of medicine, it is a question that represents a general lack of knowledge of non-combat military programs. My name is Joshua da Silva, and I was an HPSP Air Force student at the Philadelphia College of Osteopathic Medicine (PCOM), and now an incoming resident to the Wright State EM residency in Dayton, Ohio.



So, what is HPSP you ask? It stands for Health Professions Scholarship Program. The program, sponsored by the United States military, exchanges service time for tuition payments. I chose the Air Force mainly because my dad was in the Air Force and everyone told me it was “better.” Better, I learned, was a subjective term. It turns out the Air Force was the correct fit for me, but it most certainly is not for everyone.

The HPSP creates a unique kind of student, with needs that differ from their civilian counterparts; needs that our institutions are ill-prepared to face. In addition to growing numbers, we also have guaranteed paid tuition and a significantly lower drop-out rate, as the cost of a drop-out is steep. As the military student population grows, so must our colleague’s knowledge of its details.

The Entrance Process

In the Air Force, before we can even apply to the HPSP program, we must be officially accepted into a medical school. The extensive application includes several rounds of paperwork and a military physical, where you are surrounded

by kids asking you how many months ago you graduated high school (surprise, I’m a grown up). If all steps are cleared, then the application goes to a board where they decide whether to grant you entrance into the program. If your MCAT scores and GPA meet a certain threshold, and space is available, this acceptance is automatic. When I entered the program, the minimum requirements for this “matrix” selection were an MCAT score of 30 and a GPA of at least 3.5.

Modern Day Indentured Servitude

The military foots the enormous medical school bill and students, in turn, owe one year of military service for every year of tuition that the military paid. For some HPSP students that may only be three years, which would equate to three years of service. The service time does not include time spent in residency, as this is still considered in training. You will also not be deployed during this time, or have any other requirements that will interfere with your residency. Depending on how long your residency is and if you decide to pursue fellowship, the active duty payback time can be extended.



"AN ORGANIZED SYSTEM THAT PROVIDES ACCURATE, UP-TO-DATE INFORMATION TO OUR MILITARY STUDENTS WOULD NOT ONLY DECREASE ANXIETY, BUT WOULD GIVE A HUGE ADVANTAGE TO ANY STUDENT IN THE PROGRAM. "

Commissioning and Boot Camp

Regular military officers undergo an 11-week training school before they receive any rank. When we are accepted into the program, we receive a direct commission, meaning that we have instant rank without having to go through any training prior. One day we are civilians, and the next we are military officers, expected by all other members of the military to adhere to military rules and customs. Personally, I was terrified of embarrassing myself and my rank by saluting incorrectly or violating some custom of which I was ignorant. I would say that is true for the majority of HPSP students.

We finally complete our version of basic training, called Commissioned Officers Training (COT), in the summer between first and second year. Due to time constraints, our training is shortened from the normal eleven weeks to six weeks. I had a lot of anxiety before boot camp, because I had convinced myself it was going to be like the film "Major Payne." If you have not seen the movie, it is about a group of ROTC cadets and the iron grip of a man of questionable mental stability. Ironically, I did have a Major Payne during training, but he was actually a very nice man. After arriving on base, the first few weeks are flavored with frantically

reading the tiny rule book with a large side of getting yelled at all day. The yelling was what I was most nervous about, but I adjusted as time progressed. It turns out that Air Force commissioned officer's boot camp is composed mainly of leadership training, classes, and exams. We did have PT in the morning along with other training exercises, but this was only a minor part of the day—who knew? Graduating COT was the first time I felt like a real soldier, and I walked out of graduation proud of my accomplishments. Second year of medical school is uneventful from a military perspective, and is overshadowed by the panic and stress of the months leading up to boards.

Third Year and Audition Rotations

Most of the third year of medical school is composed of stressing about fourth year and auditions. Setting up audition rotations at military institutions poses a unique challenge, in that we have no idea how to go about actually setting them up. That is to say, usually our schools have no idea how to set them up or how to help. The process can vary by site and branch of the military, and helpful information usually originates from a fourth-year who has gone through the process. The problem is that fourth-year students are all on

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the audition rotations themselves. I was lucky enough to have friends at other schools that were going into emergency medicine as well, and we shared our gathered intel. Setting up the rotation usually just involved contacting the military program coordinator, but getting the necessary information to contact them was the trick.

Military auditions, at least for me, were 30% medicine and 70% anxiety. For many of us, this was the first time we were in uniform outside of boot camp two years prior. For example, it is military custom that if you pass a superior officer, then you initiate a salute and cannot drop the salute until the officer drops his salute (or ignores you...which is fine too). Not doing so can result in you ignoring a salute from someone else or disrespecting a colonel. One tactic that worked for me was avoiding any navy officer, because navy ranks are the only ones that are different and I never had any idea what they meant. Slowly, I remembered my training and was promptly corrected for any misstep. Other than being in uniform, military audition rotations are the same as our civilian counterparts.

The Match (AKA The Hunger Games, may the odds be ever in your favor)

Now let me bring up the dreaded "M" word; the match. The military match is uncharted territory for most schools. The process recently switched over to a system similar to ERAS, but with more bugs and glitches. The one major difference is that ranking is asked to be completed BEFORE any interviews and is completely open to each program. It is definitely awkward to hand that sheet to a program you ranked last and convince them you still want to go to their program. Another major difference is that the ranking is based on a point system that includes board scores, research, prior service, and years of training. There are point caps; the system is setup to provide an intern with a higher point cap than a medical student, and is able to receive additional points for an additional year. Compared to the civilian system, incoming interns have an advantage over medical students when applying to military residency programs.

Interviewing

Interviews are an interesting thing, since all you need to do to secure one is to call and ask. As long as you do it far enough in advance, each program is required to provide an interview, even if it is simply over the phone. At least, that is the way it works for Air Force emergency medicine. The program that you rank first is required to submit an interview form, and a certain number of points are awarded based on how well you did in the interview. In EM, that interview form, along with all other information submitted, is reviewed by a committee

including directors from each of the programs. Each candidate is ranked according to their point score, and the highest scores get their top pick for residency. It is very important to understand how this process works, and how lying to the programs about ranking will quickly be discovered. It is also important to know that each program participates in this process; it behooves the applicant to apply to each program, since that provides more information to the committee than simply the views of one program.

But We Can Do Better

A great deal of being a military medical student is figuring out what in the world you're supposed to be doing at any given time. As a result, HPSP students, like me, fight to succeed due to the lack of support structures provided by our schools. Eventually we all figure it out, but there must be a better way. At my school, there have been years when the upperclassmen organize themselves to teach the younger years pertinent information, but as life becomes busy, the programs will fall apart.

We are overdue for a better process, and the situation at my school is by no means uncommon. An organized system that provides accurate, up-to-date information to our military students would not only decrease anxiety, but would give a huge advantage to any student in the program. Once a framework is in place, it can be expanded to provide networking with military alumni, specialty specific mentoring, and match assistance. The program would also ultimately be organized and maintained by the school, to eliminate the risk of the program falling apart once the year becomes busy. At PCOM we are working on a program just like this that will hopefully be up and running soon.

My graduating class of 250 was composed of almost 10% HPSP students from various branches. The time has come to amend the deficiency that exists in our medical schools in regards to the military. We are smart, hard-working students, and setting us up for success not only benefits us, but every man and woman in service to this country that we have the pleasure to care for.

FOR MORE INFORMATION ON THE HEALTH PROFESSIONS SCHOLARSHIP PROGRAM VISIT www.airforce.com/careers/specialty-careers/healthcare/training-and-education.

HOW TO SURVIVE THE FIRST TWO YEARS OF MEDICAL SCHOOL



Christopher Borowy, OMS-II
Jonathan Kelley, OMS-II
Midwestern University – Glendale, AZ

Countless tests, endless hours of studying, and bottomless pots of coffee—the first two years of medical school are unlike anything most people will ever experience. As the pressure mounts, so does your stress level. We have compiled 10 tips to not only help you survive the grueling didactic portion of medical school, but to ensure you thrive as you embark on your career in emergency medicine.

— 1 —

Accept that you are smart enough to be in medical school.

There will be moments during the first two years when you will doubt your ability to become a physician. This is normal. Do not let a bad test grade or rough week allow you to begin questioning your capabilities. Remember, you are in medical school. You deserve to be here. Embrace your intelligence and own it. What do you call the person who graduated at the bottom of their class in medical school? A doctor. Repeat this mantra every day.

— 2 —

Create a schedule and stick to it.

Medical school is a marathon, not a sprint, and training for a marathon is not accomplished overnight. Learning takes time, dedication and commitment. Throughout the first two years, you will be amazed by how much you can learn in a short period of time. However, it is important to be patient with yourself and create a schedule that allows you to soak in the information whether that includes nightly study sessions at Starbucks or morning runs on the treadmill. Developing a schedule creates consistency and eliminates unnecessary mental clutter. Be the tortoise. Don't be the hare.

— 3 —

Schedule one night per week off.

As part of your schedule, take one night per week off. This is an absolute necessity. Time off will become more valuable as you progress through medical school and continue long into your career. Get into the habit of forcing yourself to step away from school and to clear your mind now. Use this time to reconnect with the outside world, decompress with non-medical school friends, and bond with family. You will arrive back in class refreshed and centered.

— 4 —

Remind yourself why you are in medical school.

The human element of medicine is easily forgotten when you have your head buried in textbooks and case studies for two years. Why in the world do you need to know about Sphingomyelinase deficiency in Niemann-Pick disease? Because someone's child has this and they have turned to you as the medical expert to guide them through treatment. The trust patients have in you during their most vulnerable times is the ultimate privilege. When school gets rough, stop to remind yourself why you have chosen medicine as your profession.

— 5 —**Build a diverse and supportive network of friends.**

There are different types of people in medical school. Go figure, right? Some people are hypercompetitive, ace the boards, and are destined to become neurosurgeons. Others already have a residency lined up through family connections and complete the bare minimum to pass. Cultivate a strong network of support by surrounding yourself with both types of people. We as individuals have strengths and weaknesses that contribute to our learning and shape our world view. As we are learning together, we need people to vent to, share frustrations with and to celebrate successes. Having a diverse group of peers allows you to push your own limits and unlock your true potential. Not to mention, having supportive friends who can empathize with your walking zombie routine after an all-night cram session is crucial to surviving medical school.

— 6 —**Stay active and try to eat healthy.**

Unless you are fortunate enough to have won the lottery or have a sugar-spouse, chances are you are poor. We all are. As a student, money is sparse and any food is good food. However, try to gravitate towards the healthy option. Produce is just as cheap as McDonalds so choose the carrots over the French fries.

It is just as important to get active. Take a break from studying each day to work up a sweat and clear your head. Even dedicating 15 minutes every day to exercise will have an enormous impact on your mental health. It will help with endurance, attentiveness, and information retention. We promise the 15 minutes you devoted to your health over studying didn't result in a lower test score. It is important to remember habits you form in medical school will carry over into your career in medicine.

— 7 —**Begin giving back.**

Getting away from the books to give back to the community is a perfect way to maintain a positive attitude during your first two years. There will be a variety of opportunities to volunteer. Take advantage of them. Whether it is volunteering at an underserved medical clinic, being involved in club outreach programs or advising undergraduate pre-med students, stop studying once in a while and give back! Trust us, you will never regret time away from studying to volunteer. In fact, it may even rejuvenate and recharge your batteries.

— 8 —**Embrace failure and learn to fix your mistakes.**

We all fail at some point. You will fail a test. You will miss a diagnosis. Unfortunately, mistakes are inevitable. There is a learning opportunity in each failure whether specular or miniscule. Mistakes provide an opportunity to reflect on what went wrong and what could be done differently in the future in a way our successes don't. Learn from each of them and adjust accordingly. If you fail a test, remind yourself that it was better to happen in a testing center than in the hospital. The entire point of these first two years is to learn, so take advantage of your mistakes by viewing them as another learning opportunity.

— 9 —**Force yourself to be optimistic.**

There is no question there will be tough times during the first two years. Force yourself to be optimistic. Be flexible, yet resilient. We often see classmates absolutely losing their cool over changes in their schedule, hard exams or poorly written test questions. Do these relatively minor inconveniences matter in the grand scheme of life? Probably not. It is important to maintain perspective and understand you choose your reaction - so choose optimism. You must learn to deal with adversity now so you are ready to deal with it in practice. There will be plenty of times during rotations, residency, and practice when things will be beyond your control in which you can choose to freak out or accept the situation as it presents itself and move forward.

— 10 —**Have fun!**

The single most important tip we can pass along is to make sure you have a good time during the first two years of medical school. There is no point in doing anything in life if you are not having fun doing it. Tests will come and go, but your mental health is what will carry over into the clinic, wards, operating room, and emergency department. Take care of yourself, enjoy your friends and family, and make sure you avoid studying periodically.



JOIN US IN DENVER FOR ACOEP'S 2017 SCIENTIFIC ASSEMBLY!

Gabriela Crowley, ACOEP Staff

From Boston, to Orlando, to San Francisco, over the years ACOEP has taken its annual fall conference, Scientific Assembly across the country, and this year we're heading to Denver, CO, November 4-8th.

Scientific Assembly's 2017 keynote speaker, YouTube sensation, ZDogg, new pre-conference tracks, including a resuscitation course led by Dr. Haney Mallemat, MD, FAAEM, and multiple new track lectures, are just a few of the many highlights that attendees can look forward to this fall, according to Scientific Assembly's Course Chair, Nilesh Patel, DO, FACOEP.

Dr. Patel also credits the overall "vibe" of the conference as a large component of its success.

"ACOEP is a close-knit group and you tend to see new and old friends at every conference. It's a big family that comes together to learn from the best in emergency medicine," Dr. Patel said.

With the planning for Scientific Assembly starting soon after the previous year's conference is complete, a lot of time and effort goes into making sure the event runs smoothly.

"We meet about two times in Chicago for a few days to plan, brainstorm on topics based on curriculum needs and feedback, choose speakers, and complete a boat load of CME paperwork. Then we execute the plan," he said.

Dr. Patel admits a lot of hard work and time goes into creating a successful event, but in the end, it's quite rewarding to see it all come to life.

"It's fun to plan the Scientific Assembly. With clinical and administrative tasks, it is a lot of work but the enjoyment of planning it makes it worth it. And seeing the conference

succeed makes it worth it as well," he said.

Caring for the critically ill, learning how to stay well having a career in EM, utilizing FOEMed, and updates in various medical specialties, are just a some of the topics that Dr. Patel hopes attendees will walk away from ACOEP's 2017 Scientific Assembly knowing more about.

"You are hearing from high quality speakers and educators, some of the best in EM," he said.

"Our conference is a success of the growth of the college, as well as the attendees that foster the excitement at the conference. Have fun, get to as many lectures and events as you can!"

ACOEP's 2017 Scientific Assembly also plans to offer more opportunities to earn CME credit, a new and improved resident career fair, well-known EM speakers including Salim Rezaie and David Talan, a re-vamped expo hall, and various physician wellness activities.

Visit www.acoep.org/scientific for more details. We hope to see you in Denver this fall!



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- Sponsored nights out in downtown Denver
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A STICKY CASE OF "Splénomegaly"

Timothy Bikman, OMS IV
West Virginia School of Osteopathic Medicine

Terrance McGovern DO, MPH, PGY-IV
St. Joseph's Regional Medical Center, Department of Emergency Medicine, Paterson, NJ

Anthony Catapano, DO
St. Joseph's Regional Medical Center, Department of Emergency Medicine, Paterson, NJ

Case Report

A 6-year-old female presented with a two-day history of abdominal pain after being referred by her pediatrician for evaluation of "splénomegaly." The patient had been complaining of constipation for the past six days along with a few episodes of nausea and vomiting. On physical examination, a firm, non-tender mass was palpated extending at least 10 cm below the left costal margin.

The patient's labs revealed a significant iron deficiency anemia with a hemoglobin of 6.3g/dL and hematocrit of 23%. The ultrasound of the spleen revealed a normal spleen without any evidence of splénomegaly or renal masses. Abdominal x-rays showed a large density that was possibly a distended stomach (Image 1). To further evaluate the mass, a CT of the abdomen and pelvis (Images 2 & 3) was obtained which revealed a mass-like entity that completely filled the stomach, consistent with a large gastric bezoar.

On subsequent questioning, the patient's mother mentioned that she has noticed her daughter peeling and eating pieces of Velcro from her book bag and lunch box; similar to her sister who developed trichotillomania around the same age. After evaluation by pediatric gastroenterology and surgery, the decision was made to proceed with surgical removal of the mass due to its large size that would have made endoscopic removal difficult. The patient underwent an exploratory laparotomy and a 20 x 5 x 7 cm mass was removed from the stomach which was composed of predominantly hair and other textile-like material.

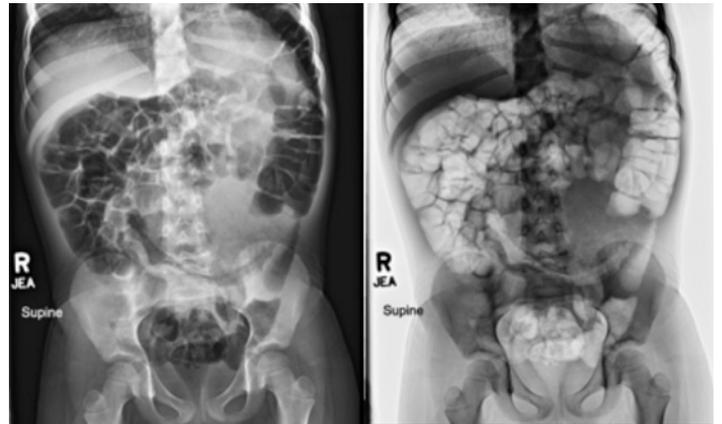


Image 1 is an Abdominal/KUB AP X-ray revealing a large soft tissue density with numerous tiny lucencies is seen within the left abdomen.

Discussion

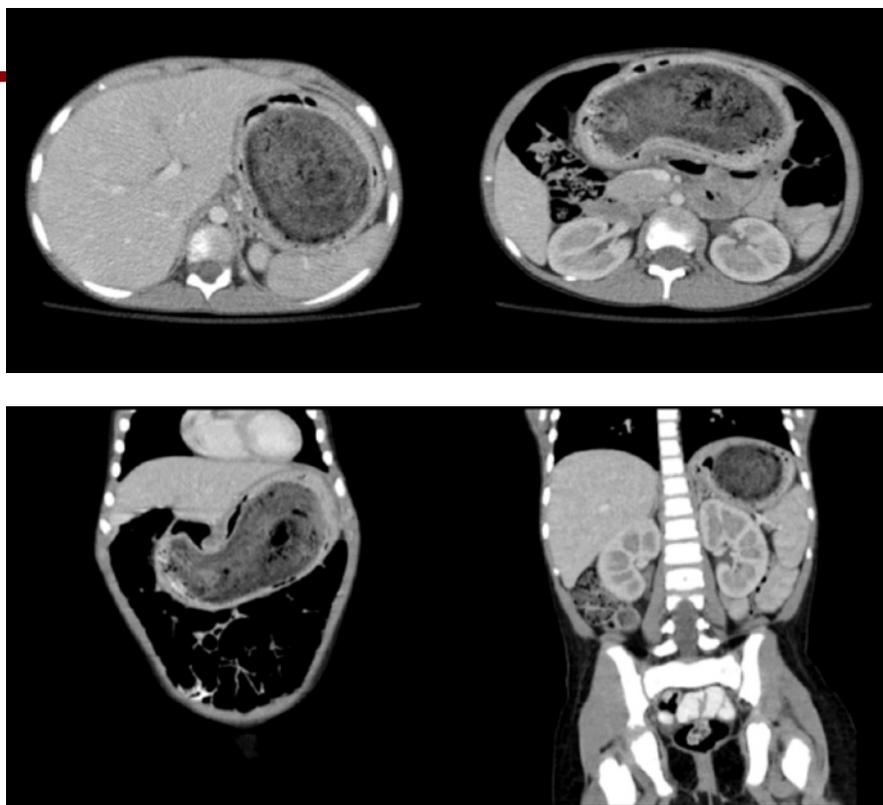
A gastric bezoar is an accumulation of indigestible material commonly found as a hard mass in the stomach. Bezoars can be subcategorized into four distinct types based on the primary material composing the mass. The four subcategories are phytobezoars (plant material), trichobezoars (hair), pharmacobezoars (medications), or other ⁽¹⁾.

The epidemiology of bezoars depends on a number of factors including age, sex, and comorbid conditions. In adults, phytobezoars are most commonly found in middle-aged

men (40-50 years old). However, women in their 20's more commonly have trichobezoars, and have associated psychiatric disorders. These masses can commonly reoccur if the underlying cause is not properly addressed. Other risk factors include problems that affect gastric motility (medications, surgeries, and medical diseases), gastric emptying abnormalities, dehydration, and anatomic anomalies⁽¹⁾.

Once a patient is found to have a bezoar, appropriate management is dependent on the underlying cause and other contributing factors. There are three primary techniques for removing a bezoar. For small uncomplicated bezoars, prokinetic agents like metoclopramide, and chemical dissolution agents can be used. The second, the most commonly used technique is endoscopic removal. Lastly, when the mass is too large and/or the clinical situation is more complicated, abdominal laparotomy is used to surgically remove the mass^(1,2).

Removal of the bezoar is only one step in what is often a multifactorial program that requires an equally dynamic approach to management. This was the case for our patient. Our patient was young, had a very large mass, was experiencing severe anemia, and had some underlying psychiatric issues leading to trichotillomania/pica. To properly address this complicated situation a multi-specialty team was organized. This team was composed of general pediatrics, pediatric gastroenterology, pediatric surgery, and pediatric psychiatry. Together they effectively and appropriately managed this pediatric patient's anemia, bezoar removal, general medical health, and underlying psychological conditions to properly care for her acutely and prevent future occurrences.

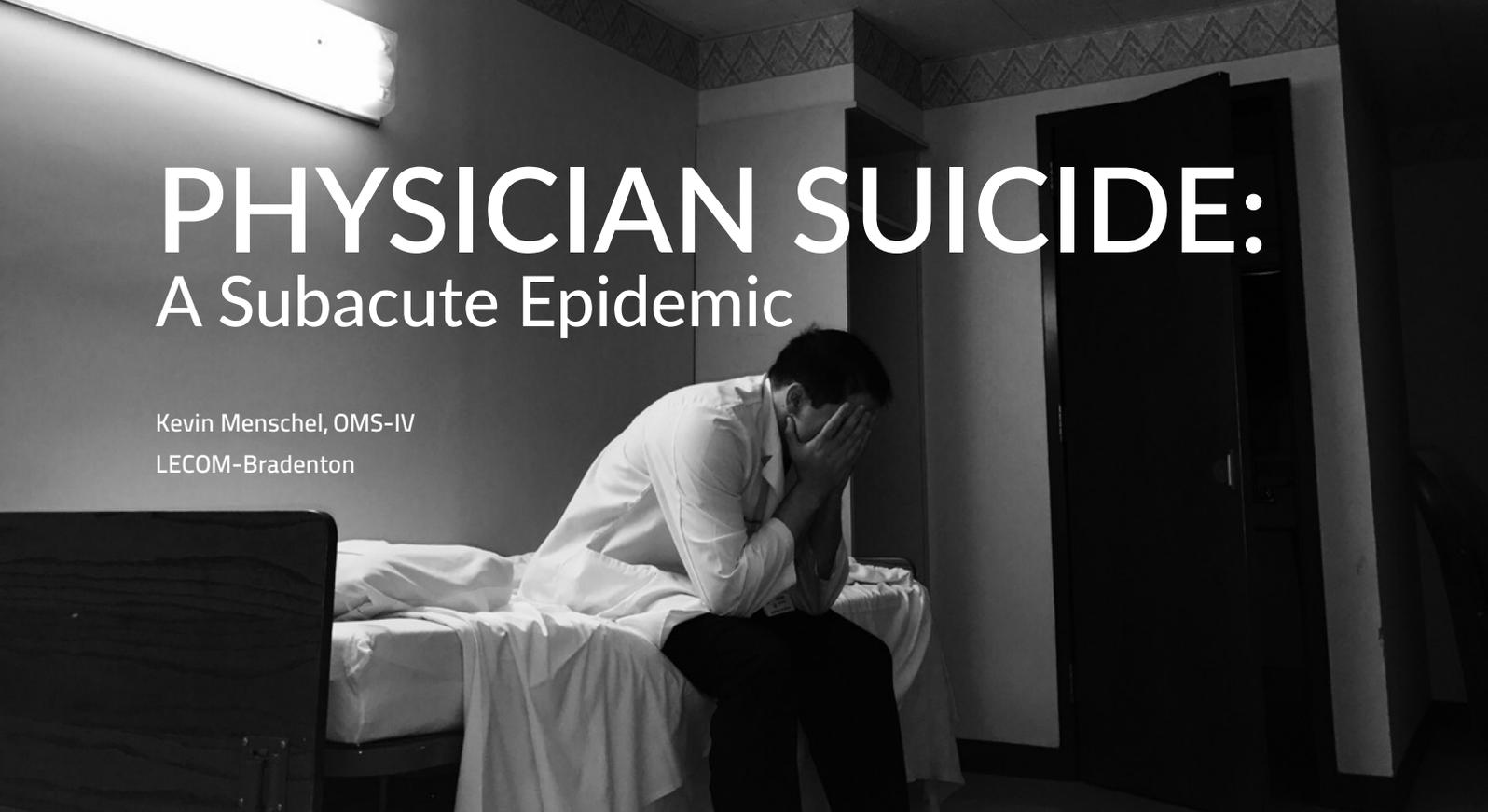


Images 2 & 3 are from the patient's CT Abdomen and Pelvis with oral and IV contrast revealing ingested material filling almost the entirety of the stomach most consistent with a large bezoar.

In emergency medicine, we are constantly presented with patients who present with what seems to be a very simple diagnosis and associated work-up, but on further investigation there is the possibility of a much more ominous pathological process present. We as emergency medicine professionals cannot afford to oversimplify any case. Our differentials must be broad, especially in regards to atypical presentations and potentially dangerous pathologic processes⁽³⁾. In the case of gastric bezoars, a missed diagnosis can lead to many serious complications such as bleeding, perforation, and small bowel obstruction. These complications can be found in the young and old alike. Gastric bezoars should be considered when patients of any age, present to the emergency department complaining of abdominal pain, weight loss, anemia, and/or unexplained abdominal mass⁽²⁾. A thorough ingestion history is warranted and will aid in making a diagnosis and appropriate management plan. Imaging may include plain films, ultrasound, or CT scans. A multi-specialty approach is often necessary to properly manage acute cases and prevent future recurrences.

PHYSICIAN SUICIDE: A Subacute Epidemic

Kevin Menschel, OMS-IV
LECOM-Bradenton



As physicians, we are trained to identify the signs and symptoms of depression. The diagnosis is made clinically based on a series of nine simple questions. Depressed mood? Daily insomnia or hypersomnia? Diminished interest or pleasure in activities? Fatigue or loss of energy? Difficulty concentrating? Significant weight loss/gain (>5% in one month) or change in appetite? Feelings of guilt? Psychomotor agitation/retardation? Recurrent thoughts of death or suicide? It sounds similar to every pharmaceutical advertisement ever produced, but display five of these nine symptoms in a two-week period, with one being depressed mood or loss of interest/pleasure, and you have a diagnosis of major depressive disorder.¹

If depression is so “simple” to diagnose, why is it so hard for the trained physician to seek help or even notice when they themselves meet the criteria? According to Medscape, a survey of American surgeons showed that ~6% had experienced suicidal ideations, but only 26% of those had tried to get help.² Though the actual number of physician suicides yearly cannot be estimated accurately, 400 is the number seen used most commonly. Unfortunately, physicians are twice as likely as non-physicians to complete a suicide attempt.³ According to Simon et al., between 1947-1967, suicide was the second leading cause of death amongst medical students.⁴ There have

been more recent studies as well, all finding variations on this theme, but none have given concrete numbers to corroborate the percentages of any of those that came prior. In any case, there must be a reason for these staggering numbers and something must be done about it.

There are many reasons for the high prevalence of physician suicide. Most students take on hundreds of thousands of dollars in loans over their careers. They are expected to spend countless hours memorizing facts for exams and compete amongst their peers for class rank—something that will help to “steer” their choice of specialty. Resident physicians are expected to be able to transition from 3-4 patients in medical school to upwards of 10 or more at the start of their intern year. Practicing physicians on the other hand, are said to be able to access or afford a chosen method of suicide more easily than non-physicians and have the knowledge to turn a suicide attempt more lethal, making it more likely to be successful. More recently though, evidence has emerged providing a different reason that expands across all levels of medical education and practice.

Burnout is a term defined by Merriam-Webster as “exhaustion of physical or emotional strength or motivation usually as a result of prolonged stress or frustration.”⁵ It can easily be measured by the Maslach Burnout Inventory, which addresses three specific domains: emotional exhaustion, depersonalization, and personal accomplishment.⁶⁻⁷ A 2006-2007 study by Dyrbye et al. discovered that burnout occurs at a rate of 49.6% amongst studied medical students with 11.2% reporting suicidal ideations. Recovery from burnout

was associated with a decreased risk of suicidal ideations and attempts.⁸ One can easily draw a link between burnout in students, who are yet to be completely responsible for any patient's care, and the practicing physician who cares for up to a few thousand patients each year.⁹ According to a 2015 Mayo Clinic study, the rate of burnout in physicians is dependent on which specialty they practice in, with ranges from ~38% in preventive medicine to ~72% in emergency medicine.¹⁰ In addition, burnout may not only harm the physician, but may impact patient care as well. A study by Shanafelt et al. indicated that 8.9% of participating surgeons reported making a major medical error in the past three months.¹¹ A one-point increase in the burnout domains of emotional exhaustion or depersonalization were associated with a 5-11% increase in the likelihood of the surgeon reporting an error.¹¹

It is well established that the rate of suicide is high in the profession, as pointed out above. The question remains though: what can be done about it? How can we protect those who protect others when they are at their most vulnerable? One place to start is breaking the stigma around depression in medicine. Medical students, residents, and physicians must be encouraged to seek help when they need it. Changes must be made in the way licensing boards ask about and document mental illness during licensure. Every single physician must be supportive of their colleagues when they are seeking help and offer to be a safe haven for discussion and assistance.

A recent suicide in August of 2016 by a fourth-year medical student named Kathryn Stascavage at Icahn School of Medicine refocused the spotlight on methods that medical schools can

"PHYSICIANS ARE HUMAN BEINGS AND PATIENTS AS WELL; THEY MUST BE TREATED AS SUCH IN ORDER TO BEST AVOID BURNOUT, DEPRESSION, AND SUBSEQUENT RELATED SUICIDE."

use to enhance mental health services for students.¹²⁻¹³ Mount Sinai and several other schools have begun programs to assist their students in dealing with the stresses of medical school. The Accreditation Council for Graduate Medical Education website states that "the ACGME is committed to addressing physician well-being for individuals and as it relates to the clinical learning environment." "We need to protect the workforce that protects our patients,"¹⁴ Senior Vice President, Tim Brigham stated. It begins early on in medical school. If we continue to allow medical students to suffer from unchecked burnout and depression, it will unavoidably continue on into

their residency and future career. Icahn School of Medicine has moved to a pass-fail grading system in the first two years and is trying to lessen the emphasis of MCAT and Step 1 exam scores to remove the competition amongst students. They are also requiring yearly mental health check-ups for students in an attempt to make it part of routine care.¹³

Practicing physicians might benefit from these efforts as well. A yearly psychological check-up without the negative connotations and disgrace that surround mental illness would be extremely valuable. As mentioned above, anecdotal accounts of licensing boards asking about mental illness worries physicians wishing to seek care. If they are required to reveal that they have been diagnosed with a mental illness, it could potentially affect their ability to obtain or even renew their license.¹⁵ While certain mental illnesses would preclude the physician from practicing and caring for patients safely, others such as depression due to burnout do not and should not be allowed to affect licensure in any way. Many physicians are understandably worried about seeking psychological help at the worry of being looked at negatively for doing so.

Physicians are human beings and patients as well; they must be treated as such in order to best avoid burnout, depression, and subsequent related suicide. As current and future physicians, we must support our colleagues who reach out to us for help. We must do everything in our power to assist them in obtaining the help they seek and continue to search for new methods to support and protect our brothers and sisters in this profession. It appears that there is a shift beginning to uncover itself, but it is not quite there yet. Many medical schools and

hospitals are progressing toward open mental health services for their students and physicians, but most schools have not taken those steps as of yet. Medical students, residents, and physicians must become advocates

for themselves and their peers. We must demand that mental health programs be established at every level offering care to those in need. Strict diligence is required on our part so as not to hear more stories of the physician suicide epidemic. We must not stop until every physician affected by burnout and depression receives the care that he/she desires and requires.

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WOMEN IN EM SPOTLIGHT: REGINA HAMMOCK, DO

Gabriela Crowley
ACOEP Staff

Although women make up over one-third of the physician workforce, it's all too common they've faced gender discrimination at some point in their career. Emergency Medicine Residency Program Director at NYC Health + Hospitals/Coney Island, Regina Hammock, DO, knows first-hand the challenges women in emergency medicine face every day.

"Preconceived notions and prejudices have been the cause of many obstacles. I've found that closed minds produce closed doors. In order to develop more possibilities in career and life, you have to find ways to open those minds first, then the doors can follow," she said.

Dr. Hammock suggests a strong network of support and mentors when it comes to climbing the ladder to success.

"Fortunately, there are many good, objective people out there willing to give a chance to people like me. Find them, develop them, and you can find your way through (or around, in some cases) those closed doors," she said.

The fight for gender equality in emergency medicine doesn't end at the caretaker level, and often presents greater issues with treatment and care of patients. A topic of which Dr. Hammock believes needs to be discussed more often.

"Heart attacks, along with many other ailments, present differently between the sexes, and symptoms are often either ignored in women, or are dismissed as being imaginary, hormonal, or mood swings," she said.

And with the future of women's healthcare resting heavily on our country's current political leaders, Dr. Hammock believes this topic needs to continue to be challenged for the sake of every woman's well-being.

"Women's healthcare and their rights in general are under siege by politicians who do not represent us, but are determining the quality of our lives. Why should this be, when we represent the majority of the population? Let's talk some more about that," she said.

Dr. Hammock's mother, who mastered multiple careers as a teacher, an attorney, and a bureau chief, on top of being a mom, serves as a source of guidance and inspiration.

"She is a truly fabulous woman who has accomplished three lifetimes in her one, with no sign of slowing down. She taught me that people do not aim at low targets, so keep on doing what you do, and expect backlash, especially if you do it extremely well," she said.

When it comes to maintaining a healthy work-life balance, Dr. Hammock is a big proponent of time management and developing an efficient and reasonable schedule for yourself and your work.

"Time is the one resource that you cannot make more of, so learn how to work with what you have," she said.

Admitting that she lives by the popular quote, "Do what you love, and you'll never work a day in your life," Dr. Hammock says it's still possible to burn out, especially in a career that is so time consuming. Traveling, practicing yoga, enjoying movies and music, and spending time with family and friends are just a few of the things that she surrounds herself with while taking a break from the ED.

"I do things that are not my job when I feel I've had enough of it. It can be difficult to disengage from work, but you have to do it, or you can be consumed. Too much of anything, even a good thing, is not good," she said.

At the end of the day, Dr. Hammock stresses the importance of being humble and kind, regardless of your position, and to simply enjoy the journey and path of your career.

"Take your work seriously, but don't take yourself that seriously. If you are doing this because you enjoy it, then enjoy the privilege of doing it."

To learn more about Dr. Hammock's career in emergency medicine, visit <http://acoep.org/main/uncategorized/regina-hammock-do>.

WHAT'S NEW IN EMERGENCY MEDICINE?

Aadil Vora, OMS-IV

ACOEP-SC Research Chair

NSU College of Osteopathic Medicine

Treatment Of Acute Diverticulitis Without Antibiotics (February 2017)

Daniels L, Ünlü Ç, de Korte N, et al. Randomized clinical trial of observational versus antibiotic treatment for a first episode of CT-proven uncomplicated acute diverticulitis. Br J Surg. 2017;104(1):52-61.

The efficacy of antibiotics in the treatment uncomplicated diverticulitis is unclear. The current standard of care, however, is bowel rest and broad spectrum antibiotics for at least 7-10 days. In The Netherlands, a large multicenter randomized trial assigned 623 low-risk patients, with first episode, uncomplicated diverticulitis to either a treatment group with antibiotics or an observation group with IV fluids. Uncomplicated diverticulitis in this trial was confirmed with CT imaging, showing colonic outpouching and inflammation, but without perforation, abscess or fistula formation. Patients in the treatment group received antibiotics to cover gram negative and anaerobic organisms, for at least 7 days. All patients had "colonic investigation" 6-8 weeks following discharge of either barium enema, colonoscopy, or CT colongraphy and a questionnaire on bowel habits 1 year after discharge. The results of this study showed no difference between patients treated with antibiotics and those treated without, in regard to frequency of surgery due to complications, length of hospital stay, recurrence of diverticulitis, abdominal pain, or changes in bowel habit after 12 months of follow-up. The authors furthermore suggest that antibiotic treatment does not prevent complications, accelerate recovery, or prevent recurrence in uncomplicated diverticulitis patients. However, an important limitation with this study was that all eligible patients were not registered due to too many clinicians being unaware of the trial. Additionally, the study was not blinded. Lastly, a much larger study will be needed to show no difference between the two groups. Until more evidence comes forth, the current recommendation is still to treat uncomplicated diverticulitis with antibiotics.

No Benefit Of Hypothermia In Convulsive Status Epilepticus (January 2017)

Legriel S, Lemiale V, Schenck M, et al. Hypothermia for Neuroprotection in Convulsive Status Epilepticus. N Engl J Med. 2016;375(25):2457-2467.

Convulsive status epilepticus is a neurologic emergency with a mortality near 40%, and is loosely defined as prolonged seizures, which can be refractory to first-line benzodiazepines and other non-benzodiazepine antiepileptics. Therapeutic hypothermia has been investigated as a neuroprotective intervention in brain injury, and is often used to treat refractory intracranial hypertension, hemorrhagic, and ischemic stroke. Additionally, hypothermia has been shown to have antiepileptic effects in small-animal models. Recently, a multicenter randomized controlled trial of 250 adults in France investigated whether therapeutic hypothermia (32 -34 degree Celsius) would yield a better neurologic outcome than the standard of care in convulsive status epilepticus patients. Patients eligible for the study were adults who had a seizure of more than 5 minutes, who were admitted to the ICU and mechanically ventilated. Hypothermia was achieved with ice-cold intravenous fluids at 4°C and was maintained with ice packs to the groin and neck as well as a cold-air tunnel around the patient's body. Sedation was implemented with propofol and neuromuscular blockade. EEG was used to monitor the progress of the treatment and the Glasgow Outcome Score (GOS) was assessed 90 days following the treatment. However, there was no difference between the hypothermia and normothermia groups. In fact, there were more adverse effects in the hypothermia group 117 of 138 patients (85%) versus the control group, 100 of 130 patients (77%). The study has several limitations, but the major one is selection bias as all the patients in the trial were mechanically ventilated and admitted to the ICU which could have skewed the results.

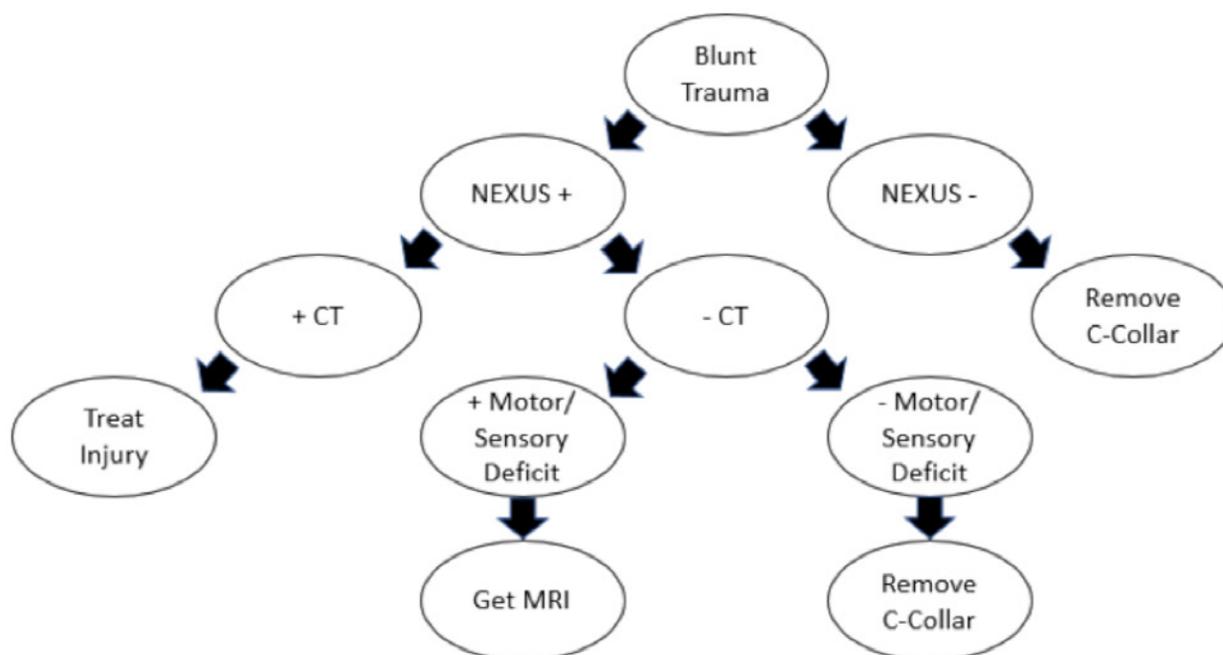


Figure 1 displays a diagnostic approach to screening for c-spine injuries in blunt trauma patients.

CT To Rule Out Cervical Spine Injury Following Blunt Trauma (February 2017)

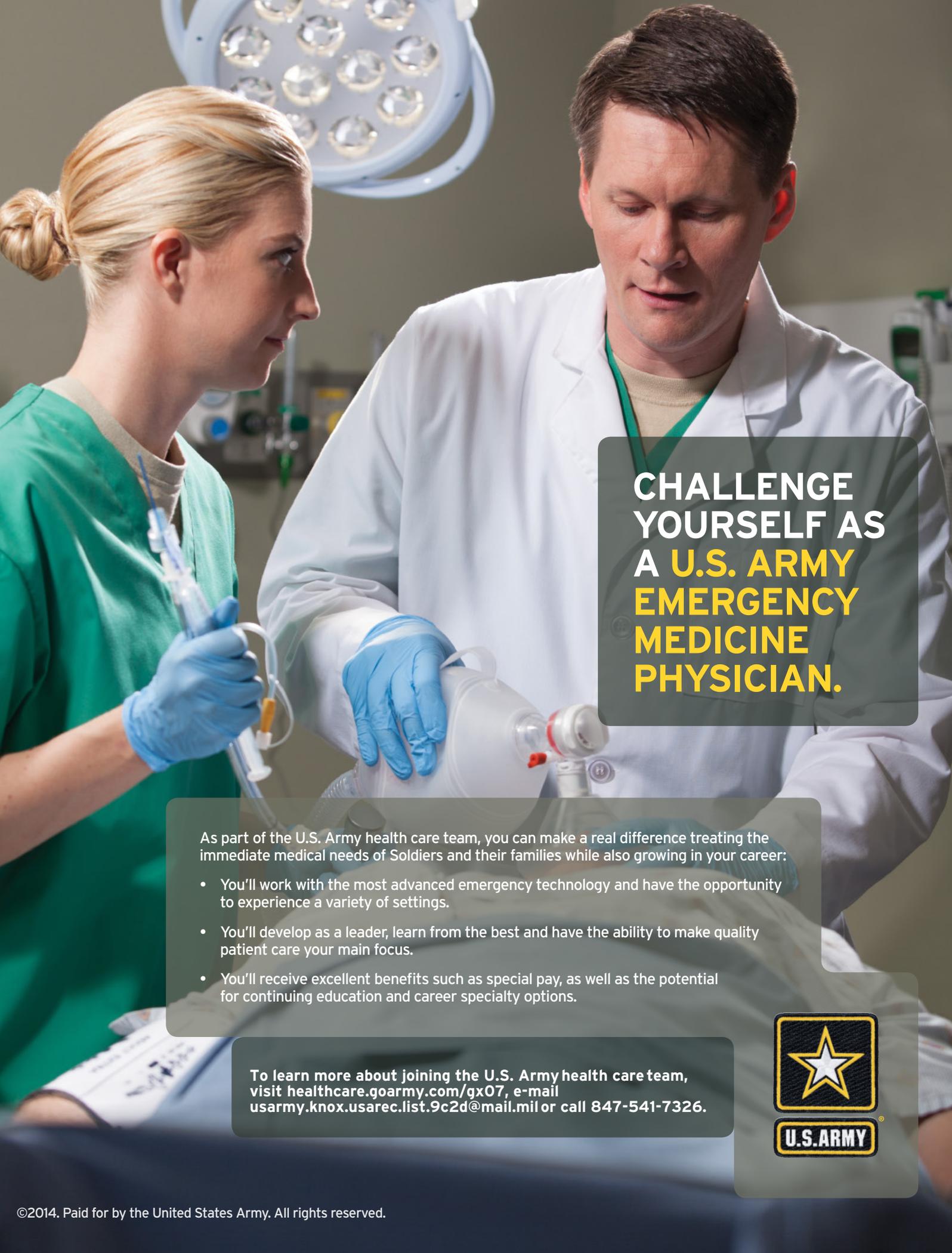
Inaba K, Byerly S, Bush LD, et al. Cervical spinal clearance: A prospective Western Trauma Association Multi-institutional Trial. *J Trauma Acute Care Surg.* 2016;81(6):1122-1130.

The NEXUS Low Risk criteria was developed to standardize the management of patients who had sustained neck trauma and guide clinicians in choosing whether or not to image the C-spine without jeopardizing patient care. The NEXUS rule states that radiography is unnecessary when patients satisfy all five criteria listed below:

- Absence of posterior midline cervical tenderness
- Normal level of alertness
- No evidence of intoxication
- No abnormal neurologic findings
- No painful distracting injuries

However, if patients fail to meet one of the NEXUS criteria, the next step is controversial: Which imaging modality should be chosen? The current standard is to use CT, and a large prospective multicenter study recently addressed the adequacy of using CT as a screening modality in trauma patients who

have failed the NEXUS criteria. 10,276 adult patients in various North American centers were screened for C-spine injury using CT in this study and only three patients did not achieve a diagnosis from CT, and were later diagnosed with MRI. The authors note that these three patients had a neurologic presentation consistent with central cord syndrome, and therefore were going to need an MRI regardless. If all patients with a negative CT who had a neurologic deficit underwent MRI, the sensitivity for detecting clinically significant injuries would be increased to 100%. This study adds to the body of evidence that CT has high sensitivity and specificity, and is an acceptable screening modality for C-spine injury. But patients with persistent motor or sensory deficits despite negative CT may benefit from an MRI (Figure 1).



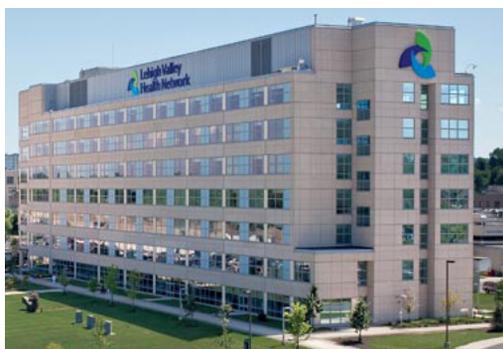
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RESIDENCY SPOTLIGHT:

Lehigh Valley Health Network Emergency Medicine Residency

NUMBER OF RESIDENTS:

52 Residents total (13 per year)

INSTITUTION BED SIZE:

950 beds across our two main campuses with 4 other sites in the network (not counted in this number)

ED VISITS PER YEAR:

The emergency medicine residents rotate through two of our hospitals – Cedar Crest and Muhlenberg

Cedar Crest annual ED visits: 90,000 with 4,500 trauma cases

Muhlenberg annual ED visits: 60,000

ACGME ACCREDITATION STATUS:

Accredited since 2007

TRAUMA CENTER:

Cedar Crest: Level 1 trauma center

Muhlenberg: Level 2 trauma center

HOSPITAL LOCATIONS:

Cedar Crest: Allentown, PA

Muhlenberg: Bethlehem, PA

Other sites (not used for residency clinical rotations, but part of the network) in Pocono, Hazelton, and Schuylkill County

AVAILABLE FELLOWSHIPS:

Sports Medicine

Administration

WHAT IS UNIQUE ABOUT YOUR PROGRAM?

As part of a wide hospital network, we have the ability to work at a large level 1 trauma center as well as smaller community hospitals. This gives us the training necessary to work in any setting after graduation. We are a progressive program that strives to be innovative with educational opportunities.

WHAT DO YOU DO OUTSIDE OF THE HOSPITAL?

From frequenting Philadelphia and New York, to spending time outdoors hunting, skiing, or hiking, the benefit of being involved in a large program is that there are varied interests throughout and a plethora of things to do outside of the hospital.

WHAT ARE THREE WORDS THAT DESCRIBE YOUR RESIDENCY?

Innovative

Supportive

Close-knit

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