EM Resident

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Words of Wisdom

Advice from EM pioneers

Under Pressure

Treating traumatic brain injury

World Premiere 24|7|365

EMRA

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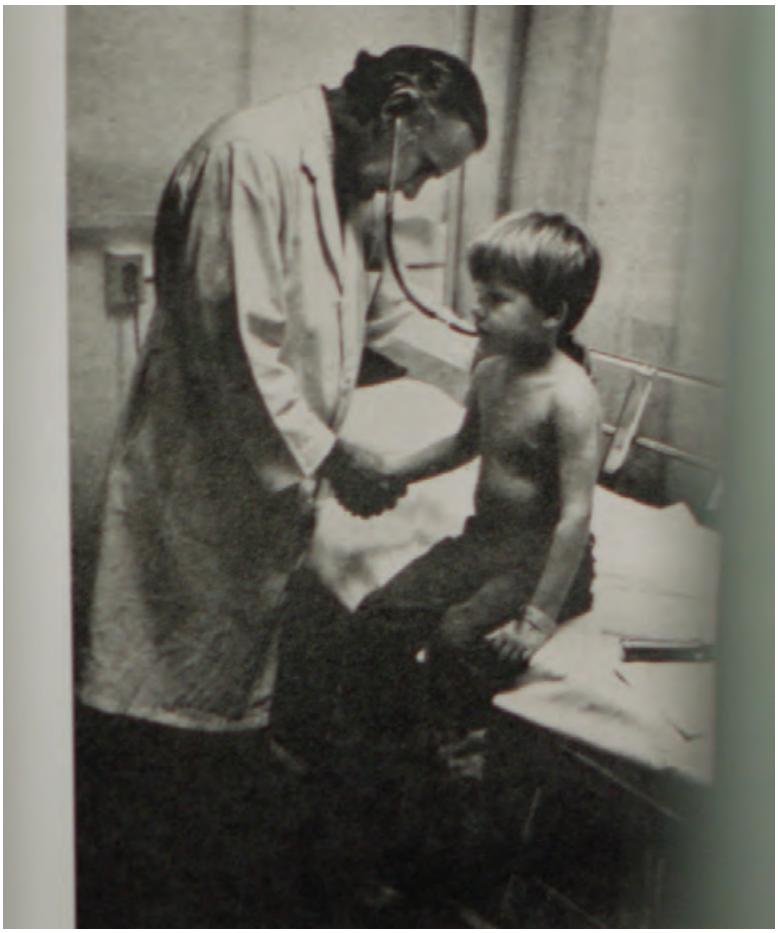
CONTENTS



20 The Legacy of EM

The making of 24|7|365

Our past is not behind us, it IS us – and every patient encounter is a manifestation of the original Hippocratic ideal and the advancements that have followed.

44 TRIAGE

Difficult decisions about life and death

Having to make these immediate judgments is counterintuitive to normal health care practices and the belief that every patient deserves full consideration and care prior to the determination of futility.

UNDER PRESSURE

ED Management of Traumatic Brain Injury

10 *The management of TBI is a very complex and dynamic process that requires a multifaceted approach to optimize and preserve the brain, while preventing further injury.*

3 PRESIDENT'S MESSAGE
4 PHOTO CONTEST
6 RRC-EM UPDATE
7 TREASURER'S REPORT
8 VICE SPEAKER REPORT
10 TRAUMA
13 MEDICAL STUDENT LIFE
16 ACADEMIC AFFAIRS
17 FIRST PERSON
19 MONEY MATTERS
20 COVER STORY

24 WORDS OF WISDOM
28 EMRA EVENTS AT ACEP13
35 LEGISLATIVE ADVISOR
37 CLINICAL CASE
39 EMERGENCY MEDICINE HISTORY
42 CRITICAL CARE
44 EMERGENCY MEDICAL SERVICES
47 INFECTIOUS DISEASE
49 EM REFLECTIONS
51 BOARD REVIEW QUESTIONS
52 PEARLS AND PITFALLS

BOARD OF DIRECTORS

EMRA STAFF

EDITORIAL STAFF

★ ★ ★ ★

MISSION STATEMENT

The Emergency Medicine Residents' Association is the voice of emergency medicine physicians-in-training and the future of our specialty.

★ ★ ★ ★

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Cameron Decker, MD
EMRA President
Baylor College of Medicine
Houston, TX

Flying is one of my most treasured hobbies, yet it has been over a year since I last sat behind the yoke of an airplane. The dust on my flight bag is a discouraging reminder that residency renders both time and money in short supply. Every summer my credit card is hit with a hefty fee for my flight association membership, but I've never before considered canceling. This time, I stared at the bank statement and asked, "Why am I still a member?" After some thought, I realized that my loyalty rested on **the organization's ability to deliver on three simple promises: *content, commitment*, and *community*.** Over the course of this year, EMRA has met and exceeded these same three expectations, reinforcing the unmatched value of membership.

During my term as president of your association, the board, **other committed volunteers, and staff have worked tirelessly to provide you with superior content.** Our incredible team has revamped *EM Resident* (also available via the new complimentary iPad app); provided free access to even more popular podcasts, including Critical Care Perspectives in Emergency Medicine; offered you ebook versions of four new publications; and freshly redesigned our new member kit.

While EMRA continues to offer top-notch programming at ACEP13 *Scientific Assembly*, the SAEM Annual Meeting, and the Leadership and Advocacy Conference, we have been working to deliver that "big conference" feel to *your* neighborhood. Through an ever-expanding list of regional meetings, EMRA continues to bring tremendous educational content right to your doorstep.

EMRA has been living up to the commitment it made to represent physicians-in-training. Most notably, we accomplish this through our multitude of grants and scholarships, including eight new awards and expanded research grant opportunities.

That commitment extends beyond financial backing, however; EMRA has represented the interests of residents on numerous boards and task forces in discussions of the emergency medicine model, *Milestones*, and graduate medical education. **Your elected leadership also has made numerous trips to congressional offices to support your ability to practice medicine.** These efforts have helped put our specialty at the forefront of discussions regarding access and improved patient care.

This year, EMRA also united its members to create three new divisions of individuals sharing a common passion: **the Ultrasound Division, the PEDS/EM Division, and the Simulation Division**. Our 13 committees and divisions not only produce incredible content, but also serve as a networking tool for some of the greatest minds in their respective fields.

Although EMRA is known for its internal community-building, this year has been one of phenomenal partnerships within organized medicine. Most prominent has been the outpouring of support for *24|7|365 – The Evolution of Emergency Medicine*, an EMRA-produced documentary film that chronicles the development of our specialty through compelling testimonials from our founders and leaders. At ACEP13 *Scientific Assembly* **the world will see the final product of extraordinary donations of time, treasure, and talent from countless benefactors** who have vowed to help preserve our history and inspire current and future generations of physicians.

Further, **EMRA has promoted collaborative efforts with other emergency medicine community organizations**, including the Emergency Medicine Foundation and the Emergency Medicine Action Fund. We also have developed new liaisons for improved resident opportunities with the Emergency Medicine Patient Safety Foundation, the American Association of Women Emergency Physicians, Urgent Matters, the Academy for Women in Academic Emergency Medicine, and the Academy for Diversity & Inclusion in Emergency Medicine, to name a few. These, among other initiatives, have helped to strengthen our relationship with ACEP, CORD, and SAEM.

As my term comes to a close, I am in awe of the many great milestones our colleagues have accomplished for this association. With our membership at a record high of nearly 13,000, it is clear that we are fulfilling the promises of content, commitment, and community. I want to thank the countless volunteers, our amazing Board of Directors, and our incomparable staff for making this possible.

I am pleased to yield the gavel to Dr. Jordan Celeste, our 41st EMRA President, who is an unparalleled leader in our specialty. For years, she has demonstrated an inimitable love of our organization, and I can think of no one better to speak for EMRA. ✶

PHOTO CONTEST WINNERS

EMRA is pleased to announce the results of the 5th Annual EMRA Photo Contest. Wonderful photographs streamed in from all over the world, once again reinforcing the broad talents of our members.

Please visit EMRA's Facebook page to view all contest entries.

GRAND PRIZE WINNER
Mining the Blue Flame
Steve Pham, MD
New York Presbyterian Hospital
New York, NY

The winning photo was taken in Kawah Ijen, a crater in Indonesia that once was a volcano. The blue flame is caused by gas jets that ignite sulfur, an event that only happens at night.

ART PHOTOGRAPHY WINNER
Church Organ
Vic Volle, MD
University of South Florida
Tampa, FL

PORTRAITS WINNER
At the Village Market
Steve Pham, MD
New York Presbyterian Hospital
New York, NY

ART PHOTOGRAPHY RUNNER-UP
Eye of the Aisle
Vic Volle, MD
University of South Florida
Tampa, FL

PORTRAITS RUNNER-UP
Unnamed picture of a Dog in a Barn
Nathan Holbrook, DO
Ohio University Heritage College of Osteopathic Medicine/Doctors Hospital
Columbus, Ohio

SPORTS WINNER
Swim
Myles Jen Kin, DO
Genesys Regional Medical Center
Grand Blanc Township, MI

NATURE & WILDLIFE WINNER
Through the Ice
Amos Shemesh, MD
University of Pennsylvania Health System
Philadelphia, PA

NATURE & WILDLIFE RUNNER-UP
Baldy
Vic Volle, MD
University of South Florida
Tampa, FL

TRAVEL AND LANDSCAPE WINNER
An Icy Coastline
Matthew Hodapp, MSIV
Albany Medical College
Albany, NY

MISCELLANEOUS WINNER
Ducking the Sail
Steve Pham, MD
New York Presbyterian Hospital
New York, NY

TRAVEL AND LANDSCAPE RUNNER-UP
Pass-a-Grille Beach
Vic Volle, MD
University of South Florida
Tampa, FL

MISCELLANEOUS RUNNER-UP
Elegant Nematocytes
Laura Hagopian, MD
Boston Medical Center
Boston, MA

THE MATCH MARKET

Increased competition poses new challenges for EM applicants

Brandon Allen, MD
RRC-EM Representative
University of Florida
Gainesville, FL

The new residents have arrived! Some of them are eager and confident, while others seem frustrated and overwhelmed. Regardless, we welcome and congratulate all of them on successfully completing the match. As a follow-up to my article "Careful What You Cut" in the last *EM Resident*, **I'd like to discuss the results of the most recent data from the National Resident Matching Program (NRMP) in emergency medicine.** Information from the *NRMP Results and Data* book underscores the fact that applicants are distancing themselves from eligible training positions throughout the house of medicine. This alarming trend is corroborated in *Figure 1*. Emergency medicine is no stranger to these problems. This year 2,430 students applied to emergency medicine programs; that's 538 more than last year.

In this same time frame, 12 new emergency medicine programs accepted applicants to fill 76 positions (*Table 1*). In fact, available residency positions in emergency medicine have been on a steady incline over the last five years (from 1,472 available positions in 2009 to 1,744 this year). This is a wonderful achievement for our relatively young specialty. I meet this success with tepid excitement, however, as **our specialty has moved into the upper echelon of popularity**. We've had fewer unmatched positions than radiology over the last three years, and are on par with plastics and neurosurgery! What will this mean for applicants in the years to come?

Dr. Louis Binder, the associate residency program director at Case Western Reserve University, concluded in the Society for Academic Emergency Medicine (SAEM) newsletter that "*the unmatched rate of 6.5% for U.S. seniors, and 43% for independent applicants (osteopathic, prior allopathic, and IMG) going into EM, continue to support the notion that most U.S. seniors and independent applicants who apply will match into an EM residency*." This may be the case, but by most indicators, matching into emergency medicine is becoming increasingly difficult, especially for independent applicants. This year 313 of the 1,741 matched positions in EM were filled by independent graduates. They represent about 18% of all matched applicants, a proportional 22% decrease, and an absolute decrease of 5% since 2010 (*Table 2*).

Dr. Binder also wrote, "*By historical trends and supply and demand considerations, 2013 was a 'seller' year. An increase in the supply of positions, paired with a larger increase in the applicant pool, led to a high fill rate for EM programs and a higher unmatched rate for applicants*." While emergency medicine programs have continued to fill, the demand (applicants) still outweighs the supply (available training positions). Twenty-eight percent of those who applied to emergency medicine did not match into our field this year. This reinforces the idea that ours is becoming a more selective and competitive specialty.

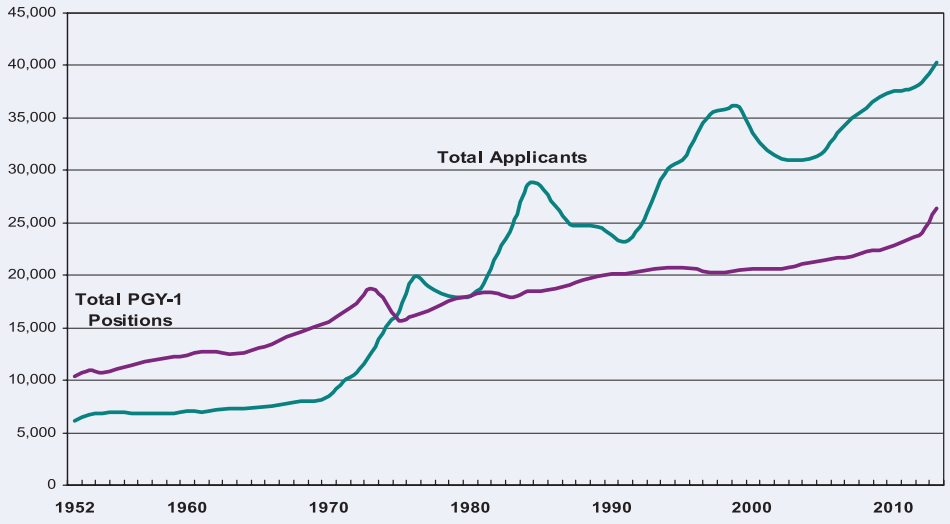
TABLE 1. Emergency Medicine NRMP Position Data

	2011	2012	2013
Total Residency Positions	26,158	26,722	26,392
EM Positions	1,626	1,668	1,744
Unmatched EM Positions	5 (0.5%)	0	3 (0.1%)

TABLE 2. Applicant Match Data

	2010	2011	2012	2013
Allopathic	1182 (77%)	1268 (79%)	1335 (80%)	1428 (82%)
Osteopathic, Prior Allopathic, and IMG	358 (23%)	334 (21%)	333 (20%)	313 (18%)

FIGURE 1. Applicants and First-Year Positions in The Match, 1952-2013



NATIONAL RESIDENCY MATCHING PROGRAM, RESULTS AND DATA: 2013 MAIN RESIDENCY MATCH

By now, all of your programs have received the ambitious and determined PGY1s who were once stellar *applicants*. I remember hearing my faculty members at the University of Florida say that they couldn't match in emergency medicine now; it has become too competitive. Today's first-year residents are further ahead of the curve than ever before.

I would like to commend our specialty for continuing to expand training positions, even when faced with dramatic GME funding cuts. That said, **we must be mindful of the popularity of our specialty** and the fact that medical school graduates are still being left out. Emergency medicine might be a bull market, but it can still be a bear to get in. ✶

EMRA's 2012–2013 Financial Report

EMRA has benefited from a recovering American economy, but the organization also continues to invest its money wisely and seek non-dues revenue to ensure financial health and keep membership fees low.

Donald Stader, MD
Immediate Past-President/Treasurer
Salem Health
Salem, OR

Making Dollars and Sense

Every October, ACEP's annual *Scientific Assembly* marks the end of another year in EMRA's history and becomes a key reflection point for our organization. At ACEP13, EMRA's Representative Council will gather to elect new members to the EMRA Board of Directors and bid farewell to those who have finished their terms of service to the organization.

The conference also will mark the end of my third year on the EMRA board and the completion of my term. **During my time with the organization I have seen amazing growth.** We have boldly expanded our member services; produced several pivotal new educational products, including *PressorDex* and *Basics of EM*; expanded our awards program to include more than $30,000 in annual grants; increased our staffing; launched novel projects, such as our landmark *Legacy Initiative*; and contributed to programs that benefit our residents and the house of emergency medicine, including $100,000 in donations to the Emergency Medicine Action Fund and the Emergency Medicine Foundation.

Against this background of innovation, EMRA has continued its record of sound financial stewardship. On behalf of the board and staff, I am proud to report another successful financial year. From **2012-13, EMRA's total assets grew to more than $3.8 million – up from $2.8 million the year before.**

When our organization's net liability ($1.4 million) is subtracted from its assets, we have a net equity of $2.4 million; this reflects an increase of nearly $400,000 over the previous year. Compared to 2010 (net equity of $1.2 million), our organization's net equity has *doubled*.

EMRA's operating budget has reached a new milestone of over $2 million, which is dedicated to programs that serve *you*, our members. Moreover, EMRA has continued to maintain more than one full year of equity in reserve – an excellent indicator of financial security.

EMRA has benefited from a recovering American economy, but the organization also continues to invest its money wisely and seek non-dues revenue to ensure financial health and keep membership fees low. For these reasons, we have been able to develop new products and services, while increasing membership dues only *once* in our nearly 40-year history! EMRA strives to provide greater value to its membership, and I believe it is the greatest deal in emergency medicine. As treasurer, I am pleased by our organization's fiscal health and proud of what our organization has accomplished.

As I transition off the board, I want to thank EMRA. It has been my distinct privilege to serve our great association during the past three years. I cannot adequately express my gratitude to the wonderful staff, board, committee and division chairs, and members. **Your efforts have and will continue to propel EMRA to greater and greater heights.** ✶

EMRA BY THE NUMBERS

EMRA Membership as of August 2013	Total: 12,854 – Alumni: 2,771 – Fellows: 433	– Residents: 7,496 – Medical Students: 1,943 – Other (Honorary, Life, etc): 211
Financial Snapshot as of June 2013	*June 2013* Total Assets: $3,829,579 Total Liabilities: $1,370,079 Net Equity: $2,459,500	*June 2012* Total Assets: $2,736,007 Total Liabilities: $ 817,011 Net Equity: $1,918,996
Year-to-Date Budget as of June 2013	Membership Dues: $ 509,637.54 Non-Membership Dues Revenue: $1,605,170.00 Total Revenue: $2,114,807.84 *Robust non-dues revenue and sound investments are why EMRA has raised membership dues only once in its almost 40-year history!	
EMRA Facts	Number of Full-Time EMRA Employees: 4.5 Founding of the Organization: 1974 Original Member Dues 1974: $15** Amount Donated to EMAF and EMF this Year: $100,000 **EMRA operated in debt until 1979, when it had its first positive budget.	

Dr. Raul Ruiz

At the intersection of politics and medicine

Dr. Raul Ruiz is a bit of a Renaissance man. A practicing emergency physician and U.S. Congressman, he has remained committed to volunteerism and our country's patients, even in the midst of a rising political career.

By sheer determination and through the support of his community, Dr. Ruiz became the first Latino to earn three graduate degrees from Harvard University – a master's in public health, a master's in public policy, and a medical doctorate. He was elected in 2012 to represent California's 36th District in the U.S. House of Representatives, where he has been a vocal advocate for veterans' affairs, Medicare and Social Security, and patient rights. He has received numerous awards for his community service and humanitarian efforts, including the Commander's Award for Public Service from the U.S. Army's 82nd Airborne Division for his work with the victims of the 2010 Haiti earthquake.

An exclusive *EM Resident* interview

I had the privilege of sitting down with this impressive public servant in Washington, D.C., during the ACEP Leadership and Advocacy Conference (LAC) to talk to him about his views on public policy, emergency medicine, and the future of our country's health care system.

Q You have been described as a physician-advocate. Kindly tell our readers about your decision to seek elected office.

As physicians, we need to get out of our comfort zones in the exam room, ER, and operating room, and into the community to address the social determinants of health that impact the wellness of the people we care for. I saw a lot of problems in my local community and the need for strong leadership, so I decided to run for Congress. Very few lawmakers have medical or public health backgrounds. It is critical for doctors and health care providers to be active within the political and policymaking system on the local, state, and federal levels to make their voices heard and be part of the *solution*.

Q As a practicing emergency medicine physician, you started the Coachella Valley Healthcare Initiative. How can initiatives such as the one you founded in Coachella be replicated nationally, and where do they fall into the matrix of the Affordable Care Act (ACA)?

The purpose of the Coachella Valley Healthcare Initiative is to improve health care access and wellness for all residents of the community. The CVHI is a collaborative effort that brings people together to identify and address the biggest barriers to health care access and come up with solutions. We identified a lack of health care access and insurance, a critical physician shortage, and a growing need for a better health care infrastructure in our local communities. The Affordable Care Act has provisions to begin addressing some of these problems, but it is an imperfect bill that does not fully address the scope of problems within the health care system. Much work remains to be done.

Q You have spoken passionately against cuts to Medicare and Social Security in the recent budget. You also serve on the House Committee on Veterans' Affairs. What more can the government do for our seniors and veterans, and what is your position on not reducing budgets?

This Congress has a responsibility and an opportunity to work together to grow our economy and set this nation on a fiscally responsible path. However, putting the burden of the national deficit on the backs of our seniors is wrong, and I will stand with our seniors to oppose any effort from either political party that would cut their hard-earned benefits and force them to pay even more out of pocket for health care. At a time when many seniors are barely making ends meet, we should be working in a bipartisan way to responsibly reduce the deficit and strengthen Medicare and Social Security, and I am committed to working with both political parties toward that end.

Q As an emergency medicine resident working in a county hospital with many undocumented patients, I find it quite perplexing that there is great silence about this subset of patients under the ACA. What are your thoughts on this, with immigration reform as the backdrop?

I believe that everyone should have access to high-quality, affordable health care. There is no doubt that current policy, even with the ACA, leaves a residual uninsured population that is costly for hospitals, providers, and other consumers in the system. To help address the skyrocketing cost of health care and overcrowding in emergency rooms, I believe that uninsured patients should have the opportunity to contribute to paying for their health care costs.

Q You recently co-sponsored the Health Care Safety Net Enhancement Act, providing protection for physicians and other providers practicing under the EMTALA tenets. Has EMTALA done enough for our patients? Do you think emergency medicine physicians are being appropriately compensated for the EMTALA mandate?

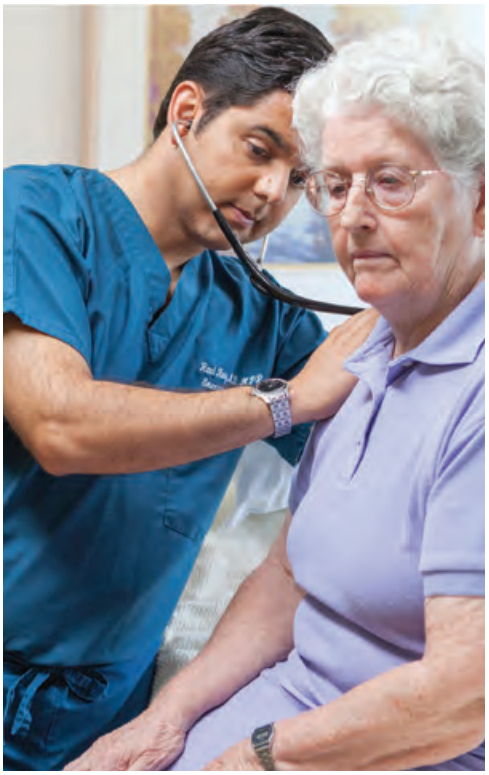
I support the Health Care Safety Net Enhancement Act of 2013 because it helps emergency health care providers to stabilize a patient at a hospital emergency department, regardless of his or her ability to pay. Hard economic times have made access to quality and affordable health care more difficult, causing families to forgo treatment until the condition requires emergency care. We must work to ensure that patients have access to life-saving treatment. The cost of providing unpaid health care is high, but the cost to society of failing to provide care to those in need is greater.

Q As senior associate dean at the University of California, Riverside, you were responsible for a high school pre-med mentorship program. How important has mentorship been in your own career, and do you view it as a means to reducing health care disparities?

The mission of the Future Physician Leadership program I started is to develop more "home-grown" high-quality physician leaders who serve the community with social responsibility in order to achieve optimal community health, wellness, and health care access for all residents in the Coachella Valley. I believe this mentorship program and others like it are critical for reducing health care disparities and addressing the physician shortage.

Q As a member of the House Committee on Veterans' Affairs, mental health is very important to the work you do. What kinds of tools do you think emergency physicians should be given to take care of mentally ill patients presenting to our EDs?

Mental health is a very important issue – both within our veterans' community and the larger general population. All emergency physicians have the responsibility to learn mental health emergency medicine, and it is also important that they know the appropriate local, state, and federal resources to help mental health patients get access to the resources and care they need once they leave the emergency department.



Dr. Ruiz continues to serve the community as a physician through his volunteer efforts.

Congressman Ruiz and Ije Akunyili met at ACEP's 2013 Leadership and Advocacy Conference in Washington D.C.

Ije Akunyili, MD, MPA
Vice Speaker of the Council
Medical Center Emergency Physicians
Baylor College of Medicine
Houston, TX

"The cost of providing unpaid health care is high, but the cost to society of failing to provide care to those in need is greater."

Q I recently wrote my final article as a resident for this publication. I wrote about three pivotal lessons I learned during residency. What three things do you know for sure as a politician, an advocate, a physician, and a steward of the public trust?

1. If you want to make a change and get something done, don't just complain; get engaged and active in the system and encourage your colleagues to do the same.
2. As doctors, we put patients first. Elected officials should do the same. I believe in putting people first and solutions above ideology.
3. Rather than focusing on partisan gamesmanship, Washington could learn a lot from physicians by implementing evidence-based policymaking. ✶

UNDER PRESSURE

ED Management of Traumatic Brain Injury

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Traumatic brain injury (TBI) is a common diagnosis in the emergency department and accounts for a large proportion of patients we see. TBI is a major cause of morbidity and mortality, and is the leading cause of death for patients ages 1 to 45. **The majority of cases are the result of assault, motor vehicle collisions, or falls**.[1] These injuries also carry a massive economic impact, with approximately $9.2 billion in medical costs and $51.2 billion in lost productivity every year.[1,2] The management of TBI is a very complex and dynamic topic that requires taking a multifaceted approach to optimize and preserve the brain, while preventing further injury.

Since the degree of injury in brain trauma can vary significantly, a means of delineating mild to severe cases is required. TBI cases can be broken down using the Glasgow Coma Scale (GCS). Patients with a GCS score of 14 to 15 are determined to have a minor brain injury; fewer than 1% will require neurosurgical intervention. Moderate traumatic brain injuries are defined as those with a GCS score of 9-13. **These patients have a 10-15% chance of requiring further neurosurgical intervention**. A GCS score of less than 8 defines a severe TBI, which carries a 60% mortality rate. About one in four of these patients will need neurosurgical intervention.

Part of the common vernacular when discussing TBI is the Monro-Kellie Doctrine. This is a postulation created by two 18th-century Scottish physicians who hypothesized a relationship between the fluid and solid intracranial components and pressure within a fixed space. The cranial vault is a rigid, non-expansible compartment with a set volume. The intracranial space includes brain tissue, cerebral spinal fluid, and blood, which exist in a state of equilibrium. A change in any one of these components necessitates a compensation by the other two. This concept is integral to understanding brain injury.

Primary injury of the brain occurs at the initial time of insult and may include diffuse axonal injury (DAI), contusions, or intracerebral hemorrhage. These are often irreversible.[2] Secondary injury occurs immediately after the initial insult and is the result of a cascade of cellular injury. Identifying findings that may exacerbate a secondary injury is critical, and prompt action to reduce further brain damage is warranted.[3]

Findings of concern include:[2,3]

- Hypo/Hypertension
- Hyperpyrexia
- Hypo/Hyperoxia
- Anemia
- Hypo/Hyperglycemia
- Vasospasm
- Hypo/Hypercarbia
- Seizures

Like with other critically ill patients, the initial assessment of an individual who has suffered a TBI should start with the ABCs. This can provide a logical and systematic approach that will facilitate identification of concerning signs, direct proper treatment, and decrease secondary injury. Each step in primary management of a TBI has pitfalls, but with preparation and proper knowledge, the practitioner can avoid drowning, and instead reap pearls.

The management of TBI is a very complex and dynamic process that requires a multifaceted approach to optimize and preserve the brain, while preventing further injury.

Airway and breathing

There are many nuances that can make airway management challenging in a patient with TBI. It is important to avoid hypoxia, but it is also equally important to avoid prolonged pre-oxygenation that might cause hypocarbia. When the patient's CO_2 drops, the cerebral vasculature can constrict, which then decreases cerebral perfusion pressure (CPP), resulting in cerebral hypoxia. Hypoxic events after a TBI have been correlated with increased mortality.[4] Definitive airway management should be performed in TBI patients with a GCS score of 8 or less. When approaching an airway in a patient who has suffered a severe TBI, three important concepts should be considered:

1. It should be assumed that all patients with a TBI have a concurrent cervical spine injury. Therefore, inline stabilization should be used, which has the potential to increase the difficulty of airway management.
2. Laryngoscopy and intubation are physiologically stimulating and have been demonstrated to raise intracerebral pressure (ICP). The use of what has been termed "neuroprotective" rapid-sequence intubation (RSI) has been debated. Both lidocaine and fentanyl have been studied as pre-induction agents that potentially blunt the elevation of ICP during intubation. Two studies performed using patients with brain tumors in the operating room demonstrate that **lidocaine reduces laryngoscopy-induced ICP elevation**.[5] Fentanyl has not been studied with ICP measurements, but other studies have shown that it blunts tachycardia and hypertension during laryngoscopy.[6] Use of one or both of these agents three to five minutes prior to RSI of patients with suspected TBI or known elevated ICP is recommended.[7] Dosing for fentanyl is typically 2-3 mcg/kg, and for lidocaine the dose is 1.5 mg/kg.
3. A premium should be placed on hemodynamic stability during intubation. It is critical to avoid hypotension, as well as hypoxia and hyper- or hypocarbia. Induction agents should be selected based on their hemodynamic profiles. Etomidate is the most common agent used for RSI, and should probably be the "go-to" in the absence of contraindications. Ketamine is another agent that can be used for induction in TBI. Ketamine has long carried the reputation of potentially raising intracranial pressures; however, recent data comparing benzodiazepines to ketamine showed no difference in ICP or CPP between the two agents.[8,9] **The belief that ketamine is contraindicated in TBI is based on older studies performed on patients in the operating room who did not have a TBI**. ACEP clinical policy has removed the contraindication to ketamine use in patients with suspected ICP elevation.[10]

Each step in primary management of a TBI has pitfalls, but with preparation and proper knowledge, the practitioner can avoid drowning, and instead reap pearls.

Circulation

In the exsanguinating trauma patient, it is easy to focus on perfusion and maintaining the mean arterial pressure (MAP). However, it can be more difficult to keep blood pressure in mind when faced with a traumatic brain injury, even though the results of hypotension can be equally as devastating in these patients. Cerebral perfusion pressure is dependent on MAP, as seen in the equation:

$$CPP = ICP - MAP$$

We are often rightfully concerned for hypertension in TBI leading to vasogenic edema, but it should be remembered that hypotension can be disastrous for cerebral perfusion. These patients need to be volume-resuscitated to ensure that the CPP is not compromised.

The optimal resuscitation fluid is an area of debate. It is vital to avoid hypo-osmolar solutions, as they may worsen cerebral edema. The SAFE trial, published in *JAMA* in 2010, compared crystalloid to albumin for resuscitation. Post-hoc analysis reviewing TBI patients in the study demonstrated that patients who received albumin had a two-year mortality of 41.8% vs. 22.2% in the crystalloid group.[11]

The goal for systolic blood pressure should be at least 90 mmHg. If there is an intracranial pressure monitor in place, it can be used to titrate resuscitation with a goal cerebral perfusion pressure of 60-75 mmHg. A study performed on 145 patients in 1995 demonstrated that a CCP greater than 70 mmHg portended improved outcomes.[12] If needed, vasoactive agents should be initiated to meet these goals. Norepinephrine is favored in these patients due to its predictable effect, as was reviewed in a paper published in *Critical Care Medicine* in 2004. They

compared norepinephrine to dopamine, and found that in patients with a TBI, norepinephrine was much more reliable in producing desired effects.[13]

Intracranial pressure

Elevated intracranial pressure can have disastrous consequences. Recalling the Monro-Kellie Doctrine, the skull is a fixed space. When pressure is elevated due to hypertension, edema, or fluid collections within the cranial vault, oftentimes it is the brain tissue that suffers. **This rise in pressure can lead to fatal brain herniation**. Some simple management points can aid prevention of the catastrophic effects of ICP elevation.

It is important to elevate the head of the bed to 30 degrees for patients with high ICPs. Neck hyperextension, noxious stimuli (e.g., suctioning), and ventilator asynchrony should be avoided when possible. Optimal sedation should be a goal, and multiple sedating agents should be used if there are ongoing issues with elevated ICPs. Select patients with TBI will have an ICP monitor placed, which will allow for optimal CPP management; however, such monitors have not been shown to improve outcomes.

Patients with an acute rise in ICP can be temporally hyperventilated to a goal $PaCO_2$ of 30-35 mmHg.[4,14-18] A reduction in $PaCO_2$ below this level will likely cause cerebral vasoconstriction and further compromise cerebral perfusion. Hyperventilation should be a temporary measure and should not be used for a prolonged period of time.

Mannitol is an osmotically active agent that helps draw fluid out of brain tissue into the intravascular space. It then induces overall volume loss through diuresis. Mannitol is dosed between 1-2 g/kg, with repeat dosing at 0.25-0.5 g/kg IV every six to eight hours. There are down sides to its use, however, as side effects can include hypotension, hyperkalemia, and rebound ICP elevation.

Hypertonic saline also can be used for ICP reduction. There is no clearly defined optimum dosing regimen, so administration will vary by provider and institution. Studies comparing mannitol to hypertonic saline have shown hypertonic saline to be more effective in lowering ICP; however, no mortality benefit was seen.[15-18] These studies are all limited somewhat by size and methodology, but their results are compelling enough to suggest that hypertonic saline is at least as good as mannitol in the right circumstances. It should be remembered that a serum sodium level greater than 150 mEq/L could be detrimental, so saline should be used judiciously. Goal serum osmolality should be between 295 and 320 mOsm/L.

GLASGOW COMA SCALE

ADULT		PEDIATRIC
EYE OPENING (E)		
Spontaneous	4	Spontaneous
To speech	3	To speech
To pain	2	To pain
No response	1	No response
VERBAL (V)		
Oriented	5	Coos, babbles
Confused	4	Irritable cry
Inappropriate words	3	Cries to pain
Incomprehensible speech	2	Moans to pain
No response	1	No response
MOTOR (M)		
Obeys commands	6	Normal spontaneous
Localizes pain	5	Withdraws from touch
Withdraws from pain	4	Withdraws from pain
Decorticate posturing	3	Decorticate posturing
Decerebrate posturing	2	Decerebrate posturing
No response	1	No response

Other points

Seizures can be disastrous for the TBI patient. They can increase metabolic demands by 300-400%, raise ICP, and worsen secondary insult. It is estimated that 4-25% of patients with TBI will seize within seven days of a blunt injury, and about half of patients will seize after a penetrating cranial injury. The TBI Society recommends phenytoin administration if there is a depressed skull fracture or penetrating injury, a seizure in the emergency department or at the time of injury, severe head injury (GCS <8), intracranial hemorrhage, history of seizures, or if the patient is intubated and paralyzed.[4] While these patients will benefit from phenytoin early on, post-traumatic seizures, unfortunately, often are unavoidable. **We should do our best to quickly and aggressively treat any seizure activity associated with a TBI**.

Since glucose is the primary energy source for cerebral tissue, control of a euglycemic state is required. There is not good evidence for an ideal target range, but both hyperglycemia and hypoglycemia have been associated with poorer outcomes.[19]

Steroids should probably be avoided in the TBI patient. The CRASH study, published in *Lancet* in 2005, found that patients who received corticosteroid infusions after TBI had no overall benefit at two weeks or at six months. In fact, these patients were slightly more prone to death and severe disability.[20]

Therapeutic hypothermia for the TBI patient also has been studied. Six meta-analyses published between 1993 and 2001 demonstrated no improvement in mortality with hypothermia. The traumatic brain injury **guidelines do not recommend routine cooling of the TBI patient**.[4,19]

Conclusion

Traumatic brain injury of all severities is a common presentation to emergency departments worldwide. The management of TBI is a dynamic and sometimes complicated process; it is important to ensure that the ABCs are managed early. It is our primary job as emergency physicians to provide adequate hemodynamic support to these patients, optimize their cerebral perfusion, and avoid potential insults that may worsen the TBI or lead to secondary injury. ✶

A Seat at the Table

Physicians as policymakers

Zach Jarou, MSIV
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Imagine a world where patients in need of emergent treatment were turned away because of their race, religious beliefs, or ability to pay. **Believe it or not, "patient dumping" used to be a common practice, whereby poor, often critically ill patients were shifted from private to public hospitals, many times to the patient's detriment.** Thanks to the Emergency Medical Treatment and Active Labor Act (EMTALA), this is no longer a widespread reality. EMTALA requires *all* hospitals that accept Medicare to provide screening and treatment for emergency medical conditions, regardless of insurance status. And emergency medicine physicians are happy to do this. As the safety net of our health care system, we provide more uncompensated care than any other medical specialty.

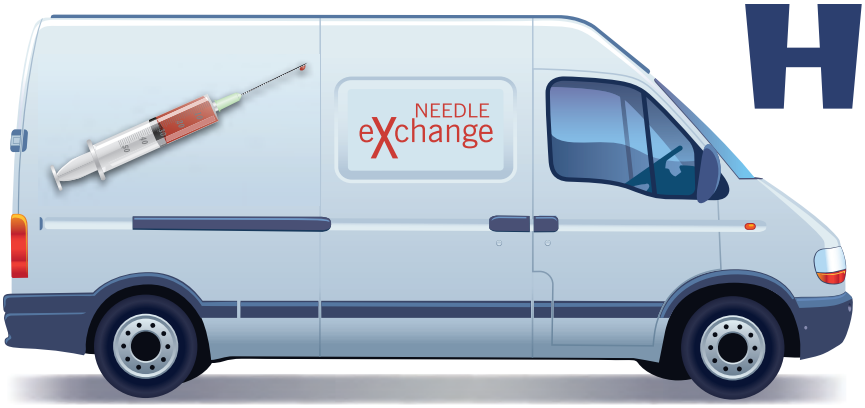
EMTALA does not apply only to emergency physicians, however; it pertains to on-call physicians of every specialty. If a hospital provides a service to the public, that service is also expected to be provided through on-call coverage of the emergency department. Unfortunately, in many communities there are some specialists unwilling to take call, which necessitates patients being transferred to distant hospitals. This practice not only delays the onset of treatment, it can create a distressing inconvenience for families unable to travel with their loved ones.

It is not that specialists in these communities lack the compassion or competency to treat these patients; it is that often they fear being liable for the outcomes of this already high-risk patient population. This self-protectiveness may make them hesitant to provide care. **Even when standards of care are followed, these patients are prone to bad outcomes completely unrelated to the skillfulness of the physician.** It's also important to keep in mind that, unlike patients seen in the clinic, many patients referred from the emergency department come with no past medical history, further complicating informed medical decision-making.

Nearly 100 student, resident, and attending-physician members of the Michigan College of Emergency Physicians convened at the Michigan State Capitol in September to advocate for the adoption of a gross-negligence standard for all EMTALA-related care.

I've always believed that physicians have a duty to be involved in the policymaking process. If we don't have a seat at the table, others will make decisions for us – and not always for the betterment of our patients. I am proud to have stood shoulder-to-shoulder with nearly 100 student, resident, and attending-physician members of the Michigan College of Emergency Physicians at the Michigan State Capitol in September to advocate for the adoption of a gross-negligence standard for all EMTALA-related care.

Reducing the disincentive for specialists to take call will increase patient access to quality emergency care. Additionally, by creating a more favorable practice environment, specialists will have more motivation to provide local services where they are needed most. ✶



Hope on Wheels

Lessons learned aboard a needle exchange van

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I recently had the privilege of spending an evening on a needle exchange van in Chicago, which proved to be a fascinating, eye-opening experience. **My time on the van brought me face to face with men and women who had been disenfranchised and forgotten, and those who were just plain down on their luck.** The experience crystallized the importance of providing services to the most vulnerable among us, and reminded me why I chose to pursue a career in emergency medicine.

The mobile unit, operated by the Chicago Recovery Alliance, provides basic medical care to those seeking to exchange needles and others who simply require no-strings-attached access to the health system. Once a week, first- and second-year medical students volunteer for two-hour shifts in a makeshift exam room in the back of the van, which is stocked with a medical bag of drugs and a cooler of vaccines. **The van is always parked at a predetermined location on a run-down street corner in the west side of Chicago – an infamous area of town known for its high crime rate.** Drug addicts stream in with boxes and bags full of dirty needles. In exchange, they are given sterile syringes – no questions asked.

In one two-hour shift, I witnessed two patients receive syphilis and rapid HIV testing, administered two hepatitis A/B vaccines, and referred a woman who accidentally broke a needle off into her arm to a free clinic capable of handling such an emergency. The experience not only provided hands-on clinical exposure to a couple of inexperienced medical students, it also showcased the fragility of life and vitality of caring for those who view the mobile van as their primary means of health care access. **These lessons just cannot be learned in an anonymous lecture hall.** In the academic setting, we contemplate patients who require the most health care assistance and we discuss what can be done to help them, but it wasn't until that evening on the van that those theoretical discussions became tangible to me.

Many patients we saw were unwilling or unable to seek care in an emergency department, traditionally thought to be society's safety net. These patients waited until Wednesday night to be seen, when the van was parked at its usual curbside location.

The woman with the broken needle in her arm had waited two days – *two days* – with a needle in her body to visit the mobile clinic, where the provision of absolutely free care would be ensured. She seemed calm at first, as we told her we lacked the appropriate resources on the van, and that the best we could do was a referral to a free clinic with the proper equipment for needle removal.

That night, there also were young men – all about my age – who sought testing for sexually transmitted infections (STI). They said they had been anxiously waiting an hour for the van to arrive, despite knowing its hours of operation; they were determined not to lose the opportunity to be seen. Their quick laughs and propensity for jokes gave away their nervousness. They had made poor decisions and were attempting to redeem their actions by facing their STI statuses head on. By taking responsibility, they hoped to prevent the further spread of disease, which impressed me.

Many of the patients who enter the van each night have made some poor decisions – something of which we all are guilty. Witnessing the vulnerability of these patients also made me aware that mobile care not only assists those who come for treatment, it also benefits the community at large by providing public health services through STI testing.

Working aboard the van necessitates leaving your expectations at the door. We never know who will visit us. Some will come simply to exchange needles, and others will present with serious medical conditions that need to be addressed immediately.

We must go in with an open mind, withhold judgments, and aid those who visit to the best of our abilities. Sometimes our "best" involves providing directions to a more appropriate clinic, offering basic medical exams, or just listening to nervous jokes. Whatever the case may be, we will be out in the van every Wednesday night to support those who seek the special kind of services only offered on four wheels. ✶

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THIRD-YEAR SURVIVAL GUIDE
Self-preservation tips from a recovering MSIII

As fall approaches, we are beginning to settle into our respective academic years. For many third-year medical students, the season will usher in the stark realization that this first clinical year may not be as sunny as they'd hoped it would be.

I recently had lunch with a resident who shared that his third year of medical school was the most trying and exhausting period of his life. **The stress, anxiety, and episodes of depression that he experienced caused him to question whether he could even finish medical school.** I was glad to hear that I was not the only one who had been exhausted by the turbulent year.

The third year of medical school comes with a unique set of challenges. **It is a year full of long days, difficult teams, humiliating "pimp" questions, and tons of hard work that goes completely unnoticed.** Opportunities to succeed are rare, while opportunities to fail seem to be around every corner. You are permanently a guest on someone else's service.

As the rigors of third year take their toll, physical and emotional health can suffer. I can't say I ended the year in stellar health, but I did survive. Through highs and lows, I learned some important lessons about staying healthy.

Don't overanalyze

Residency programs look at clerkship grades. Clerkship grades come from evaluations. Evaluations are based on every heart sound interpretation, every progress note, and the length of every suture you cut – or so it seems. **In reality, work ethic and attitude are far more important than individual "tests."** If you show up on time with a good attitude, you will receive a good evaluation. Do not agonize over small failures. If you do, you'll spend a lot of time needlessly worrying and will miss out on opportunities to learn.

Remain active

The shifts of third year are long and irregular, making workouts difficult. If you are used to working out or playing sports on a routine schedule, you will need to make adjustments. **This may mean shorter workouts, choosing a more convenient location, or finding different workout partners.** Do not give up. It's difficult to recover from deconditioning, which comes quickly. I certainly felt a lack of energy when I was not regularly exercising. My resident friend says that weekly rock climbing was the one thing that preserved his sanity during his third year.

Get sleep

This is obvious, but not easy. When you are required to pre-round at 4:45 a.m. and you have a 20-minute commute, nights get very short. Tell yourself (and your spouse or roommate) that going to bed at 8 p.m. is perfectly acceptable. When you are on call at the hospital and nothing is going on, *go to bed*. I found out early that there are no hero points for sitting around the workroom or nurses' station all night long.

Remember your priorities

Neglecting the things that are most important to you will bring you down fast. If you have family, friends, traditions, or religious events that are an integral part of your life, keep them at the top of your priority list. Remember that no one *needs* you at the hospital. The surgeries and deliveries will go on in your absence. **Go home when you are able to and don't be afraid to ask for time off if there are important events.** On the other hand, understand that you will be working 40-80 hours per week for 50 weeks. Prepare your friends and family for your lack of flexibility and make sure plans are made well in advance.

Don't compromise your principles

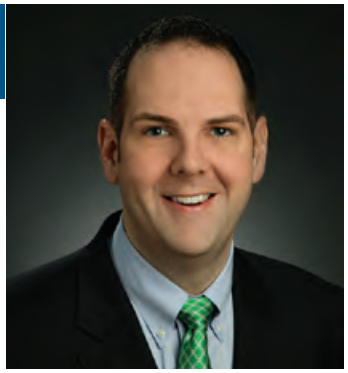
On the wards and in the operating room you will encounter many different personalities and many different ways of handling stress. Unfortunately, this may include less than positive words and actions. You may experience corners being cut, immature attitudes, personality clashes, behind-the-back insults, or a lack of respect for patients or staff. Try not to let this bring you down, and avoid joining in. Bad attitudes can be contagious, especially when they belong to your superiors. **Your day will be more pleasant and you will avoid personal regrets if you rise above the fray.**

Third year is quite a ride. There are unavoidable challenges, but along with those trials come major growth and wonderful first-hand experiences. With adequate preparation, you will survive the year with your health, fitness, and sanity intact. ✶

EXCELLENCE DEFINED

A tribute to Ron Krome, MD

Dr. Krome trained and mentored hundreds of young faculty and residents – an indelible gift to the future of the specialty.



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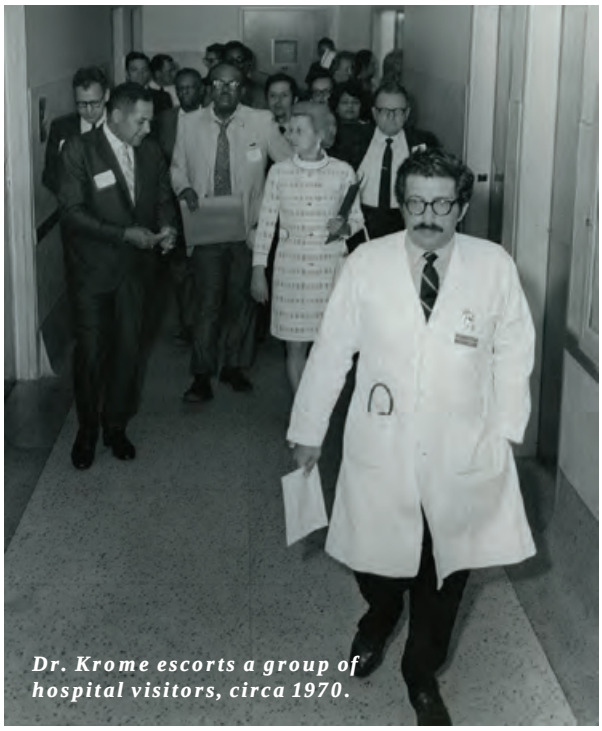
In May, emergency medicine lost a luminary. Dr. Ron Krome, prominently featured in EMRA's documentary, *24|7|365: The Evolution of Emergency Medicine*, played a central role in the development of our specialty. Like many heroes of emergency medicine, his life and career defined excellence.

Trained as a surgeon, Dr. Krome cared for countless casualties of the violence that gripped urban Detroit in the late 1960s. In those days, emergency medicine was the missing piece in the house of medicine. **Thanks to the vision and leadership of Dr. Krome and other early pioneers of the specialty, emergency medicine now holds a prominent place.** The "missing square" on the ACEP logo serves only to remind us of our heritage.

Dr. Krome, along with other founders of emergency medicine, including Drs. Judith Tintinalli, David Wagner, John Wiegenstein, Peter Rosen, and George Podgorny, fought for recognition of emergency medicine by the American Board of Medical Specialties (ABMS); and what a fight it was. In those formative years, many leaders were not keen about the idea of emergency medicine as a unique specialty.

The EMRA documentary captures one of those heated exchanges between Dr. Krome and renowned trauma surgeon, Dr. Kenneth Mattox. As Dr. Mattox recalls in the film, early emergency physicians had displayed a relative lack of academic productivity, as defined by peer-reviewed publications. Dr. Krome accepted his colleague's challenge and set out to prove that emergency physicians possessed a unique fund of knowledge worthy of great consideration.

Dr. Krome helped to establish the peer-reviewed scientific journal that would provide academic legitimacy to our fledgling specialty, the *Journal of the American College of Emergency Physicians* (JACEP). His editorial legacy lives on today in the *Annals of Emergency Medicine*, the specialty's foremost peer-reviewed journal.



Dr. Krome escorts a group of hospital visitors, circa 1970.

Dr. Krome and his colleagues were rewarded for their efforts when, on September 19, 1979, the American Board of Emergency Medicine (ABEM) officially became recognized as the 23rd specialty board of the ABMS. He helped to write ABEM's first board certification exam and served as president of the organization. He also served as an early president of the University Association of Emergency Medicine, the organization that evolved into the Society for Academic Emergency Medicine.

Perhaps most importantly, Dr. Krome trained and mentored hundreds of young faculty and residents – an indelible gift to the future of the specialty.

Dr. Krome captured many of his professional experiences in his memoir, *The Floater's Log*. This entertaining book can only begin to capture the unparalleled contributions he made to our specialty, to the evolution of medicine beyond the emergency department, and to the care of the patients we serve every day. From those of us who follow in your footsteps and benefit from your accomplishments – *Thank you, Dr. Krome.* ✶

SEARCHING FOR SUPER WOMAN

Reflections on Motherhood and Residency

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There is a parable about a professor who presented his class with a jar full of large rocks. When asked if the jar was full, the students replied, "Yes." The professor then added small pebbles, which slipped around the edges of the larger rocks, until he could fit no more. Again, he asked the class if the jar was full. "Yes, *now* the jar is full," they replied. With this response, the professor produced a bag of sand and proceeded to fill in the minute gaps that were left within the jar, noticing that the class was catching on to the concept. When he asked for the third time if the jar was full, the students replied in unison, "No!" To complete the exercise, the professor then poured water into the jar until its contents overflowed.

Three months into my intern year and pregnant with my second child, I felt a lot like that jar of rocks and sand – full. But it was more than just the internal pressure from my baby-burdened belly that made me feel full; it was my entire life overflowing with the responsibilities of residency, raising a child at home, staying healthy through pregnancy, and trying to keep my career on track.

There is little discussion in emergency medicine journals or forums about pregnancy during residency, despite the fact that 50% of women in medicine who have children will have their first child during training.[1] Like many of my colleagues, **I was taught throughout college that, as a woman, I could do it all – career, family, hobbies.** I could *do* anything and *be* anything I wanted. At the time, this message seemed empowering and enlightened. In retrospect, however, I realize that it may also have been a little bit misleading. As a human being, finding time to do everything is simply impossible.

Medical school has become increasingly competitive. It's not enough to be academically successful in college; you also have to be involved in sports, theater or music, have multiple volunteer experiences, and a cabinet full of awards. Once in medical school we are encouraged to pursue our broad interests, including research, teaching, service, interest groups, and travel, to name just a few. That was my medical school experience, and I assumed residency would be similar. But then came kids.

My first child was born during medical school, and I was fortunate to be able to have two more during residency. In preparation, I attended talks on family life and work balance and spoke with many residents who were parents to find out how they managed. A large portion of them had a spouse, family member, nanny, or someone else at home with

the children. An undercurrent running through all of their advice was the need to relinquish the idea that we can do it all.

In today's society, we are a far cry from the Victorian Era, in which pregnant women were expected to withdraw from all work and society. **Modern pregnant women often feel that they are expected to continue as if nothing were different.** I felt pressured to be a pregnant superhero who forges ahead and works long, stressful hours – all without abandoning her station for *anything*. When I was eight months pregnant and early into my trauma surgery rotation, a surgeon watched me struggling to tie a blue gown over my protuberant abdomen. Raising one eyebrow, he said, "You'll never make it."

I was fully intent on proving him wrong. I wanted to prove that I not only could tie my own gown, but that I also could work just as hard as anyone else, right up to the day I delivered. Dutifully, I waddled through the hospital hallways, ignoring the contractions and the pressure of the baby's head in my pelvis, resisting the overwhelming fatigue 24 hours into a 30-hour call day. Using up all of my vacation at once, I took three weeks off for maternity leave during intern year. While family leave was available, I did not want to postpone my graduation or inconvenience my peers' schedules. I was determined not to let gestation or childbearing affect my work.

Even now, I sometimes think about filling up my time in terms of the parable; you have to put the big rocks in first, or you won't be able to fit them in at all. In my life, my kids are the big rocks. With each new child I had to dump everything out of the jar in order to fit in a new rock.In my jar, there is now less sand and water. Like many other resident mothers, there is only a sliver of time left for hobbies, health, chores, bills, reading, and all of the optional activities.

Sometimes I look around at other residents who are publishing research, volunteering in free clinics, serving on committees, and traveling abroad, and I feel like I'm being left behind. I feel like less of an academician, watching opportunities pass me by, stagnant in my career, and always stuck at home. Despite working longer, harder hours to complete my work and care for my children, sometimes I feel like a failure.

But why? Because **I've fallen into the trap of thinking that I can – and should – do it all**. It's easy to feel that you have to go from being the pregnant superhero to the academic supermom.

Having kids involves sacrifice. There is no way to stuff everything into the jar without breaking it. Unless you possess superpowers, as a resident you have to make conscious decisions about which things in your life are expendable. As many before me have discovered, a career pales in comparison to the importance of your children. The enjoyment of a good day at work, a high-profile publication, or a promotion can never rival the joy of seeing your baby smile when you walk through the front door. **For other moms and residents, we need to give ourselves a break. We were told that we could do it all, but the fine print always reads "some restrictions apply."** I'm not a failure, but I'm also not a superhero.

I can't do it all – and that's okay. ✶

Building a Finanical Roadmap

Making post-graduation plans

This article is intended to provide a framework for making informed, effective, confident decisions about your financial future.

It happens every late fall and accelerates toward spring – graduating residents start to stress about the transition into practice. The medical transition is relatively easy. The *real* stress comes in to play when financial decisions must be made – beginning at salary negotiation and continuing on through benefits enrollment. This is a crossroads at which pivotal questions must be answered. How much of a house can we afford? How much should we contribute to retirement? Do we need this supplemental insurance? What do all of these retirement booklets mean?

M. Shayne Ruffing
CLU, ChFC, AEP
Managing Director
Integrated WealthCare

Preface

There is a logical progression of choices that need to be made; the first involves confirming your new practice. Until you know what that looks like in terms of location, type of practice, compensation, and benefits, it is difficult to plan the transition. Here are some guidelines for mapping this out:

Practice type

Independent Contractor – As an IC, you will have both the flexibility and the challenges that accompany self-employment. Take time to understand self-employment income, separate business and personal expenses, set up an additional account to track tax payments, and plan a forward-looking budget. Based on your hourly rate and expected shifts, determine your gross monthly income, subtract retirement contributions, separate appropriate tax payments, and use the remainder to frame your budget.

Private or Democratic Group – Consider that you might have to serve one to three years as an employee before making partner and becoming self-employed. During the employee period, you likely will have a fixed income, minimal business expenses, and a limited ability to contribute to retirement. You also will not be required to *think* like a *business person*. Your budget should be well-defined. As you transition into a partner role, it will be important to have an accountant and other financial advisors advise you in navigating the changes in taxation, retirement eligibility, medical benefit limitations, and more.

Hospital employee – A W-2 employment position with a hospital provides financial stability, diverse resources, and often, competitive scheduling. In exchange for security in these areas, employees typically don't earn as much as private practitioners and have less flexibility in designating money for retirement and other important programs. For many, a significant advantage of hospital work is the ability to do research, train residents, and be involved in the collaborative, educational side of medicine.

A COMMON SET OF GOALS

It is important to articulate what you want to accomplish and when.

- Buy a new home within the next 12 months.
- Aggressively pay down student loans.
- Develop sufficient retirement income at age 60.
- Put your three children through four years of undergraduate school.
- Minimize income taxes.
- Eat, live, and enjoy a reasonable standard of living.

866.694.6292 • shayne.ruffing@integratedwealthcare.com
www.IntegratedWealthCare.com.

Pieces

With a set of goals and some numbers, success comes down to developing a tangible *plan*. This involves putting certain pieces of the puzzle in place. Setting up bank accounts, obtaining insurance, starting investment programs, and developing a portfolio all come into play. These pieces need to be identified and fit into your plan, based on your personal objectives and timeline.

Action plan

The rubber meets the road when you agree on the next steps – and there *are* next steps to be taken. The best intentions fall victim to inaction when they are in the hands of the wrong people. Identify the goals, agree on the steps to get there, and delegate the implementation to someone who does it for a living.

The Confident Transition Plan™

Literally thousands of residents have benefited from financial guidance during the transition between training and practice. Appropriate direction can enable you to reduce debt faster, build wealth more rapidly, prepare for variables, develop confidence, and enjoy the freedom and flexibility that you have worked so incredibly hard to attain. ✶

The Legacy of

"If you don't know history, then you don't know anything. You are a leaf that doesn't know it is part of a tree."

Michael Crichton

Our past is not behind us, it is us – and every patient encounter is a manifestation of the original Hippocratic ideal and the advancements that have followed.

The beginning of Western medicine is commonly credited to a single individual – Hippocrates of Cos (circa 460 – 370 BC). Fledgling physicians who utter the Hippocratic Oath pay homage to Hippocrates and swear to uphold the 2,400-year tradition of placing the well-being of the patient at the center of their livelihoods.

Since the time of Hippocrates, the tree of medicine has grown – the technology advanced, the quantity and potency of drugs multiplied exponentially, and the scope of physician practice expanded. New specialties of medicine have arisen, and new heroes such as Maimonides, Galen, Osler, Lister, and Harvey have added their names to our history books.

Emergency medicine is one of the newest branches of medicine's ancient tree, its history still young and evolving. We have our heroes and are governed by an ethos entirely our own. We celebrate legends such as Drs. Jim Mills and John Wiegenstein, who championed the notion that every patient deserves to be cared for by an expert in emergency medical care – regardless of the place, time, or circumstance.

Our history as healers is about filling the needs of the people, including developing pre-hospital EMS systems with the vision of organizers such as Drs. Ron Stewart, Eugene Nagel, and David Boyd. With the determination and grit of Drs. George Podgorny, Ron Krome, and Peter Rosen, we forged a specialty and won a place in the house of medicine.

We launched residencies with mavericks like Drs. Bruce Janiak and Pam Bensen, who were among the first of a new breed of doctor – the residency-trained emergency physician. Under the stewardship of reformers like Dr. Art Kellermann, we fought for EMTALA and the codification of our dictum to care for *all* patients, regardless of their plight or ability to pay.

While emergency medicine's history is young, it is also rich, proud, and fleeting. The heroes and heroines who created our specialty are aging, and many are no longer with us. They are the inspiration for EMRA's *Legacy Initiative* and the documentary *24|7|365 – The Evolution of Emergency Medicine*. This film, which will make its long-awaited debut on October 15, is the culmination of nearly three full years of intense work by a dedicated group of EMRA residents, staff, and professional filmmakers.

While the film will preserve the specialty's history, the project itself is a historic milestone. It marks the first time in the 2,400 years of medical history that a specialty has told its story through the recorded words and images of its own heroes; and perhaps most remarkably, it was championed by residents like you. This article chronicles the genesis and development of the *Legacy Initiative* and how a determined group of residents and filmmakers joined to unite the emergency medicine community with the common goal of preserving our history.

The making of

Emergency Medicine

THE BIRTH OF THE LEGACY INITIATIVE by DONALD STADER

September 25, 2010, is a night that I will never forget. On that date, the Carolinas Emergency Medicine program said farewell to its retiring chairman, Dr. John Marx. A member of the first generation of residency-trained physicians, he was the chief editor of *Rosen's Emergency Medicine* textbook, former president of the Society for Academic Emergency Medicine, and a leader of our specialty. He was quite a character, to boot, whose love of fine scotch and Italian shoes was legendary.

I was one of a handful of residents at the celebration, and was spellbound by the stories and myths woven by his colleagues. At the end of the night, my head was full of bourbon – and resolutions that this history had to be captured and shared.

The next time I saw Dr. Marx in his office, I shared my new passion and conviction. To my delight, he agreed, expressing regret that the next generation would never get to know the founders – that we would never have the opportunity to train directly under the Peter Rosens of the world, or hear from those early heroes about the battles that formed our specialty and forged our inherited identity.

This conversation spurred me to author a proposal to bring before the EMRA Representative Council at ACEP's 2011 *Scientific Assembly*. The proposal called for the creation of a video on the heroes of emergency medicine, citing the urgency to record these voices before the legends retired or were gone. The proposal was passed unanimously. At the instruction of the representative council, a task force of residents was assembled to identify a filmmaker, raise funds, and turn the documentary into a reality.

By 2012, the process was well under way. The task force was fully assembled and the search for a filmmaker had begun. Then, in July 2012, Dr. Marx – who was the original inspiration for the documentary and was to be among the first heroes interviewed – died unexpectedly in his home at age 62. His death was a shock to the entire emergency medicine community. Beyond tragedy, Dr. Marx's death illustrated the stark fact that the window of opportunity to know our heroes and history was rapidly closing. His memory added fuel and purpose to the project.

FINDING A FILMMAKER by MARK BRADY

I heard about EMRA's proposal to make a short video from my program's representative, who knew I had done some work with the Discovery Health Channel. I also had read Dr. Brian Zink's book *Anyone, Anything, Anytime* and knew emergency medicine's history was full of characters and conflicts. The story follows changes in society, war, politics, emerging technologies and interventions, and chronicles a band of rebels in the conservative house of medicine.

To do our specialty's history justice, I thought we needed more than just a video; we needed a professionally produced documentary with all the bells and whistles.

The task force launched a national search for filmmakers who would be able to deliver our vision – a one-hour documentary that told the story of emergency medicine. While the primary goal was to preserve our own history for ourselves, we were convinced that, if properly executed, this story would have a large secondary audience beyond the emergency medicine community. After all, ours is a specialty that connects our communities to our hospitals; we are the front door, and often the only access people have to medical care.

Donald Stader, MD
Immediate Past-President/Treasurer
Resident (2009-2013)
Carolinas Medical Center
Charlotte, NC

Mark Brady, MD
Resident (2009-2013)
Yale–New Haven Hospital
New Haven, CT

24 | 7 | 365

We received bids from filmmakers across the country and, after some healthy and heated debate, we narrowed our choices.

We loved the Emmy-nominated producer Ann Prum, and we were impressed by talented director Dave Thomas (whose projects included *Lost* and *The West Wing*). Although producers and directors usually come in pairs, ours were virtual strangers. The task force made a risky move. We played matchmaker, choosing both and hoping they would work well together. The decision was crucial and would prove to be one of the best decisions our task force made. Now we had our talent, but we needed funds.

MONEY DOESN'T GROW ON TREES by DONALD STADER

The quality of a work depends on many variables: the aptitude of the creator; the quality and quantity of the materials; time; and, of course, *money*. We had secured a quality producer and director and had a great subject with engaging personalities; but to create the professional, high-quality film we desired, we needed money – lots of it. In a short four months, we needed to raise an ambitious $550,000. But with naiveté, conviction, and optimism, we forged ahead, resolute that our specialty and heroes deserved nothing less.

The EMRA Board of Directors approved $50,000 of seed money for the project in 2012, which allowed our production team to film five emergency medicine luminaries (Drs. Peter Rosen, Judith Tintinalli, Bruce Janiak, Brian Zink, and Lewis Goldfrank). From those initial interviews, the filmmakers created the trailer that would serve as the touchstone for our fundraising efforts.

We had a business plan that included taking this teaser footage on the road to ACEP's 2012 *Scientific Assembly* and trying to raise the rest of the budget from within the emergency medicine community. To keep the product neutral, we wanted to avoid taking money from pharmaceutical companies. We also had to set an extremely aggressive timeline. Not only did we have to raise a half million dollars, we then had to shoot *a lot* of film across the country, compile an archive of still photos and video, and complete months of post-production and editing work. Oh, and arrange a screening for over a thousand of our closest friends in Seattle. We were gambling on ourselves, and we knew it.

The task force pounced on every major CEO, national emergency medicine organization, and practice leader we could find. We scored our first donation over a glass of scotch in the Sheraton hotel – as Wake Emergency Physicians, a small independent group practice, pledged $2,500. Dozens of other organizations promised to take the project before their boards, saying they liked the trailer but were uncertain if they'd be able to donate. At the end of the conference we had collected a good number of "we'll think about its," but only $2,500 in promised funds – roughly 0.5 percent of our goal.

A bubble of doubt arose as we left the conference; perhaps we'd bitten off more than we could chew. Then, just two weeks later, Dominic Bagnoli, CEO of Emergency Medicine Physicians (EMP), contacted the task force with some incredible news. EMP offered to commit $150,000 – roughly 30 percent of the fundraising goal – to become our principal benefactor. This donation gave wings to our dream; we were on our way. The fundraising efforts of the task force continued from October 2012 to February 2013. Our initial doubt faded as every facet of the emergency medicine community came forth to support the project. Large group practices, small independent groups, professional organizations, ACEP chapters, residency programs, and individual physicians generously stepped forward to support the project.

In the end, a total of $624,101 was raised – every penny invested into *Legacy* and its goals.

MAKING THE DOCUMENTARY by MARK BRADY

The most difficult pre-production task that the *Legacy* team faced was deciding whom to interview. Our specialty has many heroes, but we knew we simply couldn't film them all. During the five months of intense fundraising, we were also aware that we would still need to deliver a product, even if we didn't reach the full production goal. This was a daunting thought. From the start, we established that the production team would be independent and have full creative control. If we were to make a credible film, we couldn't tie it to any particular funder or institution.

We had positions to fill and aspects of the larger story that needed to be told. The task force began by making lists for each of these roles, and then we triaged our subjects. When I asked our director what his process was for doing the documentary, he said, "If I were going to decorate a room, I'd want to have a warehouse at my disposal." Our job was to provide Dave and the team with this "warehouse" of emergency physicians and information.

I scoured articles, books, and videos and made my own little reference library of the history of emergency medicine. For each subject, I prepared a background bio-sketch and questions for the director to ask.

Dave Thomas had the creative idea of shooting our subjects in their homes, an environment that would make them more relaxed in front of the camera. This would give the film an appealing intimacy, but it meant a lot more travel and legwork for the production team.

The shoots I was able to attend were an absolute pleasure. It was a thrill to actually meet so many of the pioneers I'd read about – to shake their hands and to be welcomed into their homes.

For a final round of filming, the production team traveled to an abandoned Staten Island hospital. These unique shots would be used to capture the tone of the time periods explored in the film. To help make this shoot happen, I crashed on the editing studio couch for two weeks, used every connection I had in the city, and at one point served as a sandbag for a stage light.

Postproduction, a period that lasted a tedious four months, involved deciding what to do with the 60 hours of footage that we had amassed, which would need to be pared down into a cohesive, hour-long story. Our postproduction team included an archivist from the National Archives, an associate producer, editors, graphic artists, a musical composer, and sound engineers, all of whom worked long hours behind the scenes to craft and polish the documentary.

After the editing was complete, there was one final piece to add – a *voice*. We knew who we wanted, but we knew the film would already have to be polished enough for our potential narrator to understand the importance of the project. In the end, we got our man. Actor Anthony Edwards (aka Dr. Mark Greene from *ER* and Goose from *Top Gun*) graciously agreed to narrate the film. Mr. Edwards donated his modest fee to his charity, *Shoe4Africa*, much as he did with the fee he got for his last performance on *ER*. The charity is currently building a children's hospital in Kenya. ✶

And that, as they say, is a wrap.

CLOSING THOUGHTS

From the beginning, medicine has emphasized reverence for its past and homage to those who have taught us our sacred craft. While medicine no longer is taught as an apprenticeship, it remains a profession whose traditions and past continue to reverberate in our present age. Our past is not behind us, it *is* us – and every patient encounter is a manifestation of the original Hippocratic ideal and the advancements that have followed.

EMRA is proud to honor the history of our specialty through the *Legacy Initiative*. Because of our organization's efforts, the narrative of emergency medicine will be told as it was always meant to be – in the words of the men and women whose actions and grit forged our specialty and changed the face of medicine in America and around the world.

There are numerous individuals who deserve to be singled out for thanks and praise in making the *Legacy Initiative* possible – but most important are the heroes who are the subject of and inspiration for *24|7|365*. We owe them our everlasting gratitude.

Because of [EMRA's] efforts, the narrative of emergency medicine will be told as it was always meant to be – in the words of the men and women whose actions and grit forged our specialty and changed the face of medicine in America and around the world.

At ACEP13

Two years after the EMRA Representative Council approved the *Legacy Initiative* – the promise of that resolution will be realized. EMRA invites you to celebrate this historic achievement with two extraordinary events.

The World Premiere of the EMRA documentary *24/7/365* will take place on Tuesday, October 15 from 5:30 pm to 8 pm in the Sheraton Seattle Ballroom. The premiere will be hosted by Dr. Mel Herbert. In addition to the documentary, the evening will feature a historic panel of emergency physicians, including Drs. Judith Tintinalli, Peter Rosen, Bruce Janiak, and George Podgorny.

On Wednesday, October 16 from 9 am to 10:30 am, EMRA will host "In the Words of Our Heroes," a 90-minute panel discussion in which the panel from the film premiere will be joined by additional emergency medicine luminaries. The event will be hosted by Dr. Amal Mattu in the Grand Hyatt Eliza Anderson Amphitheater.

We anticipate a packed house at both events and encourage you to arrive early. Seating will be limited and is on a first-come, first- served basis.

Postcards from the EDge

In keeping with the spirit of EMRA's *Legacy Initiative*, we reached out to some of the pioneers of emergency medicine and asked the question: What advice would you give to current residents and medical students for achieving a long and happy life and career? In particular, is there anything you wish you had known when you began your own career in emergency medicine?

We're honored to share with you their thoughtful, poignant, and sometimes surprising answers.

Peter Rosen, MD

In beginning a career in emergency medicine, I think that the most important thing is to pick something that you're curious about – something that excites you. It's not necessary to choose something that you think will last your whole lifetime; instead, concentrate on what makes you *passionate*. If you're lucky, your passion *will* last a lifetime, as mine has. Also, it never hurts to have more than one passion, so that you can change between them and evolve. Doing something you're not passionate about is a recipe for a short career, burnout, and failure.

In beginning your practice, one of the most important exercises you can do is to figure out what you expect from your career. What do you think your career will bring to you in terms of fulfillment? You also need to figure out what *you* will bring to your career and your patients. What do you want to be as an emergency physician? Decide that while you are young and optimistic, and when things get tough, always remind yourself of those ideals and why you went into the field.

If you experience adversity – if you're not getting what you want – ask yourself: Is it the field? Is it your practice and hospital? Or is it *you*, and have you changed? Sometimes we blame our profession when it is our personal lives that are interfering with our practice. Don't be afraid to go after what makes you happy. I started my career in opthalmology and became a surgeon. I eventually left surgery to transition into an academic job in emergency medicine and ended up becoming an emergency physician. Along the way, I've changed cities and jobs *many* times. Don't fear change. Pursue happiness – sometimes they can be the same thing.

The most important part of being able to practice emergency medicine successfully is to remind yourself of your ideals – what they were and what they should be now. Sometimes we blame our profession when it is our personal lives that are interfering with our practices. Ask yourself: Where do I need to be, and why am I not there? What do I need to change in myself to renew my passion?

One of the biggest myths in medicine is you have to love your patients. I tell my trainees that you should get your love at home – you don't need to love patients. You *do* have to care for them, however, and upon you lies the responsibility of improving their health. It is a great danger to take what your patients do personally; when the patient makes a bad choice, it is not your fault.

If you become too enveloped by patients' bad choices, it can discourage you; it can make you think you're not adding anything to society or to the well-being of the patient. We have many examples of patients who just can't be helped in the ED – people with alcoholism or medical noncompliance. Occasionally, there will be patients you don't care for or who enrage you.

While it can be easy to simply whine about patients and blame them, you cannot let yourself get into that habit. It's self-destructive. Instead of getting angry and frustrated, you have to identify a way to cope with these patients, provide them care, and not sacrifice your ideals. Our field is hard. Don't whine about it; rejoice in its truly extraordinary rewards.

EM pioneers share what they've learned about life and medicine

Leonard Riggs Jr., MD

I often have heard that emergency medicine is only a young person's game with a notoriously high burnout rate. I don't necessarily believe that either of these things is true, but I do think that the quality of a physician's work environment plays a big part in the longevity of his or her career. When considering a position at a specific location, remember that there are many different scenarios regarding the function of a practice, but there are two *extremes.*

One is a place where the facility is crowded, old, and/or dirty; there are never enough competent nurses or other staff; attending staff from other specialties treats the emergency staff like "boys;" there are shady and unfair financial and scheduling arrangements; some of the skills of your own colleagues are suspect; patient volume is overwhelming; the lab and radiology services are very slow; and so on.

The other extreme is an environment in which there is adequate space, an ample number of nurses and other assistants, efficient lab and radiology turnaround times, a comfortable and fair financial and scheduling environment, and your emergency medicine colleagues and other attending staff treat you with respect. It is a place to which you genuinely look forward to coming every day.

I know this sounds very basic, but it is surprising how many young physicians forget to look for these common-sense requirements when considering a practice. While there is no perfect place – and it's important to learn to roll with the punches – you should never settle for a work environment that is substandard. You – and the patients you serve – deserve better.

Nancy Auer, MD

There will be times when you are worn down. There will be times you may want to quit. You will see great changes in medicine over your career — we all have. There is one thing that is unique and that will never change about you as an emergency physician: You stand at the door between medicine and society. You are the bellwether. You will see changes occurring in health care before the rest of society. You must take a leadership role to advocate for the patients you see when the rest of medicine does not understand what is needed. You will be rewarded on a daily basis by the individual patients you touch, but over your career, you also will look back and know that you made a difference to a community of people.

Greg Henry, MD

Emergency medicine is no longer the "poor sister." We are one of the important specialties in medicine, and now have more applications then we have spots. We don't recruit, we *select*; you should be very proud of being an emergency physician.

I offer you this advice from the Romans: *"Labor omnia vincit"* – work conquers all! To the Romans, work was sacred – and to work was to *pray*. I hope that you find our work as emergency physicians sacred, as well. If you truly love your work, then showing up to a shift isn't bad.

Emergency medicine is a contact sport; never confuse it with dermatology. Dermatologists deal with salves and creams. We deal with people's ultimate crises. You are a public servant – like a firefighter or police officer. We all understand that our work is 24/7 and that we have to be at our best when others are falling apart.

A long and happy career is based on attitude. You need to get your head around your job and define it. It's not what *happens* to you, it's how you *view* it.

If you don't come in with the right attitude and love your career from Day One, find another job.

Pam Bensen, MD

First and foremost, I enjoy every day; I enjoy life; I enjoy what I do. I was born in 1944 – a blue baby with a ventrical septal defect. My parents were told I wouldn't survive my first year. These were the days before ultrasound, cardiopulmonary bypass, and open-heart surgery. My mother was told to enjoy me as long as I lived, as short as it might be. Despite the many obstacles, I not only lived, I thrived. So, while others awaited my death, I celebrated life and have continued to do so.

I've also trusted my gut, but tried always to be receptive to the assistance of others. I vividly remember the pride I felt when I made my first accurate diagnosis. I stood at the top of the stairs of my grandmother's house and watched as the ambulance attendants took my aunt away to the hospital for definitive surgical care. My mother loved to tell how I, a 4-year-old, turned to her and said, "See, I told you Katie had 'pendicitis!"

I trusted my gut again when it led me into emergency medicine. Once I knew what I wanted, I did not let *anyone* or *anything* talk me out of it. A friend of my mother's once asked me what I wanted to be when I grew up. I smiled and told her confidently that I wanted to be a doctor. Patting me on the head, she responded with equal confidence and adult knowledge of the social environment in 1950, "Girls can't be doctors; girls are nurses." I proved her wrong and began studying immediately. I never had a Plan B.

I will always remember words of wisdom from a very wise and kind veterinarian: "No patient is too hopeless or too poor to give up on." In 1967, my husband and I were given a tiny dachshund puppy. Two months later, she escaped from the house and was run over, crushing her pelvis. Surgery would cost $300 we simply didn't have; the vet asked if we wanted to put her to sleep. We wouldn't give up, however, and neither would the vet. We arranged a $5 per month payment plan and moved forward with the surgery. She soon was walking again. It's a lesson I've never forgotten.

Lewis Goldfrank, MD

Study hard. Gain a broad vision of the potential of our specialty and develop in-depth knowledge about your passions in medicine. Find a means of making a difference for the good of the people you serve.

Steven J. Stack, MD

One of my favorite quotes is:
"Comparison is the source of all unhappiness."

We spend too much time unfulfilled by our own accomplishments because someone else appears to have achieved more. Recognize this trap and get over it.

The enjoyment of life resides in savoring the journey, not any particular achievement. Follow the beat of your own drummer, forget about keeping up with others or gathering material junk, and in the timeless words of Dr. Seuss, "Oh, the places you'll go!"

George Podgorny, MD

Medical Students

Your final educational decision is specialty selection. Gather information from observation, rotations, residents, and faculty. Consider your interests and abilities. Consider intellectual curiosity, dexterity, desired lifestyle, and financial ramifications. All specialties in medicine are good and challenging, but it is important to choose the one you are most comfortable with.

Residents

Residency is your last formal training. Use your time wisely. Learn about the history of emergency medicine. Besides the critical scientific knowledge base, learn about economics, management, and administration. These topics will serve you well in practice. Be active in EMS and consider an area of special interest, such as toxicology, trauma, or academics. The things you learn now will translate into a more successful practice and employment later.

Arthur Kellermann, MD, MPH

Get the best training you can so you are competent and effective. When you enter practice, strive for balance. Don't get so financially exposed in debt or lifestyle that money rules your life and clouds your clinical decisions. Find at least one pursuit – scholarship, teaching, community service – to even out the clinical intensity of the ED. Make a difference.

Gautam Bodiwala, MBBS, MS

The Great Sushruta, a fourth-century Indian surgeon, once said, "Only the union of medicine and surgery constitutes the complete doctor. The doctor who lacks the knowledge of one of these branches is like a bird with one wing only." How true that is for the specialist of emergency medicine! The only good is knowledge, and the only evil is ignorance. It is better to know that the name "emergency medicine" gives you identity and dignity; it creates the right public image and describes the function of the specialty.

Emergency is all about early access, medical help by trained personnel, early intervention, resuscitation, governing, evaluating, networking, communicating, and, yes – preparedness. But to succeed, you need clear conception, confidence, concentration, consistency, commitment, and good character. You also need to have the capacity to enjoy what you do.

The secret to a happy life is to think of the past and live fully in the present. I congratulate you on passing the first hurdle of deciding upon your career in emergency medicine. I hope you never run out of time, pride, laughter, and love for your chosen specialty.

"It's not necessary to choose something that you think will last your whole lifetime; insead, concentrate on what makes you passionate."

—Peter Rosen

Judith Tintinalli, MD

I was clueless at the beginning of my career. I just knew that when I finished my internal medicine residency, I wanted to get back to the ED. So back I came. I didn't know about the rich resources available beyond the confines of the emergency department – what other departments or schools had to offer in terms of research, knowledge, variety, or academic advancement. Of course, the lack of respect and lack of basic interest in what emergency medicine was all about was a key element leading to the barriers between emergency medicine and other specialties at that time.

At the beginning, emergency medicine was relatively "narrow" compared to what it is today. Full-steam ahead, we were deciding who and what we were; organizing chaotic, disrupted EDs; and figuring out what skills to master. We weren't able to "see one;" we had to "do one" and then "teach one." I do believe, though, that such boot-strapping makes you strong and resilient. Perhaps a bit of that is missing today, as residents and new emergency physicians now are given the opportunity to choose from a fantastic menu of things leading to the world outside of the ED.

At the beginning of my career in 1975, I was energized and motivated by a mission. That mission was to make ED medical care something special and supersize the knowledge base of the specialty. I was fortunate to be able to work in different environments, and each move felt like a new career – different algorithms of care, new people to meet, competencies that had to be tested in the new setting. As time went on and emergency medicine became well established, the mission became moving the specialty onto a higher plane – the achievement of academic integration, and national and international recognition. Today's generation of emergency physicians has a somewhat different mission – a broader scope that includes global, political, economic, administrative goals. Our specialty cannot thrive without continuing to transform its mission.

Whatever emergency medicine paths you choose, keep varied, keep teaching, keep learning. Develop a life outside of medicine. Take up new activities. Learn a new language, learn a new sport, learn how to do a kayak roll, train for a 10K race – try things you've never done before. Reversing your role from teacher to learner helps you understand that mistakes are powerful learning tools.

EMRA EVENTS

ACEP13 Scientific Assembly

SEATTLE

FRIDAY, OCTOBER 11

8:00am – 5:00pm **Board of Directors Meeting,** *Cedar AB, Sheraton Seattle Hotel*

SATURDAY, OCTOBER 12

1:00pm – 5:00pm **Medical Student Governing Council Meeting,** *Ballard, Sheraton Seattle Hotel*

5:30pm – 7:30pm **MSCG/EMIG Representative Mixer (by invitation),** *Space Needle, Seattle Room*

7:30pm – 12:00am **Board of Directors Meeting,** *Ballard, Sheraton Seattle Hotel*

SUNDAY, OCTOBER 13

8:00am – 2:00pm **EMRA Medical Student Forum**
Leonesa II/III, Grand Hyatt
Refreshment breaks sponsored by Liberty Mutual

- ***The Art of Schmooze – A Cool Talk on How to Deal with EM Patients***
  Brian Levine, MD, FACEP, Residency Program Director, Department of Emergency Medicine, Co-Medical Director for LifeNet, Christiana Care Health System, Newark, DE, Clinical Associate Professor of Emergency Medicine, Jefferson Medical College
- ***Career Opportunities in Emergency Medicine Discussion Panel***
  Sara Lary, DO, MScPH, DTM&H, International Medicine, TeamHealth Northwest and Highline Emergency Physicians; Haney Mallemat, MD, Assistant Professor, Department of Emergency Medicine, University of Maryland Medical Center, Baltimore, MD; Sandra Williams, DO, MPH, Ben Taub General Hospital, Houston, TX; Betty Chen, MD, Acting Instructor, Division of Emergency Medicine, University of Washington; David Schoenfeld, MD, Beth Israel Deaconess Medical Center, Boston, MA
- ***Application and Interview Advice – Intern Panel Discussion***
  Graham Ingalsbe, MD, Denver Health, Denver, CO; Justin Fuehrer, DO, Long Island Jewish Medical Center, New Hyde Park, NY; Joseph Reardon, MD, Duke University Medical Center, Durham, NC; and Justine Nagurney, MD, Yale New Haven Medical Center, New Haven, CT
- ***Medical Student Breakout Sessions***
  - ***MSIV – Interview Day Tips***
    Janis P. Tupesis, MD, FACEP, FAAEM, Associate Professor of Medicine, Director – Emergency Medicine Residency Program, Director – Global Health Programs, University of Wisconsin School of Medicine and Public Health Division of Emergency Medicine, Madison, WI; *Discovery AB, Grand Hyatt*
  - ***MSIII – Taming the Application & Match Ranking Process***
    Micelle J. Haydel, MD, Program Director, LSU Emergency Medicine Residency, Louisiana State University Health Science Center, New Orleans, LA; *Leonesa I, Grand Hyatt*
  - ***MSII/III – How to Survive Medical School by Not Actually Going***
    Joshua Moskovitz, MD, MPH, MBA, EMS Liaison North Shore University Hospital, Assistant Professor of Emergency Medicine, Hofstra North Shore–LIJ School of Medicine, Manhasset, NY; *Portland AB, Grand Hyatt*
  - ***MSIII/IV – What Osteopathic Students Need to Know***
    Michael Cassara, DO, FACEP, North Shore University Hospital, Manhasset, NY; *Eliza Amphitheater, Grand Hyatt*
- ***Medical Student Networking Lunch/Roundtable Discussion w/Program Directors,*** *Princessa I/II, Grand Hyatt*
- ***Managing Student Loans***
  Jason DiLorenzo, Regional Manager, GL Advisor, Waltham, MA; *Princessa I/II, Grand Hyatt*

2:00pm – 3:00pm **Residency Program Fair Exhibitor Registration,** *6E, Washington State Convention Center*

3:00pm – 5:00pm **Residency Program Fair,** *6E, Washington State Convention Center*

MONDAY, OCTOBER 14

8:00am – 9:00am **Resident Bloody Mary Breakfast/Discussion Panel,** *Princessa I/II, Grand Hyatt*
Sponsored by Integrated WealthCare

9:00am – 1:30pm **Resident Forum,** *Leonesa I/II, Grand Hyatt*
Refreshment breaks sponsored by CEP America

- ***Taking Care of Business: What You Should Know about Contracts/Liability Insurance,*** Todd B. Taylor, MD, FACEP Microsoft Corp. Health Solutions Group, Tempe, AZ and Joseph P. Wood, MD, JD, FACEP Mayo Clinic Medical School, Phoenix, AZ
- ***Preparing for the Job Search,*** Barb Katz, The Katz Company EMC, Inc., Phoenix, AZ
- ***Financial Planning for Young Physicians;*** M. Shayne Ruffing, CLU, ChFC, AEP, Managing Director, Integrated WealthCare, Durham, NC
- ***Resident Lunch & Educational Session – Advances in Anti-thrombotic therapy: Clinical Decisions in Disease Management and Management of Drug Complications,*** *Princessa I/II, Grand Hyatt*
  Sponsored by Mount Sinai School of Medicine Department of EM

1:00pm – 2:00pm **Conference Committee Orientation,** *Discovery A, Grand Hyatt*

2:00pm – 3:00pm **Regional Representative Meeting,** *Douglas Boardroom, Grand Hyatt*

3:00pm – 4:30pm **Reference Committee Public Hearing,** *Leonesa I/II, Grand Hyatt*

4:00pm – 5:00pm **Exhibitor Job Fair Registration,** *Grand Ballroom foyer 2nd fl, Sheraton Seattle Hotel*

5:00pm – 7:00pm **Job Fair,** *Grand Ballroom & Willow AB 2nd fl, Sheraton Seattle Hotel*
Co-sponsored by Florida Emergency Physicians and Team Health

6:00pm – 8:00pm **Reference Committee Work Meeting,** *Alki Boardroom, Sheraton Seattle Hotel*

TUESDAY, OCTOBER 15

7:30am – 8:00am **Representative Council Welcome Breakfast & Candidate's Forum,** *Leonesa I, Grand Hyatt*

7:30am – 8:00am **Representative Council Registration,** *Princessa foyer, Grand Hyatt*

8:00am – 12:30pm **Representative Council Meeting and Town Hall,** *Princessa I/II, Grand Hyatt*

12:30pm – 1:30pm **Representative Council Luncheon,** *Princessa I/II, Grand Hyatt*

1:00pm – 3:00pm **Editorial Advisory Committee Meeting,** *Menzies Suite, Grand Hyatt*

1:30pm – 2:30pm **New BOD Orientation,** *Portland AB, Grand Hyatt*

3:00pm – 4:00pm **Reps to ACEP Committee Meeting,** *Discovery B, Grand Hyatt*

5:30pm – 8:00pm **24/7/365 The Evolution of Emergency Medicine Documentary Premiere,** *Grand Ballroom BCD, Sheraton Seattle Hotel*

10:00pm – 2:00am **EMRA Party,** *Trinity Nightclub*
Sponsored by Emergency Medical Associates

WEDNESDAY, OCTOBER 16

8:00am – 3:00pm **Resident Sim Wars Competition,** *Grand Ballroom C, Sheraton Seattle Hotel*

9:00am – 10:30am **24/7/365 The Evolution of Emergency Medicine Documentary Panel In-Depth Discussion,** *Eliza Anderson Amphitheater, Grand Hyatt*

9:00am – 11:00am **Informatics Committee Meeting,** *Spruce, Sheraton Seattle Hotel*
Awards Committee Meeting, *Jefferson B, Sheraton Seattle Hotel*
Health Policy Committee, *Redwood B, Sheraton Seattle Hotel*
International Health Division Meeting, *Sheraton Seattle Hotel, Ravenna C*
Critical Care Division Meeting, *Issaquah AB, Sheraton Seattle Hotel*
Research Committee Meeting, *Aspen, Sheraton Seattle Hotel*
Education Committee Meeting, *Redwood A, Sheraton Seattle Hotel*
Wilderness Medicine Division Meeting, *Greenwood, Sheraton Seattle Hotel*
EMS Division Meeting, *Virginia, Sheraton Seattle Hotel*
Ultrasound Division Meeting, *Seneca, Sheraton Seattle Hotel*

11:30am – 2:30pm **Leaders Luncheon & Committee Updates,** *Willow B, Sheraton Seattle Hotel*

3:30pm – 5:00pm **Fall Award Reception,** *Metropolitan A, Sheraton Seattle Hotel*

5:00pm – 6:00pm **Board Alumni Reception,** *Metropolitan B, Sheraton Seattle Hotel*

OPPORTUNITY Knocks! at the EMRA Job Fair

October 14, 2013 • 5:00 pm – 7:00 pm

Grand Ballroom & Willow AB 2nd fl, Sheraton Seattle Hotel

ACADEMIC
Baylor College of Medicine
Christiana Care Health System
EmCare
MedStar/Washington Hospital Center
Mount Sinai Hospital
Premier Physician Services
Staten Island University Hospital
SUNY Downstate Medical Center
Texas Tech University Health Sciences Center
University of Chicago
University of Florida – Dept of EM
University of Maryland Emergency Medicine
University of New Mexico – Dept of EM
University of Texas SOM at San Antonio
UT Southwestern Medical Center – Dallas

FELLOWSHIP
Baylor College of Medicine
Brigham & Women's Hospital Fellowships
Christiana Care Health Services EM Fellowship
EmCare
Emory University
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TeamHealth
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The Exchanges are Coming
The Exchanges are Coming
The Exchanges are Coming

Sarah Hoper, MD, JD
EMRA Legislative Advisor
Vanderbilt University
Nashville, TN

I recently started a new job in Tennessee, a red state that is not expanding Medicaid under the Affordable Care Act (ACA). One of the first patients I saw was a man who had been putting off going to the doctor because he did not have insurance through his employer, and buying it on the open market was too expensive.

I said, "You must be happy about Obamacare coming online," knowing full well that if he were a typical Tennessean, he was *not* happy about it at all. He was frowning, so I quickly continued, "In October, Obamacare's insurance exchanges will open and you can go online to buy a policy."

He looked perplexed. "Really?"

I replied, "Yup. In fact, if you are single and make less than $44,000 per year, you'll qualify for a tax credit that will drastically reduce the cost of the policy."

Now he was sheepishly smiling. "What's that website again?"

"**HealthCare.gov**"

In October, healthcare.gov will be open for business. Whether you believe the ACA is good for the country or not, there is no refuting that more of our patients will have health insurance.

It is also irrefutable that the exchanges are America's best kept secret! Our patients, whether they live in a blue state or a red state, have no idea "the exchanges are coming." This is why it is so important that we tell them – even if it is one at a time.

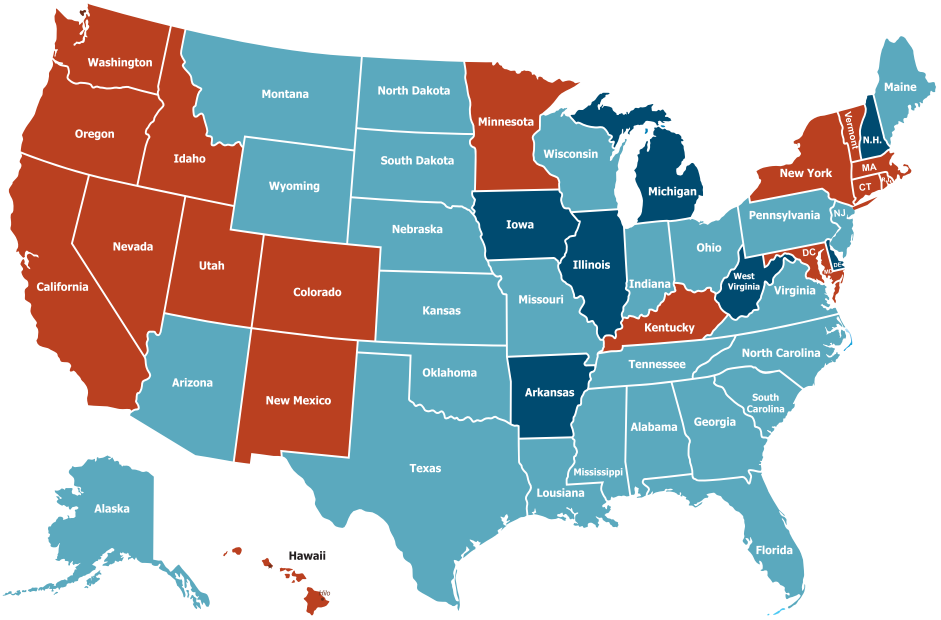
The exchanges will be open to anyone who is currently not insured, and small businesses (100 or fewer employees) that chose to have their employees use the exchanges to purchase insurance. Large businesses also can use the exchanges for employees who retire before they are eligible for Medicare. About one-third of states will administer their own insurance exchanges. The other two-thirds will participate in a federally run exchange. A few states are working in partnership with the federal government and will have a joint exchange.

The insurance providers cannot refuse anyone and there are no annual or lifetime caps on the amount of money the insurer will pay on behalf of the patient. There will be four levels of plans: platinum, gold, silver, and bronze. The platinum plan will cover 90% of medical costs. Each subsequent plan will decrease coverage by 10% so that the bronze plan will cover 60% of medical costs. Each of the plans will be limited to out-of-pocket expenses of $5,950 for individuals and $11,900 for families.

The CBO estimates that about 22 million people will obtain insurance through the exchanges. In 2017, the states can choose to open the exchanges to large companies. A RAND report projects 35 million employees will be covered when the exchanges open to large businesses. A CBO report, however, estimates that it will be closer to five million employees.

Tax credits will be available for people earning 138%-400% of the federal poverty level. Four hundred percent of the federal poverty level is approximately $44,000 for an individual and $88,000 for a family of four. The tax credit will be calculated based on the previous year's taxes when the insured applies online. The tax credit will be sent monthly to the insurance company to help pay the premiums.

Vermont was the first state to publish its exchange rates. After the tax credit has been applied in Vermont, a family of four with an annual income of $32,000 will pay $45/month; an individual will pay $317/month. Without the tax credit,



Orange = state-run exchange
Aqua = federally run exchange
Blue = partnership

a healthy individual who qualifies for a catastrophic plan will pay $745/month.

In California the rates are much lower. The average plan will cost $300/month before the tax credit. The average 21-year-old who qualifies for a catastrophic plan will pay $172/month without the tax subsidy. California was able to procure some of the best rates in the nation because its exchange was set up as an "active purchaser," meaning that California did not accept any plan that met the federal guidelines, but instead bargained for the best prices on the best plans. Thirty plans were submitted and only 13 plans were accepted, making the California exchange a competitive market.

For a comparison in 2013, the average single worker getting coverage through an employer paid between $862 and $1,065 per year for coverage, and the average family plan (family of four) cost between $4,226 and $5,284 per year.

Under the ACA, people who do not get insurance through Medicare/Medicaid or their employer are required to buy insurance through the insurance exchanges or pay the Shared Responsibility Payment. This is also known as the Individual Mandate. This is a tax collected by the IRS.

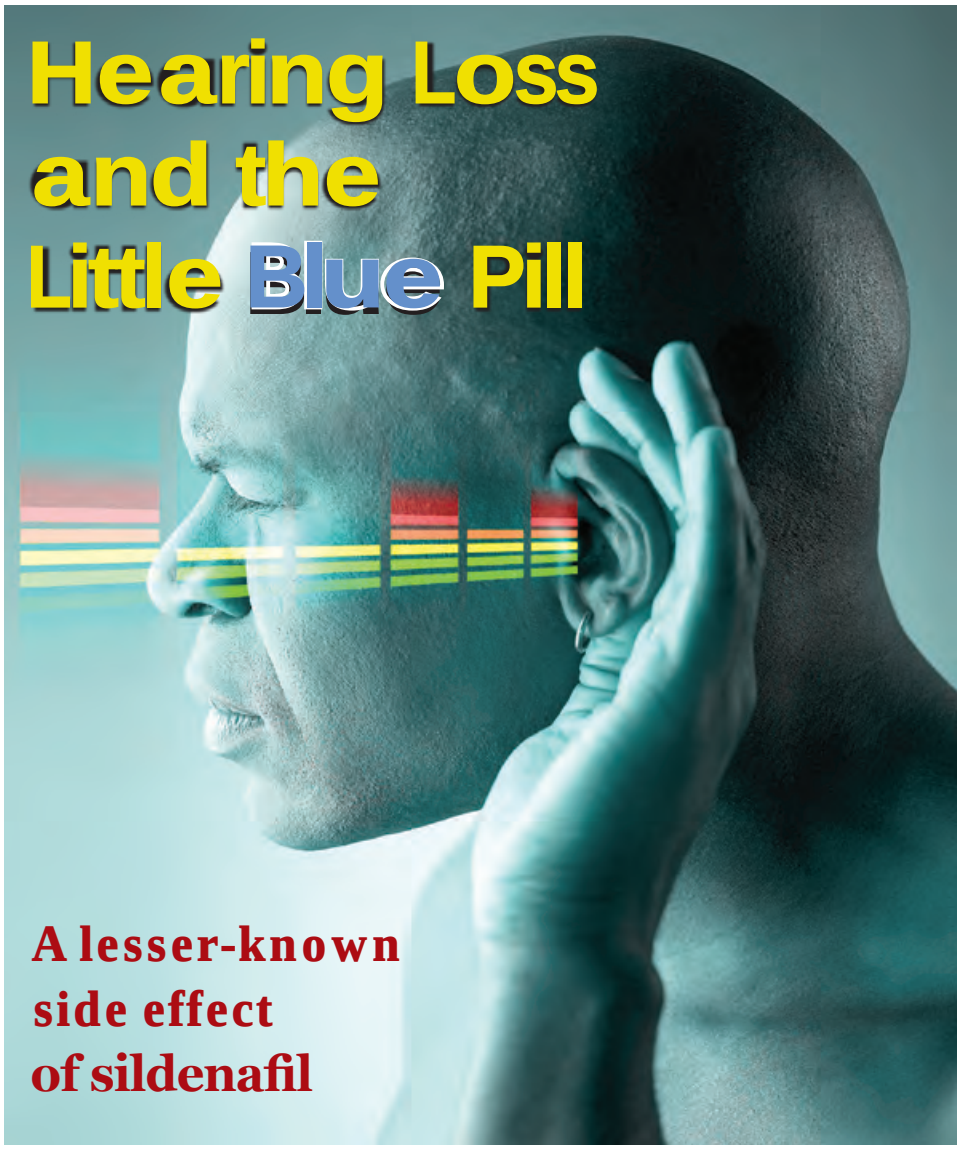
For the first year, the tax is $95 per adult and $47.50 per child with a cap of $285 per family or 1% of the household income, whichever is greater. In 2016, the penalty will increase to $695 per person or 2.5% of the household income and then will be adjusted according to a cost of living formula the following years.

This tax can be tricky to calculate. An individual who earns more than $9,500 and a family of four that earns more than $28,500 would pay the 1% penalty. The tax calculation for an individual who makes $40,000 is $300 in 2014, because the "filing threshold" ($10,000) is subtracted from the wages earned ($30,000 x 1% = $300). The filing threshold is the minimum amount of money earned that requires a person to file taxes.

There are exceptions to the tax. People who would have otherwise qualified for the Medicaid Expansion but are living in states that are not expanding, will not be taxed and will remain uninsured. Americans who are temporarily uninsured while between jobs (up to three months), those who are opposed to having insurance coverage for religious reasons, and members of Indian tribes also will not pay a tax.

The ACA can be daunting, but it is manageable. It is clear that those who are eligible for the tax credit will benefit the most from the ACA. These are the same people who come to our emergency departments because they cannot get in to see a PMD because they do not have insurance, or refuse a CT scan to diagnose their appendicitis because it is too expensive. So let's get out there and tell our patients, "The exchanges are coming!" ✶

Hearing Loss and the Little Blue Pill



A lesser-known side effect of sildenafil

Sajid Khan, MD
Clinical Assistant Professor
University of Missouri-Kansas City
Kansas City, MO

Maryam Arshad, MSIV
King Edward Medical University
Lahore, Pakistan

A 56-year-old African American male presents to the emergency department complaining of gradual hearing loss in his left ear over the past 24 hours. He denies any trauma to the ear or exposure to loud noises. He has no recent cough, congestion, rhinorrhea, or vision changes. He took a single dose of Alka-Seltzer one day prior, and used Viagra the night before. He takes a daily hydrochlorothiazide and amlodipine for blood pressure, but is on no new medications. Other than mild hypertension, he has no vital sign abnormalities.

Discussion

Sildenafil (Viagra) and other PDE-5 inhibitors are commonly prescribed drugs for the treatment of erectile dysfunction. **Although side effects are commonly mild and self-limited, serious adverse reactions have been described**. A well-described risk of hypotension has been identified in patients concomitantly taking nitrates. There is also a strong temporal association with hearing loss that has been described in the literature. Emergency medicine physicians will frequently encounter patients who have been prescribed these medications, sometimes without proper counseling on potential side effects.

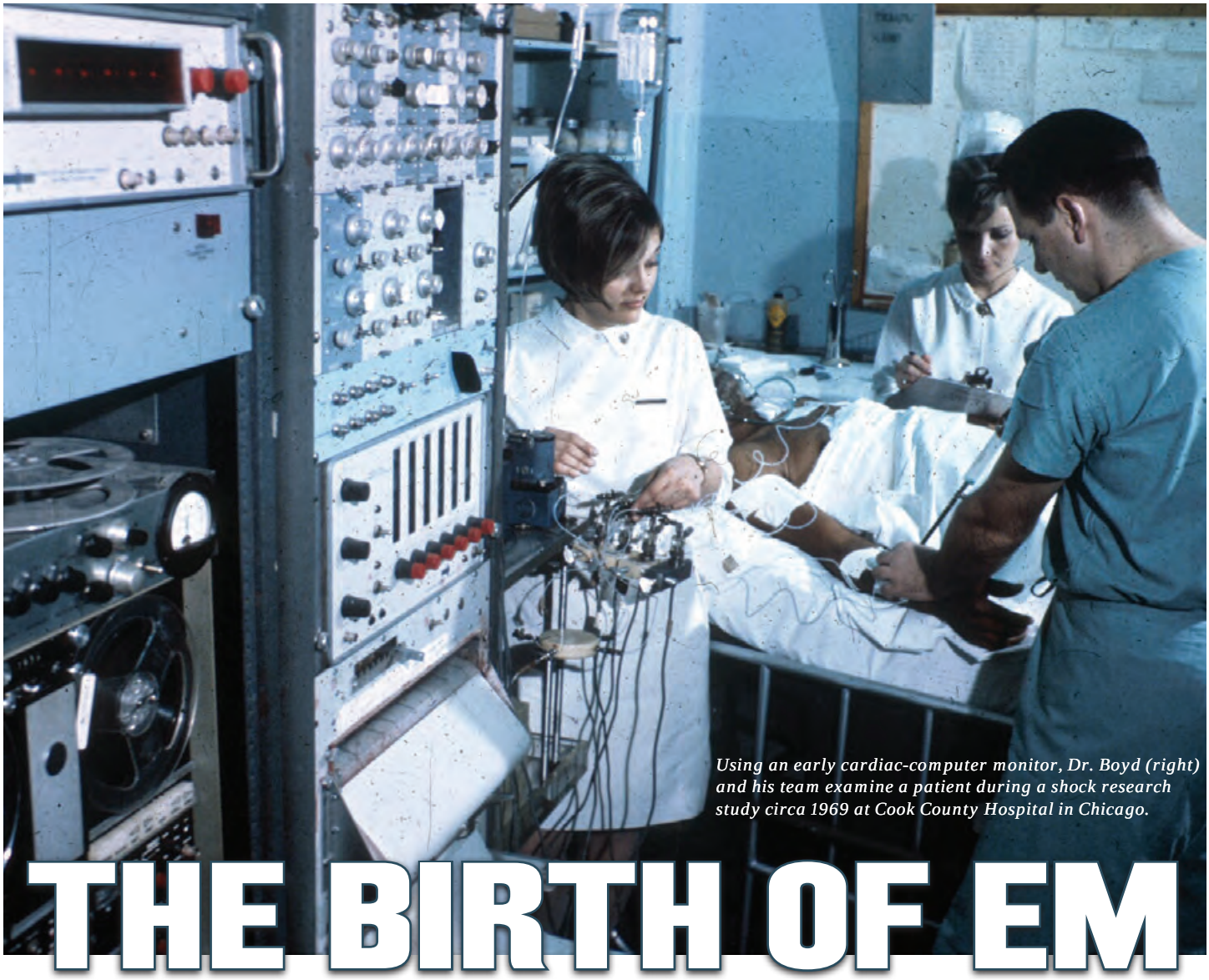
In 2007, the FDA officially added a warning about possible sudden-onset hearing loss to all phosphodiesterase 5-inhibitors. These drugs are designed to vasodilate and subsequently increase blood flow via a cGMP mechanism – but they don't do so selectively. Increased blood flow actually may damage parts of the auditory system. The cochlea, in particular, is susceptible to prolonged effects of intracellular cGMP.

A retrospective study of 47 causes of hearing loss with a temporal association to PDE-5 inhibitor use was published in 2011. **The mean age of affected patients was 56 years, and 88% of cases were unilateral, with hearing loss occurring within 24 hours in 66% of cases**. While sildenafil is the most frequent culprit, others within the same class also have been responsible.

In 2007, the FDA officially added a warning about possible sudden-onset hearing loss to all phosphodiesterase 5-inhibitors.

Salicylates are known to cause tinnitus, but also can cause hearing loss. Symptoms are typically bilateral and associated with nausea and/or vomiting. Of note, a single dose of Alka-Seltzer contains approximately 324 mg of salicylate. **When associated with hearing loss, symptoms are generally self-limited and no further workup is required**. Loop diuretics (furosemide, for instance) may also cause hearing loss, particularly when doses exceed 240 mg/hour and also when used synergistically with aminoglycosides.

Overall there is no specific treatment for medication-induced ototoxicity; immediate withdrawal of the offending drug should be done if the risk of continuing it outweighs potential benefit. In the case of our patient, he was advised to refrain from future use of Viagra and all medications in the PDE-5 inhibitor class. On a follow-up phone call seven days later, his symptoms were noted to have resolved and his hearing returned to baseline. ✶



Using an early cardiac-computer monitor, Dr. Boyd (right) and his team examine a patient during a shock research study circa 1969 at Cook County Hospital in Chicago.

THE BIRTH OF EM

Historical reflections on the development of U.S. emergency medical care

David R Boyd, MDCM, FACS
New Market, MD

Three new medical specialties emerged in the late 1960s and early 1970s: **emergency medicine, family practice,** and **trauma surgery**. Necessitated by consumer demand, these specialties quickly received wide public and political support. They were not created within the then-current academic medical centers.

They were each described as not having their own "unique bodies of knowledge" – a trait considered to be essential by the medical and surgical establishment for academic legitimacy and specialty recognition. Undaunted, these three groups progressed without endorsement, gaining enormous public support through their availability and demonstrable competence.

Family practice filled a void left by the diminishing number of aging general practice MDs who had been trained in previous generations. This growing vacancy was worsened by the overemphasis on specialization during the post-WWII period.

Emergency medicine similarly filled a void, especially in the escalating number of suburban community hospitals that were being built in new communities

populated with young families, who had no regular physicians. Americans increasingly were turning to the hospital in search of medical care. Hospitals without teaching programs at this time were covering their emergency rooms with full rotations of their entire medical staff.

For the first time in this country, **the new emergency medicine doctors brought reliable, consistent medical competence to these emergency rooms**. They soon converted these ERs to respectable emergency departments (EDs) with equal status to other specialty departments, as well as access to resources, including competent nursing and administrative staff. Previously referred to as "The Pit" – a dismal place where the intern learned by "baptism of fire" – these EDs were upgraded to full teaching and certification programs for physicians, nurses, technicians and pre-hospital personnel. **The ED now was considered the "window to the community."** Public appreciation was immediate, and the emergency medicine physician-directed ED became the new expectation. In more rural hospitals, family practitioners benefited from public support as they began to acquire emergency medicine training and adapt to the ED organizational emphasis.

The U.S. Congress authorized the Emergency Medical Services Systems Act of 1973. In 1974, President Gerald R. Ford (left) signed this bill and appointed Dr. David R. Boyd (right) director of the Division of Emergency Medical Services Systems, Public Health Service, Department of Health, Education and Welfare. Dr. Boyd persuaded President Ford to proclaim "Emergency Medical Services Week" and to host a White House conference on EMS.

As one of the first general surgeons to declare a planned career specializing in trauma, I had a unique experience with the development of this specialty. During my junior residency in 1967, I became trauma pioneer R. A. Cowley's first shock-trauma fellow at the embryonic University of Maryland Shock Trauma Program. Cowley and I foresaw a new surgical specialty in traumatology for education, training, and research.

After I returned to the Cook County Hospital Trauma Unit in Chicago as the resident-director, I envisioned a brand new field of trauma and Emergency Medical Services Systems (EMSS). I presented a plan and program for designated trauma centers statewide to then-Governor Richard B. Ogilvie, who endorsed and supported it, setting a principle of executive office leadership.[1,2]

The two higher levels of trauma centers would require a physician in the ED 24/7. This stimulated the demand and growth of emergency medicine-trained specialists downstate and in rural communities. Their presence was a decade ahead of expectations and the national experience.

We published a report on this comprehensive trauma/EMSS program in the *Journal of Trauma*,[3] with contributions from others involved in this program. In this publication, Dr. R. R. Hannas wrote about the role of emergency medicine in the Illinois trauma program. With my available grant funds, I stimulated two emergency medicine residency training programs in Evanston and Peoria to help meet the growing physician demand.

The multiple roles of emergency medicine in the Illinois trauma/EMSS program became part of my testimony to the U.S. Congress, and prompted me to write the *Organizational, Regionalization, Clinical Systems and Operational Components of the Emergency Medical Services Systems Act (PL 93-154)*.[4]

I was appointed by President Gerald Ford as the National Director of EMS Systems (1974-83). The early leaders of ACEP, including Drs. Ronald Krome, R. R. Hannas, John Wiegenstein, George Podgorny, Peter Rosen, Harris Graves, Karl Mangold, Lewis Goldfrank, and many others, were active in the national EMSS program policy and the development of Regional EMS Systems.[5,6]

Emergency medicine physicians trained, supervised, and directed the paramedic advanced life support (ALS) programs[7] and chaired community EMSS councils. Emergency medicine physicians became – and remain – the medical directors of the EMSS "Lead Agency" in state and major city/county health departments and pre-hospital EMT and paramedic transport programs.[7]

In 1983, I co-edited and authored the first text on the "Systems Approach to Emergency Medical Care,"[8] which described the historical and clinical

Regional EMS systems and the three new physician groups were the leaders that brought medical credibility and science-based medical practices to emergency medicine.

THE PAST IS PROLOGUE

The value of ideas, concepts, ventures, and methods of developing regional EMSS can get lost in the micro-perceptions of the day-to- day participating practitioner. Reclaiming the initial gestalt and vision that most emergency medicine pioneers can only be done by studying history and through reimagination.

system development through the Federal EMSS Office (DHEW/DHHS) supported by the EMSS Act of 1973, and amended in 1976 and 1979.

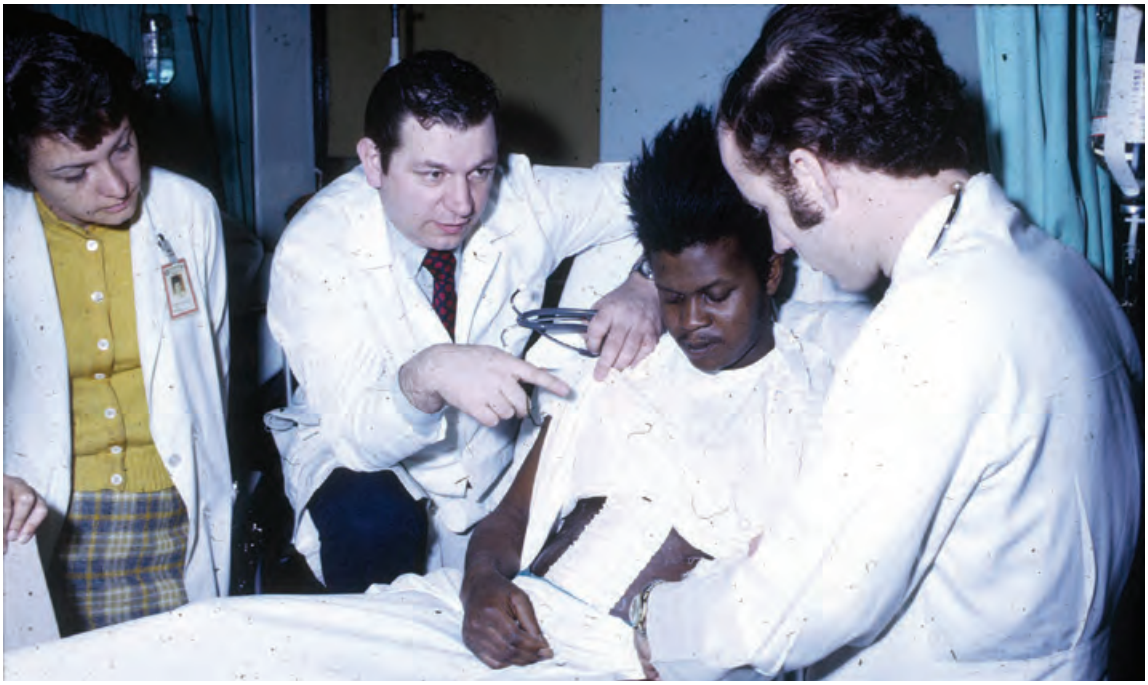
This was a unique time in the medical history of America.[9,10] New concepts, new medical technologies, and new professionals were introduced. I recruited our "systems pioneers" for the national EMSS Technical Assistance program to teach others how to replicate and implement the successfully proven models of trauma, burn, spinal cord injury, acute cardiac, neonate transfers, poison control and clinical toxicology, and behavioral emergencies. These clinical models were integrated into regional delivery systems as appropriate for urban, rural, and ultra-rural communities across the country.

Regional EMS systems and the three new physician groups (emergency medicine, family practice, and trauma surgery) were the leaders that brought medical credibility and science-based medical practices to emergency medicine**,** energizing the entire system. **The public and the press quickly endorsed the EMS systems approach.** Though not a popular group and easily criticized, our elected officials – from the White House to the State House, from mayors to councilmen – came on board early on and have maintained their support over the years.[11,12]

Regionalized EMS systems over the past 40 years have maintained their primary focus of reliable response and effective care during transport of the patient, and then on to rehabilitation with high expectations and good results. New concepts and participating groups can and do experience internal and external conflicts. Within the operating state, and especially the regional delivery system, these were minimal, as the need for integrative care and collegiate behavior was seen as a beneficial necessity. Leadership and the obvious need for professional cooperation prevailed.

The commonly held appreciation of our professional EMSS in today's vernacular relates to all technically proficient and adequately trained and supervised providers. The triage of patients to appropriate care is, likewise, understood and accepted. Incalculable lives have been saved, and the severity of injury and illness lessened, by the ubiquitous and impressive responding EMSS. The EMSS is universally accepted by the public, the medical profession, and the politicians. The EMSS response and seamless participation at mass disasters is seen almost daily on the evening news. Hurricane Katrina, Sandy Hook Elementary School, and the Boston Marathon bombing say it all.

I believe the EMSS providers – from the first responders to the emergency and trauma nurses to the emergency physicians and trauma surgeons – are our true national heroes. I have not seen the general public's sense of respect and stated admiration for any group like this since the servicemen and women and veterans of the World War II era. It's an honor they well deserve. ✶



Dr. Boyd (second from left) examines a trauma patient at Cook County Hospital during rounds with surgery residents circa 1971. He employed the Oslerian Method of bedside inquiry and clinical teaching, which grew in popularity and became the basis for critical care medicine at academic medical centers nationwide.

Thrombotic thrombocytopenic purpura (TTP)

Early recognition and reaction

Anand Pattani, MD
University of Pittsburgh Medical Center
Pittsburgh, PA

A 64-year-old diabetic male with newly diagnosed hepatitis C presents to the emergency department with prominent jaundice, nausea, vomiting, and progressive somnolence over the last 24 hours. Milder jaundice, nausea, and vomiting have been present for the last two weeks. He is mildly bradycardic and tachypneic, somnolent, but initially can be aroused. He has a non-ischemic EKG, normal head CT, and normal chest x-ray. Liver studies are most significant for a total bilirubin of 38.4, a direct bilirubin of 24.6, and moderate transaminitis. His platelet count is 24,000, he has a moderate acute kidney injury, and a sodium of 127. His mental status quickly deteriorates, requiring intubation and admission to the ICU.

Repeat labs show a new three-point drop in hemoglobin and schistocytes on a peripheral smear. The concern becomes for thrombotic thrombocytopenic purpura (TTP); plasmapheresis is arranged. Prior to starting plasmapheresis, he expires in the ICU after a PEA arrest. **Autopsy showed microvessel thrombi, causing a myocardial infarction consistent with TTP**.

Blood drawn just prior to the patient's death later showed:

- ADAMTS13 activity of 0 (reference range >68)
- ADAMTS13 inhibitor of 75 (reference range: <30)
- ADAMTS13 antibody level of >400 (reference range <12)

Discussion

Classically, TTP is described as an acute syndrome affecting multiple organ systems, causing a pentad of thrombocytopenia, anemia, renal failure, fever, and neurologic symptoms. The exact cause of TTP is not known, although **many patients are found to have a deficiency in ADAMTS13** (pronounced "Adams 13") activity (<10%). Adams 13 is also known as *von Willebrand factor-cleaving protease*, acting to cleave *abnormal* von Willebrand Factor.[1]

The pathophysiology behind the disease is related to thrombi, composed mostly of platelets, which accumulate in affected organs.[2] The majority of the cases have been idiopathic; however, medications like quinines and immunosuppressants have been implicated, as have pregnancy and autoimmune disorders.[3]

In the era before effective treatment with plasma exchange, when the vast majority of patients died and the full clinical course of the untreated disease was observed, it was common for all five features of the pentad to be present. Now, it's rare to see the pentad in its entirety.[3,4] In a study of 68 consecutive patients with a decreased ADAMTS13 level, only three (5%) had all five clinical features. Meanwhile, 52 had no fever, 33 had completely normal renal function, and 22 showed no neurologic symptoms.[3]

Such a broad spectrum of presentation necessitates a high index of suspicion on the physician's part. The diagnosis is even more difficult to come by in the ED, where blood smears and ADAMTS13 assays are not readily available.

If untreated, TTP in adults typically follows a progressive course in which **irreversible renal failure, progressive neurologic deterioration, cardiac ischemia, and death are common outcomes**.[3,4] The mortality rate prior to the use of plasma exchange was approximately 90%. With plasma exchange – the most effective treatment available for this condition – mortality is 20% or less.[1,4-6] It should be used to treat patients who meet the diagnostic criteria of TTP (thrombocytopenia and microangiopathic hemolytic anemia, +/- renal or neurologic manifestations, and without other cause).[3]

The patient in this case had neurologic symptoms, renal failure, thrombocytopenia, and anemia. In patients like this one, TTP should be considered early on. What can make the diagnosis difficult is the presence of jaundice with abdominal pain, nausea, and vomiting; ascending cholangitis, fulminant hepatic failure, and sepsis can present very similarly. However, with the first suspicions of TTP, plasmapheresis should be considered and prepared.

The patient in this case presented late in the disease course, likely explaining the presence of four of the classical clinical pentad. **It should be remembered that most cases will not present with such clear symptoms.** It will almost always require a high index of suspicion on the part of the provider in order to make the correct diagnosis. Thrombocytopenia should always raise a red flag, and prompt action is warranted to prevent potentially disastrous outcomes. ✶

24 | 7 | 365

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TRIAGE

Difficult decisions about life and death

Triage is an area of medicine without sharply defined boundaries. When an unexpected medical emergency strikes with numerous patients in need, the health care team must make life and death decisions about whom to care for first. Unfortunately, **there is no distinct algorithm for making these decisions.** Moral considerations of justice and lack of triage education among health care professionals leave many physicians unsure about making triage decisions.

In addition to minimal teaching on the subject and the lack of standard protocols, **health care professionals struggle clinically and ethically in deciding the fate of another human being**. Having to make these immediate judgments is counterintuitive to normal health care practices and the belief that *every* patient deserves full consideration and care prior to the determination of futility.

TABLE 1. Circulation, Respiration, Abdomen, Motor and Speech (CRAMS)

VARIABLE	SCORE
Circulation	
Capillary refill, normal or BP >100 mmHg	2
Capillary refill delayed or BP 85-100 mmHg	1
No capillary refill or BP < 85 mmHg	0
Respiration	
Normal	2
Labored or shallow	1
Absent	0
Abdomen/ thorax	
Abdomen and thorax, non-tender	2
Abdomen and thorax, tender	1
Abdomen rigid, flail chest or penetrating injury	0
Motor	
Normal	2
Responds only to pain	1
Decerebrate or no response	0
Speech	
Normal	2
Confused	1
No intelligible words	0
Total	10 < or = 8 is major trauma > 9 is minor trauma (May survive delay in care)

Let us imagine ourselves working in a local emergency department. On this particular night, the weather has wreaked havoc on the community and multiple tornadoes have leveled almost half of the city. Physicians stream in from across the state to help in the ED, while others head into the disaster-stricken town to help triage victims. Most physicians are neither emergency-medicine-trained nor experienced in disaster triage.

As our colleagues observe the horror of so many lifeless bodies, they experience the occasional victim who only looks shaken, and soon, everyone with a pulse is sent to the hospital. This poses the issue of over-triaging and overburdening the only nearby hospital with noncritical patients – possibly delaying care of others who are worse off. This is a common mistake, as we all have the fear of under-triaging, or labeling victims as better off than they really are. **We are afraid of allowing someone to expire who otherwise may have survived with more immediate care.**[1]

Opinions vary when making decisions on who will end up living or dying. If there were quality training on how to make triage decisions, we'd expect similar categorization of victims. In one tabletop exercise, 70 health care teams were assembled to triage 45 victims of a disaster situation into four categories. The number of patients triaged to "immediate" status ranged from four to 44. "Delayed" patients ranged from one to 20, and "ambulatory" patients were anywhere from zero to 29. Finally, "expectant" patients, whom the teams predicted would die in the field, ranged from zero to 17. Depending on which team the victims had, **it is possible that up to 37.8% of disaster victims with potentially survivable injuries may have been allowed to die.**[1]

Given the discrepancies in opinions on what injuries are potentially survivable, unavoidable legal implications exist when making decisions about death. **Triage "mistakes" have led to criminal charges against physicians.** In one infamous case, physician Dr. Anna Pou rushed to treat patients in the aftermath of Hurricane Katrina in New Orleans. She made some very difficult decisions during a time of great stress and scarce resources. Although considered heroic by many, she was charged with homicide of four elderly and critically ill patients. She continued to maintain her desire do the greatest good and eventually was exonerated, but it was difficult for the deceased victims' families to reconcile their loss with the actions of Dr. Pou and her nurses.[2]

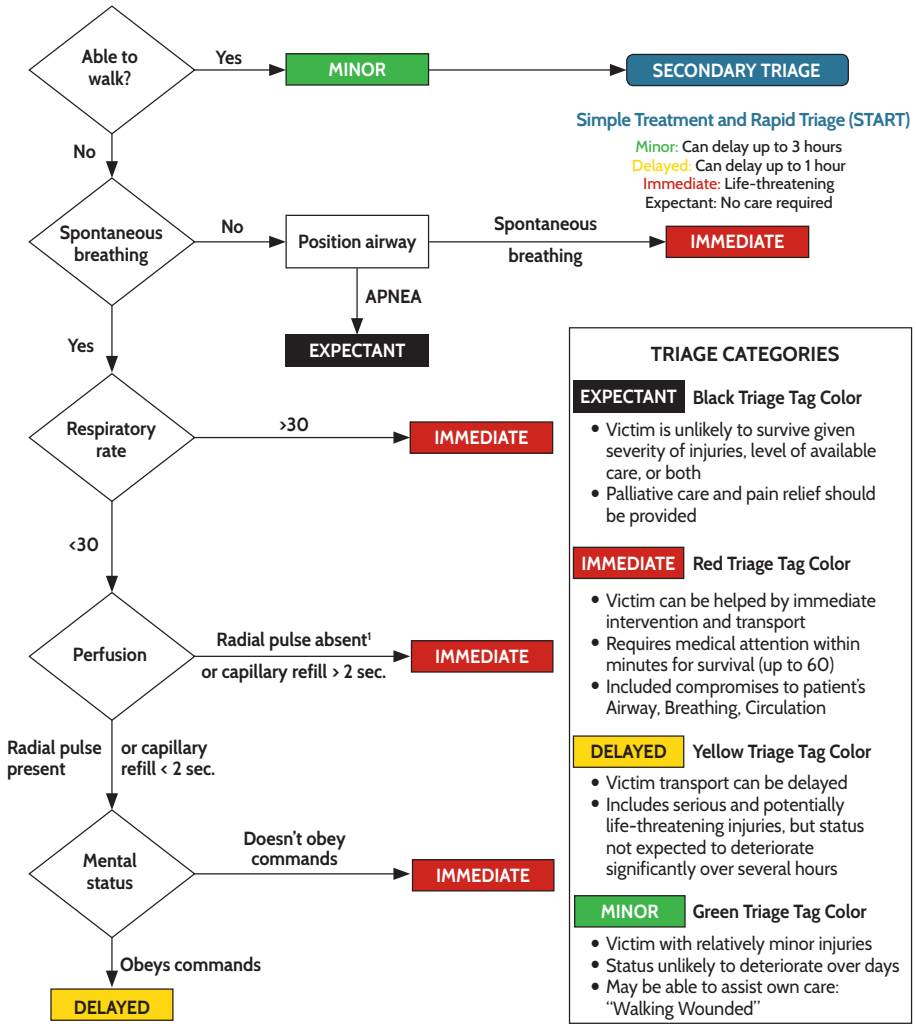
The previous scenario is not an isolated event. If there were medical ethical decision-making programs that trained physicians to make decisions based on a standard of care, physicians would know the right decision and would not face punishment if the standard were followed. All physicians should understand prognosis-based triage, since it extends beyond the scope of emergency care. For example, if terminally ill inpatients have "do not resuscitate" orders but are

Having to make these immediate judgments is counterintuitive to normal health care practices and the belief that every patient deserves full consideration and care prior to the determination of futility.

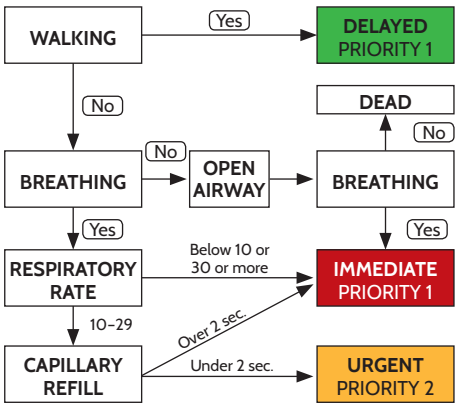
commandeering multiple resources, they should be placed in the expectant category and should be treated for comfort.[2]

Other than a sound standard model, it also is necessary for the health care community to be publicly transparent about the model of triage *before* disaster strikes. Hindsight is 20/20, and it is very easy to instill blame when, in reality, the underlying issue is *confusion*. When a family member is hospitalized, we expect them to be safe and cared for to the extent that all resources will be fatigued in order to maintain his or her life. It is easy to see how this same sentiment could be translated to acute care in the field, when **triage means providing the best care for many – not just the individual**. Most people never expect that care will be withdrawn in a disaster due to "special circumstances," but special circumstances are just that – *special*.

FIGURE 1. START Adult Triage

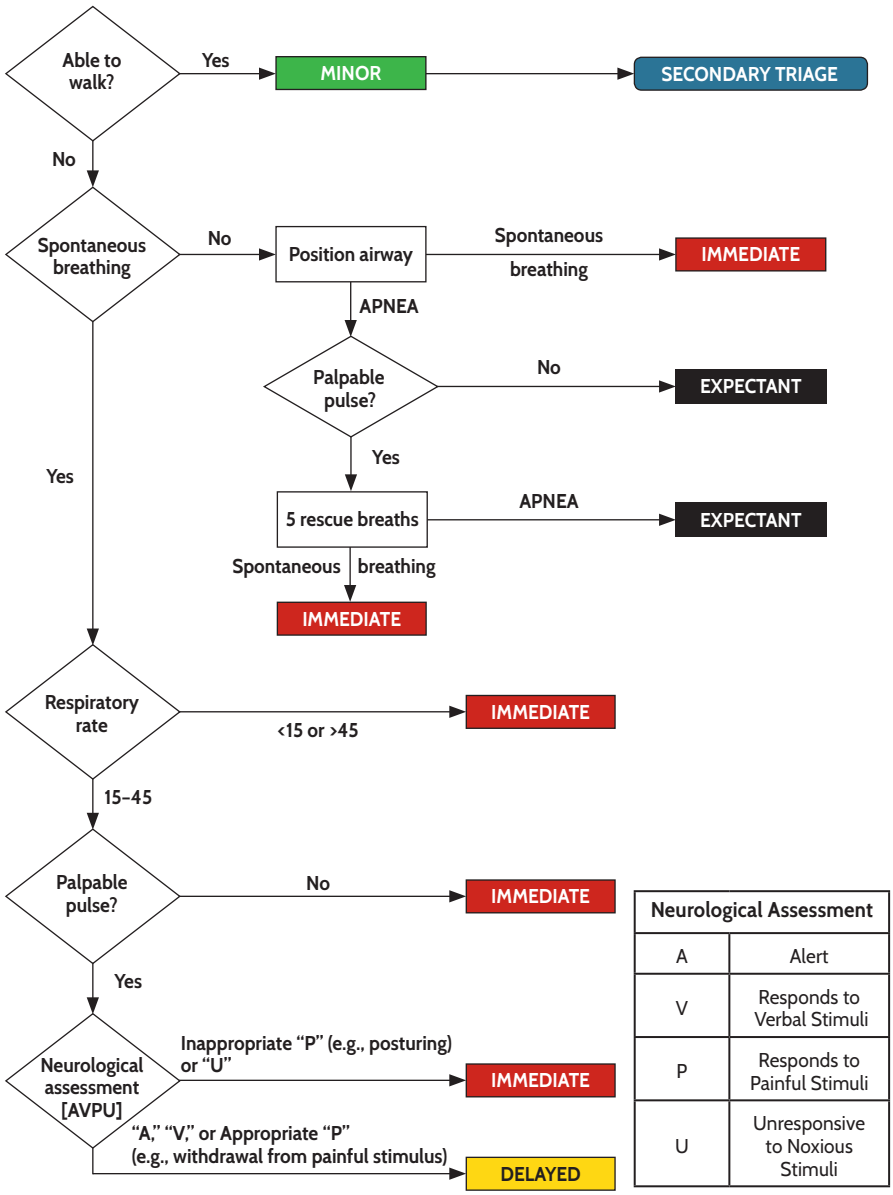


The Adult Triage Sieve



If you are unable to obtain a capillary refill and the pulse is over 120 beats per minute then the patient is PRIORITY 1.

FIGURE 2. JumpSTART Pediatric Multiple Casualty Incident Triage



Neurological Assessment	
A	Alert
V	Responds to Verbal Stimuli
P	Responds to Painful Stimuli
U	Unresponsive to Noxious Stimuli

TRIAGE CATEGORIES

EXPECTANT Black Triage Tag Color
- Victim unlikely to survive given severity of injuries, level of available care, or both
- Palliative care and pain relief should be provided

IMMEDIATE Red Triage Tag Color
- Victim can be helped by immediate intervention and transport
- Requires medical attention within minutes for survival (up to 60)
- Included compromises to patient's Airway, Breathing, Circulation

DELAYED Yellow Triage Tag Color
- Victim transport can be delayed
- Includes serious and potentially life-threatening injuries, but status not expected to deteriorate significantly over several hours

MINOR Green Triage Tag Color
- Victim with relatively minor injuries
- Status unlikely to deteriorate over days
- May be able to assist own care: "Walking Wounded"

Use JumpSTART if the patient appears to be a child.

Use an adult system, such as START, if the patient appears to be a young adult.

However, when physicians are not properly trained in the field of triage, their decisions can be publicly scrutinized – and rightfully so. Physicians learn medical ethics in medical school and make vows of "*primum non nocere*" (to do no harm) upon graduation.

Just as physicians need education on triage, so does the general public. If the public were educated in what to expect should a disaster occur, lawsuits likely would occur less frequently. Before disaster strikes, the community should understand and provide feedback on what the protocols for large-scale emergencies will be.[3]

A standard algorithm will help ease the burden on physicians and give them confidence when they are unsure what will be the best for the most people. One size never fits all, of course, but prepared guidelines will give physicians something concrete to rely on – rather than just gut instinct. Although algorithms exist, no recommendations have been made on which is best. Trying to pick apart each popular algorithm can be confusing; we are best served if we just choose one, learn it well, and do not crumble when the pressure is on.

The Simple Treatment and Rapid Triage (START) algorithm is frequently used. It also may be the most practical and can be performed by any provider. It has been modified for both adult and pediatric patients. Another approach, based on systems – the Circulation, Respiration, Abdomen, Motor, and Speech (CRAMS) algorithm – may be preferred by others and uses the idea that the most severely injured should be transported sooner. Those who have been practicing medicine longer may remember the simple, yet proven, Triage Sieve. Either way, pick an algorithm, use it with confidence, and remember the oath: *primum non nocere*. ✶

A Lemierre's Syndrome case study

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Lemierre's syndrome is a reminder that even the most common complaint can become a medical emergency.

A normally healthy 31-year-old male presents in the emergency department with a **sore throat, myalgias, and fevers**, none of which are relieved by over-the-counter medication. He has no neck pain or stiffness, photophobia, chest pain, dyspnea, nausea, or vomiting. His initial vital signs are a temperature of 103°F, a pulse of 117, and a blood pressure of 112/74. Significantly enlarged tonsils with white exudates are seen in his pharynx, and he has anterior cervical chain lymphadenopathy.

He has a white count of 4.3, and 93,000 platelets on a CBC. Blood cultures are sent, and a presumptive diagnosis of tonsillitis is made. The patient is given penicillin G, IV dexamethasone, and antipyretics. The next day, preliminary blood culture results show gram-variable bacilli and gram-negative rods. The patient is called and asked to return to the emergency department for re-evaluation. On repeating a CBC, a worsening thrombocytopenia of 41,000, and a WBC of 11.0 are noted. **Due to concern for Lemierre's syndrome, the patient is started on ampicillin/sulbactam, and admitted to the hospital.**

Discussion

Lemierre's syndrome is characterized by a primary oropharyngeal infection with evidence of internal jugular vein thrombosis and isolation of anaerobic pathogens. The typical etiologic agent is *Fusobacterium necrophorum*, which is part of the normal flora of the pharynx and GI and genital tracts. It is a non-spore forming, non-motile, anaerobic gram-negative rod; however, it is known for having a pleomorphic nature, including filaments, short rods, and coccoid elements.

***F. necrophorum* has been known since 1900 to cause severe infection.**[1] A syndrome of sepsis with thrombophlebitis after oropharyngeal infection, referred to as "postanginal septicemia" or "necrobacillosis," was first described in 1912. The disease – as it is known today – gets its name from the French bacteriologist Andre Lemierre, who in 1936 clarified its bacterial association. Additionally, Lemierre provided detailed descriptions of the symptomology and disease course, as well as the improvement in prognosis after antimicrobial therapy.[2]

The incidence of Lemierre's syndrome drastically decreased in the 1940s, when antibiotics for pharyngitis gained popularity, but the disease recently has been on the rise.[3] The current incidence of the disease is estimated to be between 0.8 and 1.5 per million per year. In a recent literature review, only six cases were found between 1980 and 1990, but there were 50 case reports published from 1991 to 2000, and 121 cases reported between 2001 and 2009.[4] It is postulated that the more prudent use of antibiotics in pharyngitis, bacterial-resistance patterns, and underreporting in previous years have contributed to this rise.

Primary oropharyngeal infection always precedes Lemierre's syndrome. This infection can be an acute tonsillitis, peritonsillar abscess, parapharyngeal abscess, retropharyngeal abscess, or even a dental abscess. The bacteria then invade the surrounding tissues, entering laterally through the pharyngeal space to the carotid sheath. This invasion may spur the development of thrombophlebitis of the internal jugular vein. *Fusobacterium* causes aggregation of human platelets, which is why thrombocytopenia is seen.

Platelet clumping has been associated with increased hemagglutination activity, which, in turn, causes more aggregation. This promotes an environment more favorable for the growth of *F. necrophorum*, allowing it to rapidly propagate.[4] **Dissemination of septic emboli from the primary clot is a known complication**. This results in metastatic abscesses, most commonly seen in the lung or pleura. Other complications include osteomyelitis, endocarditis, intra-abdominal and cerebral abscesses, splenic infarcts, pyomyositis, cutaneous abscesses, meningitis, and cerebral infarctions.[2]

Treatment consists of antibiotic therapy and, occasionally, anticoagulation. Antibiotic regimens have been used, including penicillin, beta lactam/beta

lactamase inhibitor combinations, metronidazole, carbapenems, and chloramphenicol. **The use of anticoagulants is controversial**, as there are no conclusive studies on its efficacy. It typically is given on a per-case basis to potentially shorten the course of the infection and lower the risk of the clot-propagating retrogradely. Prior to anticoagulation, other causes of thrombocytopenia must be ruled out, including alcohol abuse and malignancy. There has never been a direct or numerical correlation between improvements in disease state (bacterial load) with improvement of platelet count. Once the bacterial infection is treated and the patient appears clinically well, the thrombocytopenia should resolve.

Lemierre's syndrome is a reminder that even the most common complaint can become a medical emergency. In this scenario, the thrombocytopenia could easily have been referred for outpatient follow-up, and blood cultures might have been deferred in a well-appearing young male with pharyngitis – leading to a disastrous outcome. Without treatment in the pre-antibiotic era, fulminant infection complicated by meningitis, cavernous sinus thrombosis, DIC, and multi-organ system failure led to death within 12 days.[4] **Lemierre's syndrome may be on the rise**, and emergency physicians should include it in their differential diagnoses.

Case follow-up

After the patient was admitted, a CT scan of the neck with contrast was obtained. The images showed a non-occluding thrombus of the external branch of the right internal jugular vein, as well as a hypodense, 1-cm fluid collection in the right palatine tonsil. Final blood cultures showed growth of *F. necrophorum*, confirming a diagnosis of Lemierre's syndrome. A six-week course of intravenous ertapenem, and anticoagulation with warfarin was initiated. He was eventually discharged home without further complications or recurrence. ✶

Warning Signs

Clinical symptoms of Lemierre's syndrome include:

- Severe sore throat
- Extreme lethargy
- Fever
- General body weakness
- Shortness of breath
- Chest pain
- Symptoms that mimic pneumonia and strep throat
- Tenderness in the front and side of the neck

After the infection starts to set in (could be a week or two), the symptoms become worse and include:

- Spiked HIGH fever
- Rigors
- Swollen lymph nodes in the neck area
- Joint pain

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- **Oct 15** — EMRA 24|7|365 Documentary Film Premiere, Seattle, WA
- **Nov 4–11** — Emergency Medicine Basic Research Skills (EMBRS) Workshop, Dallas, TX
- **Nov 11–17** — ABEM Qualifying Exams, Nationwide
- **Mar 5** — Residents' Appreciation Day, Nationwide
- **Mar 15** — EMRA Spring Awards Application Deadline
- **Mar 30** — CORD Academic Assembly, New Orleans, LA
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BOARD REVIEW+ QUESTIONS

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

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

1. The Dix-Hallpike test is useful in the evaluation of which of the following presentations of vertigo:
   A. Benign paroxysmal positional vertigo
   B. Labyrinthitis
   C. Meniere disease
   D. Vertebrobasilar insufficiency

2. A 42-year-old woman presents for evaluation of nighttime epigastric abdominal pain, nausea, and occasional vomiting that have worsened progressively over the past three weeks. Symptoms have not been affected by diet, activity, or position but improve during the day, and with antacids and omeprazole. She denies NSAID and alcohol use; she is obese and has no significant medical history. Physical examination is unremarkable except for mild epigastric tenderness and hemoccult-negative stool. Which of the following is most likely to prevent recurrence of these symptoms?
   A. Antibiotics
   B. Cholecystectomy
   C. H2 blockers
   D. Oral NSAID drugs

3. A 24-year-old woman presents with abdominal and chest pain after falling off a horse. Chest radiograph reveals some irregularity of the left hemidiaphragm. Which of the following provides the most useful diagnostic information?
   A. Location of the abnormal finding
   B. Placement of a nasogastric tube
   C. Results of diagnostic peritoneal lavage
   D. Results of MRI

4. Which of the following statements regarding ST-segment elevation MI during pregnancy is correct?
   A. Low-molecular-weight heparin is preferred over unfractionated heparin
   B. Most pregnant women with this disease have normal coronary arteries
   C. Percutaneous coronary intervention is the treatment of choice
   D. Pregnancy is an absolute contraindication for thrombolytics

5. A patient presents with fever, flu symptoms, and breathing difficulty that has rapidly progressed to near respiratory failure. Chest radiography reveals bilateral pleural effusion with mediastinal widening, and chest CT reveals some hilar lymphadenopathy but no pulmonary embolism. What is the most likely diagnosis?
   A. Esophageal rupture
   B. Inhalation anthrax
   C. Lung cancer
   D. Pneumonia

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

RISK MANAGEMENT PITFALLS

EMERGENCY MANAGEMENT OF DYSPNEA IN DYING PATIENTS

EB MEDICINE
Improving Patient Care

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1. **"I don't want to do anything aggressive to her because she's DNR."**
Remember that DNR does not mean "do not treat." This order only applies to care that is delivered when the patient has experienced a full cardiopulmonary arrest. Many patients who elect to be DNR would like other treatments (such as IV fluids and even intubation), particularly in the setting of a reversible process.

2. **"The person at the bedside seems to know the patient well, so I'll just let him make all of the decisions."**
Physicians should make reasonable efforts to determine who the patient's legal and appropriate decision-makers are. In some states, health care providers are protected from civil and legal liability if they are determined to have navigated this process in good faith.

3. **"The family says they want everything done. It seems like a strange decision given the patient's prognosis, but it's not for me to explore this further. I will assume that means they want her to be intubated and that they want a central line placed so that vasopressor therapy can be initiated."**
Patients and families often say they want "everything" without fully understanding what this means or the implications of certain treatment decisions (such as intubation). It is better to ask them what they are hoping for, in light of the patient's condition, and then make treatment recommendations that allow their goals to be met.

4. **"I can't give morphine to a patient in respiratory distress. I don't want to be accused of euthanizing anyone!"**
Opioids are the first-line treatment for dyspnea at the EOL. They are safe and effective when used in appropriate doses to target symptoms. Withholding this widely accepted palliative intervention is inappropriate, particularly in patients endorsing comfort as their primary goal.

5. **"How was I supposed to know the patient had a POLST designating his care to be focused on 'comfort measures only'? I assume if he's coming to the ED, he must want something more."**
Health care providers should be diligent in searching for previously completed advance directives, particularly in patients transitioning from the nursing home environment, as advance directives are now widely employed in this setting. Many patients develop significant symptoms at the EOL, and not all nursing homes and/or families are prepared to manage the complex needs of such patients (particularly in the absence of hospice services).

6. **"The patient is dying and the family says she only wants comfort-focused care, but I have religious objections to just allowing a patient to die. I'm going to intubate her and let the team upstairs sort this out."**
One of the most important ethical principles that should guide physician behavior is that of patient autonomy. Patients have a legal and ethical right to determine what happens to their bodies. Particularly in the setting of a terminal illness, it is reasonable and normal that patients and families may decide to forgo life-sustaining treatments and focus on maximizing quality of life. If the physician caring for the patient has ethical objections to such decisions, he or she is obligated to find another physician who can honor the wishes and needs of the patient.

7. **"This patient is here all the time for respiratory failure secondary to her COPD, and yet she keeps smoking. This feels futile and like a total waste of resources. I refuse to intubate her this time."**
Patients have a right, within reason, to determine what happens to their bodies. Particularly in the setting of an organ-failure diagnosis like COPD, short-term periods of critical care may result in significant improvement in the patient's condition and allow the patient to recover with a reasonable quality of life. In the context of medical ethics, justice is an important ethical principle that pertains to the equitable distribution of resources. Decisions regarding justice should largely be made at the policy level, while individual physician-patient encounters should largely be guided by the principles of autonomy, beneficence, and nonmaleficence.

8. **"I just had a really informative conversation with the patient and have a full understanding of her treatment goals, which include focusing on her comfort and not prolonging her dying process. But I am way too busy to write this stuff down in the chart, so I'll just communicate my discussion with the inpatient team."**
All important discussions about EOL decision-making should be documented appropriately in the patient's chart. Individual institutions have different policies about how DNR and DNI documentation should occur, but a witness to such discussions is often required. Many patients who are dying eventually lose their ability to make decisions, which makes any direct conversations about treatment preferences of critical value to future care. ✶

RISK MANAGEMENT PITFALLS
ACUTE ASTHMA IN THE PEDIATRIC PATIENT

EB MEDICINE Improving Patient Care An Evidence-Based Review

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1 "She didn't wheeze, so she couldn't have had asthma."
Although asthma is the most common cause of wheezing in children aged > 2 to 3 years, there are multiple other causes that should be considered. In the pediatric population, bronchiolitis, airway foreign bodies, and laryngomalacia/tracheomalacia are other common asthma imitators that may be difficult to distinguish from a reactive airway asthma.

2 "He was in respiratory distress, but he wasn't wheezing, so he must not have had asthma."
Some patients present with such severe exacerbations that they are unable to generate enough air movement to wheeze. In fact, the "silent lung" can be an ominous finding and generally requires aggressive treatment. Additionally, patients with cough-variant asthma may not present with wheezing, but they may present with a history of persistent cough, particularly at night.

3 "She couldn't have had asthma because she didn't respond to inhaled albuterol."
Patients with severe exacerbations or prolonged symptoms prior to presenting to the ED may exhibit poor initial response to albuterol. For these patients, continued aggressive bronchodilator therapy for their asthma is critical. The addition of systemic corticosteroids is crucial, as corticosteroids and beta agonists act synergistically. Steroids can increase the expression of beta agonist receptors and prevent their downregulation when beta agonists are administered.

4 "I ordered a chest x-ray because all patients who present in respiratory distress should have one."
For most patients with asthma, chest x-rays add little to the clinical assessment. Abnormal chest x-rays are common in children with acute asthma, but they rarely result in changes to management. Chest x-rays may be helpful in children with fever >39°C, hypoxia, focal abnormalities on examination, no family history of asthma, or in those who respond less favorably than expected to bronchodilator therapy. Chest x-rays may also be warranted in children with unilateral chest pain or differential wheezing to evaluate for foreign body, pneumothorax, or pneumomediastinum.

5 "I was reassured because her blood gas reading was normal."
Since pulse oximetry and ETCO2 monitoring are now readily available, blood gases are generally unnecessary in acute asthma management. There are currently no laboratory values that define respiratory failure; it is a clinical diagnosis. Furthermore, patients are often able to compensate for severe distress until failure is imminent; thus, reliance on a blood gas finding may provide a false sense of security.

6 "I didn't prescribe corticosteroids because they are not indicated in mild exacerbations."
Corticosteroids combat the inflammatory component of asthma and are an integral part of acute asthma management. Even for mild exacerbations, steroids have been shown to improve symptoms, decrease the rate of relapse, and decrease return visits to the ED. Corticosteroids are best given early in an exacerbation.

7 "He couldn't tolerate oral steroids, so I gave him inhaled corticosteroids. They are just as effective."
Although inhaled corticosteroids are paramount in the daily control of asthma, they offer little in its acute management. For exacerbations, systemic corticosteroids are required to treat inflammation. For patients who cannot tolerate oral steroids, dexamethasone may be given IM or IV. If compliance is an issue, a single dose of dexamethasone by mouth is equally as effective as a three- to five-day course of oral prednisolone.

8 "Inhaled anticholinergics like ipratropium should be given alongside bronchodilators throughout an acute exacerbation."
Anticholinergics provide beneficial adjunct treatment by blocking cholinergic receptors and reducing bronchoconstriction. Although ineffective as monotherapy, ipratropium coadministered with beta agonists can improve lung function and reduce hospitalization rates in children with moderate to severe exacerbations in the acute setting. Ipratropium is generally given in the first 24 hours of treatment. Studies of children with acute exacerbations have failed to show any benefit to the addition of ipratropium beyond the first 24 hours. ✶

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Albuquerque: Come **earn $200-$250 per hour** at "One of the Best Places to Work in Healthcare." Emergency Physician opportunities are available at the **Lovelace Health System** in beautiful Albuquerque. **Three Hospital System** with ED volumes ranging from 23K-33K. These are long term, **stable contracts** with a **strong leadership team**. Must be BC/BP in EM. Enjoy **flexible scheduling**, paid malpractice with tail and free & discounted CME. Contact Nicole Pletan: (877) 278-2056; email npletan@hppartners.com or visit www.hppartners.com.

NEW YORK

Brooklyn: Emergency Medicine Physicians Needed. NES Healthcare Group is seeking emergency medicine physicians for Lutheran Medical Center (LMC), Brooklyn, NY. LMC is a Level I Trauma Center and a designated stroke center. Candidates must be BC/BP EM and have current EM experience. Competitive compensation, incentive program, CME allowance and malpractice coverage provided. Contact: Patricia Rosati, Physician Recruiter, 800.394.6376, fax 631.265.8875, prosati@neshold.com.

Long Island, Albany and Cortland: Brookhaven Memorial Hospital Medical Center is in Patchogue on the southern shore of Long Island and sees 73,000 ED pts/yr. Cortland Regional Medical Center is a modern, full-service facility situated in the Finger Lakes Region between Syracuse and Ithaca (35,000 ED pts/yr). Albany Memorial Hospital has a new ED (47,000 pts/yr) and hosts EM resident rotations, while Samaritan Hospital in Troy is a respected community hospital minutes from Albany seeing 47,000 ED pts/yr. Outstanding partnership opportunity includes equal profit sharing, equity ownership, funded pension, open books, full benefits and more. Contact Ann Benson, (careers@emp.com), Emergency Medicine Physicians, 4535 Dressler Rd, NW, Canton, OH 44718, 800-828-0898 or fax 330-493-8677.

NORTH CAROLINA

Charlotte area: CaroMont Regional Medical Center is situated just west of Charlotte in Gastonia. This modern, full-service facility sees 99,000+ emergency pts./yr. and is a Level III Trauma Center. EMP is an exclusively physician owned/managed group with open books, equal voting, equal equity ownership, funded pension, comprehensive benefits and more. Contact Ann Benson (careers@emp.com), Emergency Medicine Physicians, 4535 Dressler Rd. NW, Canton, OH 44718, 800-828-0898 or fax 330-493-8677.

Charlotte: EMP is partnered with eight community hospitals and free-standing EDs in Charlotte, Gastonia, Lincolnton, Pineville and Statesville. A variety of opportunities are available in urban, suburban and smaller town settings with EDs seeing 10,000 – 99,000+ pts./yr. EMP is an

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Eastern Shore – Volumes from 15 to 37K	www.umem.org/page/hospitals/eastern_shore
DC Suburbs – Volumes from 34 to 60K	www.umem.org/page/hospitals/pg_county

Our supportive team approach in the delivery of high quality patient care features:

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exclusively physician owned/managed group with open books, equal voting, equal equity ownership, funded pension, comprehensive benefits and more. Contact Ann Benson (careers@emp.com), Emergency Medicine Physicians, 4535 Dressler Rd. NW, Canton, OH 44718, 800-828-0898 or fax 330-493-8677.

New Bern: Respected 313-bed regional medical center located at the intersection of the Trent and Neuse Rivers just off the central coast, 73,000 ED pts./yr. Outstanding partnership opportunity includes equal profit sharing, equity ownership, funded pension, open books, full benefits and more. Contact Ann Benson (careers@emp.com), Emergency Medicine Physicians, 4535 Dressler Rd. NW, Canton, OH 44718. 800-828-0898 or fax 330-493-8677.

OHIO

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

Columbus: Choose from two very appealing Columbus locations. Grady Memorial Hospital and Memorial Union Hospital are located in the north Columbus suburbs of Delaware and Marysville. Volumes are 27,000 and 21,000 with MLP support. Both opportunities offer physicians the exceptional benefits of working within a regional group with a very appealing model. Premier Physician Services is an equity-ownership where physicians share in both the profits and the decisions. Our mid-sized group offers the flexibility and access of independent groups without sacrificing the financial stability of larger groups. Package includes great benefits including family medical plan, employer-funded pension, CME/expense account, and shareholder status in one year with no buy-in. For additional information contact Amy Spegal, Premier Physician Services, (800)726-3627, ext 3682, e-mail aspegal@premierdocs.com, fax (937)312-3683.

Concord, Madison and Willoughby: Lake Health is situated in the eastern Cleveland Suburbs. TriPoint Medical Center was built in 2009 and treats 31,000 emergency pts./yr. The Madison Medical Campus hosts a freestanding ED seeing 12,000 pts./yr. West Medical Center is a state-of-the-art acute care hospital serving 37,000 ED pts./yr. Outstanding partnership opportunity includes weekend shift differential, performance pay, equal equity ownership, equal voting, funded pension, open books, comprehensive benefits and more. Contact Ann Benson (careers@emp.com), Emergency Medicine Physicians, 4535 Dressler Rd. NW, Canton, OH 44718, 800-828-0898 or fax 330-493-8677.

WHAT'S IMPORTANT TO YOU... IS WHAT MATTERS TO US!®

Listening is a major requirement in the delivery of quality patient care. It is also a requirement when matching the right physician with the right emergency department. Where do you want to work? What are your personal and professional goals and priorities? These are the questions we want to know. Here are a few thoughts we'd like you to consider as you start your search for a new opportunity:

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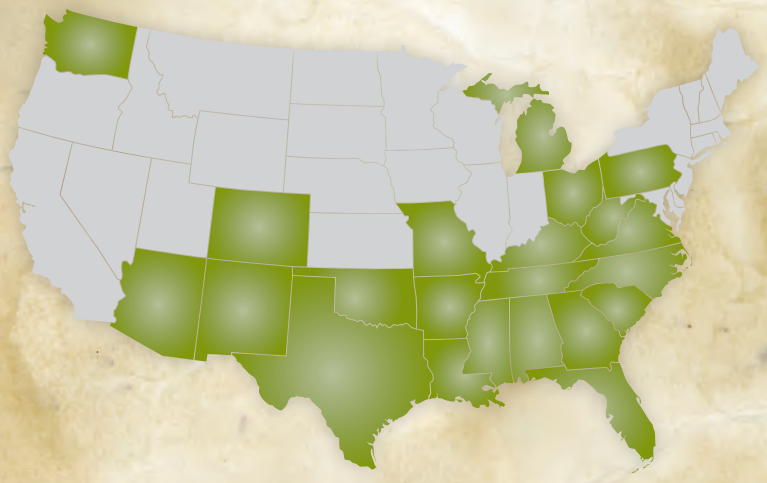
WHERE DO YOU WANT TO BE? HPP CAN HELP GET YOU THERE...



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Dayton: Enjoy the advantage of working within an EM group offering a voice, a financial share, and the opportunity to make a difference in your company. Premier Physician Services offers the stability of a guaranteed package, along with the reward of equity-ownership. Very appealing model offers shareholder status at one year with no buy-in; an excellent package with guaranteed rate, additional incentive, family medical plan, employer-funded pension, malpractice, expense account & additional benefits. Premier also offers the opportunity to elect alternate options and receive additional compensation. This is a 40,000 volume ED in a north Dayton suburb with 9-hour shifts, collegial environment and an outstanding physical plant. For additional information contact Greg Felder, Premier Physician Services, (800) 726-3627, ext 3670, e-mail gfelder@premierdocs.com, fax CV (937)312-3671.

Medina and Wadsworth: Combined two-site position at a brand new free-standing ED (~7,000 pts/yr) and established community hospital (19,000 pts/yr). Nice communities are near Akron and the area's most desirable residential communities. Outstanding partnership opportunity includes equal profit sharing, equity ownership, funded pension, open books, full benefits and more. Contact Ann Benson (careers@emp.com), Emergency Medicine Physicians, 4535 Dressler Rd. NW, Canton, OH 44718, 800-828-0898 or fax 330-493-8677.

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

Springfield: EMP is pleased to announce one of our newest sites – Springfield Regional Medical Center. The area's only full-service hospital, Springfield Regional is situated 45 miles west of Columbus and 25 miles northeast of Dayton, with 75,000 emergency patients treated annually. EMP is an exclusively physician owned/managed group with open books, equal voting, equal equity ownership, funded pension, comprehensive benefits and more. Contact Ann Benson (careers@emp.com), Emergency Medicine Physicians, 4535 Dressler Rd. NW, Canton, OH 44718, 800-828-0898 or fax 330-493-8677.

Toledo: This Level III facility has an annual volume of 42,000 visits with outstanding physician coverage plus PA coverage. Premier Physician Services is seeking an EM Physician sharing our commitment first to quality patient care and excellence. In return we offer superb financial and professional opportunity with the opportunity to participate fully in the decisions and financial rewards of the practice. Maximize your earnings and establish your future with productivity based compensation plus shareholder opportunity at one year with no buy-in. A

Emergency Physicians of St. Louis

St. Louis – Emergency Physicians of St. Louis is a young private democratic group made up of EM BC/BP physicians seeking to bring another full-time physician into our group. St. Louis is a vibrant city with an affordable cost of living, easy access to outdoor activities and ideal for raising a family. Candidate must be ABEM/AOBEM BC/BP.

We value a balanced life and an equitable practice and have created a company that espouses these principles. Our group staffs a 43 bed emergency department that sees about 55k adults yearly and has moderate/high acuity. There is superb coverage including 12-36 hours of midlevel staffing daily. We also employ scribes. Compensation is excellent including health/dental/disability insurance, 401k with Safe Harbor Match/Profit Sharing and a one-year partnership track. Total Compensation package averages around $350K and our contract is for 132 hours a month!!!

Please contact for further information
Mag Greig, Practice Manager
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SAN ANTONIO

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

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

The successful candidate will join a diverse, enthusiastic group of academic Emergency Physicians committed to creating the premiere Emergency Medicine residency program and academic department in Texas. Our initial class of Emergency Medicine residents started July 2013. Academic Emergency Physicians with expertise in EMS, Ultrasound, Toxicology, and multiple dual-board certified EM/IM physicians currently round out the faculty.

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

http://emergencymedicine.uthscsa.edu

Excellent Opportunity for BC/BE Emergency Medicine Trained Physicians

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Visit us at the EMRA Career Fair on October 14th during the ACEP Conference!

Rochester General Health System is a Top 100 Integrated Network and the region's third largest employer, with eight affiliates offering comprehensive and nationally recognized care.

- # 3 in New York State for overall Hospital Care – CareChex – Delta Group 2012
- # 1 in New York State and # 3 Nationally for Cardiac Care – CareChex – Delta Group 2012
- Nationally Recognized Centers of Excellence: Rochester Hearst Institute, Lipson Cancer Center, Orthopaedics, Women's Health, Primary Care, Surgical Services and Behavioral Health– Delta Group 2012
- Nurse Magnet Destination

About Rochester, NY: Located on the shores of Lake Ontario, Rochester is ranked by Forbes as the fourth most affordable U.S. city and the # 3 metro region nationwide for raising a family. The Rochester area is home to 15 of the country's finest colleges and universities, and public school districts with high schools ranked among the best in America.

If you are ready to join a **Patient-Centered Emergency Medicine Team** in a **Top Ranked Health System**, please submit an online application at http://careers.rochestergeneral.org/careers/physicians/ and email your CV to kathy.peishel@rochestergeneral.org or brennan.canty@rochestergeneral.org

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very appealing benefit package including family medical plan, employer-funded pension, malpractice, expense account & additional benefits is also provided. Contact Amy Spegal, Premier Physician Services, (800)726-3627, ext. 3682, e-mail aspegal@premierdocs.com, fax: (937)312-3683.

Urbana: EMP is pleased to announce another of our newest sites – Mercy Memorial Hospital. Servicing the SW Ohio region's residents in Urbana and Champaign County, the facility treats approximately 18,000 emergency pts./yr. EMP is an exclusively physician owned/managed group with open books, equal voting, equal equity ownership, funded pension, comprehensive benefits and more. Contact Ann Benson (careers@emp.com), Emergency Medicine Physicians, 4535 Dressler Rd. NW, Canton, OH 44718, 800-828-0898 or fax 330-493-8677.

OKLAHOMA

Tulsa: Modern 971-bed regional tertiary care center sees 95,000 ED patients per year. Broad pathology, high acuity, modern facilities and supportive environment. Outstanding partnership opportunity includes equal profit sharing, equity ownership, funded pension, open books, full benefits and more. Contact Ann Benson (careers@emp.com), Emergency Medicine Physicians, 4535 Dressler Rd. NW, Canton, OH 44718, 800-828-0898 or fax 330-493-8677.

OREGON

Salem: Partnership opportunity with independent, democratic, and well established group at 95K annual volume Salem Hospital, Level II trauma center with excellent specialty support. New ED built in 2009, EPIC EMR with scribes, extensive leadership opportunities. Benefits include flexible scheduling, CME stipend, malpractice, medical, 401K, and more. Must be EM BC/BP. Salem is located 45 minutes south of Portland, in the heart of Oregon's wine country. We love it here and you will too. Send CV, cover letter and recent photo to sepspc@salemhealth.org or call us at 503-561-5634.

PENNSYLVANIA

New Castle: EMP is pleased to announce one of our newest sites – Jameson Hospital. This respected facility is situated between Pittsburgh, PA and Youngstown, OH with easy access to the amenities and residential options of each. Recent major renovation includes a new ED with 30 private rooms; 36,000 emergency patients are treated per year. EMP offers outstanding partnership opportunity including performance pay, equal equity ownership, funded pension, open books, comprehensive benefits and more. Contact Ann Benson (careers@emp.com), Emergency Medicine Physicians, 4535 Dressler Rd. NW, Canton, OH 44718, 800-828-0898 or fax 330-493-8677.

Pittsburgh: Allegheny Valley Hospital in Natrona Heights boasts a brand new ED seeing 37,000 emergency pts./yr. Forbes Regional Hospital is a respected facility in Monroeville seeing 43,000 ED pts/yr. Both sites are proximate to Pittsburgh's most desirable residential communities; areas afford easy access to abundant outdoor

East Carolina University
Brody School of Medicine

EMERGENCY MEDICINE FACULTY
Clinician-Educator ◊ Clinician-Researcher
Pediatric Emergency Medicine ◊ Ultrasound

The Department of Emergency Medicine at East Carolina University Brody School of Medicine seeks BC/BP emergency physicians and pediatric emergency physicians for tenure or clinical track positions at the rank of assistant professor or above, depending on qualifications. We are expanding our faculty to increase our cadre of clinician-educators and further develop programs in pediatric EM, ultrasound, and clinical research. Our current faculty members possess diverse interests and expertise leading to extensive state and national-level involvement. The emergency medicine residency is well-established and includes 12 EM and 2 EM/IM residents per year. We treat more than 120,000 patients per year in a state-of-the-art ED at Vidant Medical Center. VMC is a 900+ bed level 1 trauma center and regional stroke center. Our tertiary care catchment area includes more than 1.5 million people in eastern North Carolina, many of whom arrive via our integrated mobile critical care and air medical service. Our new children's ED opened in July 2012, and a new children's hospital opened in June 2013. Greenville, NC is a fast-growing university community located near beautiful North Carolina beaches. Cultural and recreational opportunities are abundant. Compensation is competitive and commensurate with qualifications; excellent fringe benefits are provided. Successful applicants will be board certified or prepared in Emergency Medicine or Pediatric Emergency Medicine. They will possess outstanding clinical and teaching skills and qualify for appropriate privileges from ECU Physicians and VMC.

Confidential inquiry may be made to:
Theodore Delbridge, MD, MPH, Chair, Department of Emergency Medicine
delbridget@ecu.eduECU

ECU is an EEO/AA employer and accommodates individuals with disabilities. Applicants must comply with the Immigration Reform and Control Act. Proper documentation of identity and employability required at the time of employment. Current references must be provided upon request.

www.ecu.edu/ecuem • 252-744-1418

McLaren
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Explore and excellent opportunity for a BC/BP Emergency Physician to join our group in either a full or part-time capacity at a growing, profitable hospital in Bay City.

Since opening a new ED in 2007, patient volume growth has been steady with an expected 45,000+ patient visits this year. McLaren-Bay Region has a supportive administrative team and progressive medical staff that provide coverage for all of the major specialties. Our group offers a stable contract, top tier benefit and compensation package along with fair scheduling. Bay City and surrounding communities offer affordable housing and a short commute to major cities and Northern Michigan.

If you are interested in this opportunity, please send CV to:

Kenneth Parsons, M.D., M.P.H, FACEP
kpmdmph@comcast.net
or call 989-894-3145
for more information

QESI

#1 City for Emergency Care in the Country

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Qualified Emergency Specialists, Inc. (QESI), is looking for energetic **BC/BP Emergency Medicine physicians** to join our locally owned and managed group built for physicians by physicians.

+ Expanding in Our Regional Market
+ Full Benefits Package - Self Directed Retirement
+ Private, Democratic, Physician Owned Group
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+ Oportunity for Full Equity Partnership and Dividend in One Year

We serve a regional not-for-profit health system that includes a Level III Trauma Center, two free-standing emergency departments, and both urban and suburban tertiary care centers.

"Visit over 100 Museums and Galleries that dot the region, play a Championship Golf Course, hike through one of the Nation's most extensive park systems, enjoy water sports on the scenic Ohio River, or catch a Cincinnati Reds game."

Contact Sean Larkin at (800) 346-0747 ext. 6086
or email your CV to info@psrinc.net and reference QESI.

Ochsner Health System

EMERGENCY MEDICINE PHYSICIANS

Ochsner Health System in **New Orleans** is seeking additional residency trained and board-eligible/certified **EMERGENCY MEDICINE PHYSICIANS** to join our expanding multi-hospital 40-physician department.

Ochsner Health System is a physician-led, non-profit, academic, multi-specialty, healthcare delivery system dedicated to patient care, research, and education. At Ochsner our mission is to Serve, Heal, Lead, Educate, and Innovate. The system includes 8 hospitals and more than 40 health centers throughout Southeast Louisiana. Ochsner employs over 850 physicians representing all major medical specialties and subspecialties. We conduct over 300 ongoing clinical research trials annually. We offer a generous and comprehensive benefits package. We also enjoy the advantage of practicing in a favorable malpractice environment in Louisiana. Please visit our website at www.ochsner.org.

Ochsner Health System and The University of Queensland Medical School in Brisbane, Australia began a unique, joint partnership in 2009 by opening the University of Queensland School of Medicine Clinical School at Ochsner, providing U.S. medical students with an unprecedented educational experience.

New Orleans is one of the most exciting and vibrant cities in America. Amenities include multiple universities, academic centers, professional sports teams, world-class dining, cultural interests, renowned live entertainment and music.

Please email CV to: profrecruiting@ochsner.org. Ref. # AEMPNO2 or call 800-488-2240 for more information. EOE. Sorry, no J-1 visa opportunities available.

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

Sharon: Sharon Regional Health System has an extremely supportive administration/medical staff, newer ED, and full service capabilities making this a great place to work with 38,000 patients treated annually. Small city setting offers beautiful housing and abundant recreation less than an hour from Pittsburgh and Cleveland. Outstanding partnership opportunity includes equal profit sharing, equity ownership, funded pension, open books, full benefits and more. Contact Ann Benson (careers@emp.com), Emergency Medicine Physicians, 4535 Dressler Rd. NW, Canton, OH 44718, 800-828-0898 or fax 330-493-8677.

Hospital Physician Partners
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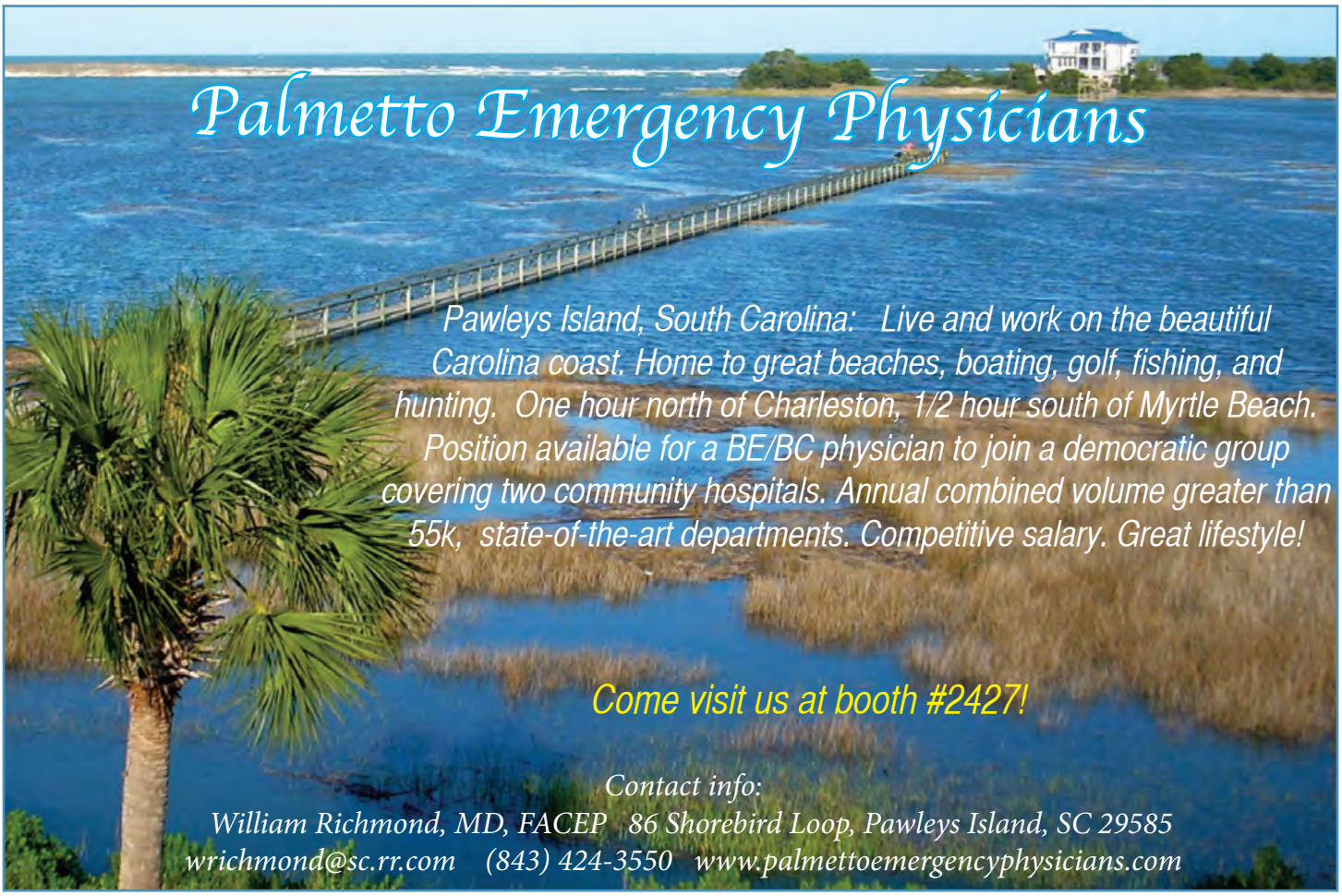
York: One of Pennsylvania's most respected hospitals is currently revising its emergency department compensation model and preparing to build a **brand new hospital in 2015**. Join us today! Memorial Hospital is a 100-bed **teaching facility** with a **43,000 annual ED Volume** and has been named **one of *PA's Best Places to Work* 11 years in a row**! HPP is a family-owned and oriented, physician-led company with **actively practicing clinical leaders**. We offer our IC providers **flexible scheduling**, free CME, full access to a suite of Insurance Benefits & Tax Planning Services, and much more. If you want to love where you work, contact Molly Smith: (954) 628-0143; email msmith@hppartners.com or visit www.hppartners.com.

RHODE ISLAND

Westerly: The Westerly Hospital is a 125-bed community hospital situated in a beautiful beach community in SE RI 45 minutes from Providence and 1.5 hours from Boston. Modern, well-equipped ED sees 26,000 pts./yr. Outstanding partnership opportunity includes performance pay, equal equity ownership, funded pension, open books, comprehensive benefits and more. Contact Ann Benson (careers@emp.com), Emergency Medicine Physicians, 4535 Dressler Rd. NW, Canton, OH 44718, 800-828-0898 or fax 330-493-8677.

SOUTH CAROLINA

Exceptional opportunity to become a member of a well-respected, growing EM Department with plans to incorporate an EM residency in the near future. ED physicians provide coverage to four local hospitals, including level 1 trauma center. Be in the heart of fast growing up-state South Carolina offering a variety of attractions and a quality



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lifestyle. Superior compensation package and flexible scheduling. For consideration, please contact Val Harden, TeedCo, 1-877-901-0191; send cv in confidence to vharden@teedco.com.

VIRGINIA

Peninsula Emergency Physicians (PEP) – Well-established democratic 17-physician group located in Hampton and Newport News, Virginia is seeking to add BC/BP physician. The group staffs a state-of-the-art 210 bed hospital and a freestanding emergency department with combined patient volume of 110,000. Partnership track with no hidden costs, equitable scheduling with 8-9 hour shifts, robust subspecialty coverage, strong midlevel program, scribes, and affordable coastal living make this a great career and lifestyle opportunity. Generous package includes competitive hourly rate, maximum allowable retirement plan, excellent malpractice coverage with tail, and opportunity for equal partnership with profit sharing. A great chance to join a stable, equitably owned democratic group. Visit us at www.pepmds.com to learn more. Contact Dr. Chris Baker at 757-599-4922 or physician@pephome.com.

WASHINGTON STATE

Longview: Unparalleled Pacific NW beauty and lifestyle: breathtaking mountains, rivers/lakes, wineries/breweries, mild winters, year-round fishing, boating, hiking/biking. 1-2 hrs to ocean, Seattle, snow skiing or wind surfing. No state income tax! Affordable small town living or easy commute from Portland, OR. Democratic group of 15 EM board certified physicians. 1-year partnership track w/ generous quarterly bonuses. Not-for-profit 193-bed Medical Center, Level III Trauma, 50,000+ ED pts/year including Minor Emergency. No night/stand-alone shifts first 6 months. Scribe support. Explore your move to a balanced lifestyle. Send CV to: Holly Liberatore, MD, Liberatoreh@comcast.net or Cascade Emergency Associates. PO Box 2404, Longview, WA 98632.

WEST VIRGINIA

Charleston: BP/BC EM physician opportunity within EM Residency at three-hospital system with 100,000 annual visits. In addition to Emergency Medicine, there are numerous residencies and student rotations. It also offers physicians the exceptional benefits of working within a regional group with a very appealing model. Premier Physician Services is an equity-ownership where physicians share in both the profits and the decisions. Our mid-sized group offers the flexibility and access of independent groups without sacrificing the financial stability of larger groups. Excellent package includes guaranteed rate plus RVU, incentives; family medical, employer-funded pension, expense account and shareholder status with no buy-in. Charleston offers both metropolitan amenities and easy access to outstanding outdoor recreation. Contact Rachel Klockow, (800) 406-8118, rklockow@premierdocs.com.

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Huntington: Equity ownership group has a very appealing opportunity in newer ED with a patient volume of 73,000 annual visits. This Level II facility has 70 hours of physician coverage, plus 48 MLP hours daily; and 60 hours scribe coverage. An outstanding package is offered including guaranteed hourly plus RVU, family medical plan, malpractice, employer-funded pension, additional incentive income, shareholder opportunity at one year with no buy-in, plus additional benefits. Located 45 minutes from Charleston on the Ohio River, Huntington is home to Marshall University. For additional information, please contact Rachel Klockow, Premier Physician Services, (800) 406-8118; e-mail rklockow@premierdocs.com; or fax CV to (954) 986-8820.

Wheeling: Ohio Valley Medical Center is a 250-bed community teaching hospital with a brand new-ED under construction. AOA approved Osteopathic EM and EM/IM residency program. Enjoy teaching opportunities, full-specialty back up, active EMS, and two campuses seeing 31,000 and 24,000 pts./yr. Outstanding partnership opportunity includes performance pay, equal equity ownership, funded pension, open books, comprehensive benefits and more. Contact Ann Benson (careers@emp.com), Emergency Medicine Physicians, 4535 Dressler Rd. NW, Canton, OH 44718, 800-828-0898 or fax 330-493-8677.

Emergency Medicine Opportunities

Geisinger Health System (GHS) is seeking Emergency Medicine physicians for multiple locations throughout its service area.

Geisinger Wyoming Valley Medical Center

Join a team of 15 Emergency Medicine Physicians and 9 physician assistants in an active, growing Emergency Department and Level II Trauma Center at Geisinger Wyoming Valley (GWV) Medical Center, located in Wilkes-Barre, Pa.

Bring your skills to this 32-bed Emergency Department that handles over 54,000 emergency room visits annually within an active tertiary/quaternary hospital. Practice state-of-the-art medicine with excellent subspecialty backup, including adult and pediatric hospitalist and intensivist programs. Enjoy a high-acuity, hands-on practice with academic involvement with 3rd year EM, Pedatrics, Internal Medicine-Pediatrics, Family Practice and surgical residents rotating through the department.

Geisinger–Shamokin Area Community Hospital*

Join a team of 5 full-time Emergency Medicine Physicians at Geisinger–Shamokin Area Community Hospital (G-SACH), located in Coal Township, Pa.

Practice state-of-the-art medicine in a facility that handles over 16,000 visits annually. Teaching opportunities exist with 3rd year EM residents rotating through the department G-SACH is a licensed 70-bed hospital with 45 acute, 15 skilled and 10 gero-psychiatry beds and the latest in surgical and health information technology.

**G-SACH is a campus of Geisinger Medical Center, Danville.*

Geisinger–Bloomsburg Hospital

Join a team of 4 full-time Emergency Medicine Physicians at Geisinger–Bloomsburg Hospital (G-BH), located in Bloomsburg, Pa.

Geisinger–Bloomsburg Hospital's Emergency Department is currently undergoing renovations that will give it 13 beds. It sees approximately 15,000 visits per year. At the hospital, surgery, OB, hospitalists, a psych unit, and radiology with ultrasound, CT, x-ray, and MRI are available 24 hours a day. Geisinger Medical Center (GMC), located in Danville, Pa., is just miles down the road for complicated cases, trauma, STEMI and pediatrics.

Meet Geisinger at the 2013 ACEP Annual Conference in Seattle, WA
from October 14-17, 2013 to discuss these exciting opportunities in person.

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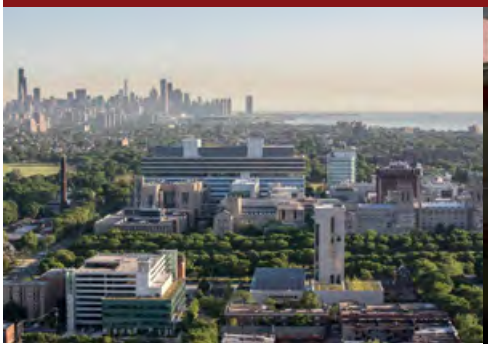

Medical Director
Adult Emergency Department

The Department of Medicine's Section of Emergency Medicine at the University of Chicago is seeking a full-time academic faculty member to serve as Medical Director for the Adult Emergency Department. Academic rank is dependent on qualifications. Applicants are required to be board certified in emergency medicine and to be eligible for Illinois licensure, and have both clinical operations and administrative leadership experience; fellowship training is preferred. Applicants must possess the interpersonal and communication skills necessary to successfully lead the physician and nursing staff in their commitment to excellence in patient care. The successful applicant will join an academic faculty responsible for the education of the 45 residents in our Emergency Medicine Residency program, established in 1972 and one of the oldest programs in the country. The University of Chicago Medicine is a receiving hospital for STEMI, a Primary Stroke Center, a Burn Center, and a Chicago South EMS regional resource hospital. The Adult ED has an annual volume of 47,000 and our Pediatric ED cares for 30,000 patients per year, including 1,000 level 1 trauma patients. Interested applicants should send their CV to Dr. Linda Druelinger, Chief and Interim Medical Director, at ldruelin@medicine.bsd.uchicago.edu.

The University of Chicago is an Affirmative Action / Equal Opportunity Employer.

Req # 01819

Ultrasound Director
Adult Emergency Department

The Department of Medicine's Section of Emergency Medicine at the University of Chicago is seeking a full-time faculty member to serve as Emergency Medicine Ultrasound Director. Academic rank is dependent on qualifications. Applicants are required to be board certified in emergency medicine, ultrasound fellowship trained, RDMS qualified and eligible for Illinois licensure. Responsibilities include ultrasound operations, quality oversight, and design and implementation of our Residency ultrasound curriculum. The successful applicant will join an academic faculty responsible for the education of the 45 residents in our Emergency Medicine Residency program, established in 1972 and one of the oldest in the country. The University of Chicago Medicine is a receiving hospital for STEMI, a Primary Stroke Center, a Burn Center, and a Chicago South EMS regional resource hospital. The Adult ED has an annual volume of 47,000 and our Pediatric ED cares for 30,000 patients per year, including 1,000 level 1 trauma patients. Interested applicants should send their CV to Dr. Linda Druelinger, Chief and Interim Medical Director, at ldruelin@medicine.bsd.uchicago.edu.

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And see us at booth #35 at the ACOEP 2013 Scientific Assembly in San Diego.

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