“The night of the accident, a Saturday night, numerous faculty came into the emergency department on their own to support the residents and other staff who were affected.”

Tragedy brings a residency together

Baruch Fertel, MD, Region 6 Representative, University of Cincinnati, Department of Emergency Medicine, Cincinnati, OH

It was a typical emergency department shift at the University Hospital Cincinnati in October. Dr. Tim Delgado, an EM2 at the time, arrived to work in his flight suit, as he was also responsible for flights on AirCare 1—the hospital based helicopter. Tim began seeing the usual assortment of patients. When the alert went out for an inter-facility transport, Tim signed out his patients in Cpod to his attending, grabbed the cooler of blood and headed to the helipad. Little did he know how this flight would change his life.

The helicopter landed, and they went into the emergency department to assess the patient. Tim was at the head of the bed performing a quick physical exam and airway assessment of the intubated patient who had suffered severe facial injuries. He looked down at the patient’s shirt and noticed that it bore the logo of his cycling team. At that point, it hit him—this was Ali, his wife, who he could barely recognize. He left the room in tears.

Although he was anxious to get her moved to University, the flight crew realized Tim was in no shape to help take care of a critically-injured patient. They radioed for AirCare 2 and a new crew to come out. Tim, although still in his flight suit, was now an anguished husband.

On landing, Alison was brought to the trauma bay in the emergency department. There was an eerie silence that filled the room, normally a very loud and chaotic place. She was stabilized and moved to the SICU where she was listed in critical condition. Alison suffered spinal, sternum, clavicle and facial fractures, as well as a traumatic carotid dissection and a severe SAH with pseudo-aneurysm formation. Her ICP was elevated. It was not clear, even if she survived, whether this active cyclist, marathon runner, and pediatrics resident would ever move or function independently.

continued on page 34
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Table of Contents

- President’s Message 4
- Editor’s Forum 6
- Treasurer’s Report 9
- ACEP Rep Update 10
- RRC-EM Update 12
- Resident Research 14
- Medical Student News 16
- Avoiding EM Errors 18
- EM Pediatrics 20
- EMRA Residency Fair 23
- Guest Feature 24
- Vice Speaker Report 26
- Ultrasounds in EM 28
- Advocacy Corner 30
- Clinical Case 32
- Resident Life 34
- Case Report 38
- EMRA Activities at Scientific Assembly 41
- EMRA Job Fair 42
- Bouncebacks! 44
- Money Matters 48
- Board Review Questions 50
- EMRA Party 51
- Pediatric Pearls 52
- Pitfalls to Avoid 53
- EM Reflections 54
- Back at You 78

Upcoming events

- October 14, 2011 EMRA MSGC Meeting & EMIG Mixer San Francisco, CA
- October 15, 2011 EMRA Medical Student Forum & Luncheon San Francisco, CA
- October 15, 2011 EMRA Resident SimWars Competition San Francisco, CA
- October 15, 2011 EMRA Residency Fair San Francisco, CA
- October 16, 2011 EMRA Resident Forum & Luncheon San Francisco, CA
- October 16, 2011 EMRA Job Fair San Francisco, CA
- October 17, 2011 EMRA Representative Council Meeting at ACEP’s Scientific Assembly San Francisco, CA
- October 17, 2011 EMRA Committee Meetings San Francisco, CA
- November 7-14, 2011 Emergency Medicine Basic Research Skills (EMBRS) Workshop Dallas
- November 7-12, 2011 ABEM Qualifying Exams Nationwide
- December 7, 2011 SAEM Board of Directors Resident Member Nominations Deadline
- January 3, 2012 EMRA Travel Scholarship to CORD Academic Assembly Applications Deadline
- February 10-12, 2012 RRC-EM Meeting Chicago, IL
- March 7, 2012 EM Resident Appreciation Day Nationwide
- March 15, 2012 EMRA Spring Award Applications Deadline
- April 1-4, 2012 CORD Academic Assembly Atlanta, GA
- May 10-13, 2012 SAEM Annual Conference Chicago, IL
- May 20-23, 2012 ACEP Leadership and Advocacy Conference Washington, DC

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For the sake of consistency, the use of the terms “ED,” “emergency department,” and “emergency physicians” are preferable to using “ER” or any such derivation.

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Passing the reins

This November will mark the beginning of EMRA’s 38th year. Since 1974, EMRA has continued to grow adding more residents and students to its roles, expanding member benefits, and representing members on the national stage. Our success as an organization has been accomplished because of the tireless efforts of many dedicated individuals who have volunteered their expertise and passion. Many of our most successful endeavors began as small ideas and were able to mature into major EMRA initiatives due to the efforts of many enthusiastic members.

In the past year, EMRA has served as one of the most influential voices in the emergency medicine landscape. EMRA representatives have lent their voices, alongside other emergency medicine stakeholders, in a collection of discussions including the Future of Emergency Medicine Summit, the Emergency Medicine Model Task Force, RRC meetings, AMA meetings, ACEP Board of Directors meetings, and many others.

In an act of collaboration, the EM community joined together this summer to form the Emergency Medicine Action Fund. EMRA was pleased to serve as a founding member of this collaboration that will concentrate its efforts on regulatory reform in Washington, DC. Collaborations like these allow for the voices of residents to carry through in important discussions that have an opportunity to shape the future emergency medicine landscape.

Resident education and support of training has always been central to our mission. The newly formed Education Committee is charged with reviewing all EMRA educational offerings at the various conferences throughout the year and producing an integrated curriculum. We hope to identify new areas of educational content that we can offer to our members. EMRA continues to support the EMRA SimWars competition hosted twice a year at SAEM’s Annual Meeting and ACEP’s Scientific Assembly. If you have not participated, consider putting together a team from your program. Stop by this year’s competition in San Francisco and cheer on your colleagues.

We are also pleased that this year we have released several new products including the Basics of EM Handbook, a chief-complaint-driven primer for interns and students and the 2nd edition of our Advocacy Handbook. These are just a few of the educational highlights of the year, and we will continue to search for new ways to aid in the education and training of emergency medicine residents.

In 1979, EMRA members numbered less than 300. This year, we are proud to have more than 10,000. This increase in membership is in part attributed to an ever-increasing number of medical students who have joined our ranks. In an effort to help guide medical students, we now offer two, regional Medical Student Symposia. This was the inaugural year for Midwest Symposium in Chicago and the 3rd annual Mid-Atlantic Symposium in Baltimore. We hope to continue these offerings in the years to come and to provide more resources to our medical student members as they prepare to enter the field of emergency medicine.

The accomplishments of our organization could not have been achieved without the work of a great number of people; however, the efforts of our staff stand out. Their dedication and creativity continue to move us forward, and it has been a pleasure to work with them for the past year. Special thanks to the EMRA Board of Directors that has put in countless hours and have been the spark behind our greatest ideas. I could not imagine a more brilliant or passionate group of people to work with. As I pass the reins onto our next EMRA President, I am eager to see what the future holds. Dr. Don Stader has been a dedicated advocate for our organization, and I have no doubt that he has the leadership to propel EMRA to even greater heights. To all those who have put in the time and dedication to our organization, and especially to our families who have supported us through it all, thank you.
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Mission Statement
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Sunday, Oct 16 9:30am-3:30pm
Monday, Oct 17 9:30am-3:00pm

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ADVANCING EMERGENCY CARE
A farewell to arms

Welcome to San Francisco for Scientific Assembly! I can’t believe my two-year tenure is already over. My time served on the EMRA Board of Directors has provided a prospective into emergency medicine that I never anticipated when first applying for my Editor position.

I would like to focus my last article reflecting back on the changes in *EM Resident*. While I always enjoy human-interest stories and believe they are a strength of our magazine, data from resident surveys indicated a demand for increased clinical content.

We responded by adding several new sections to complement our Toxicology, Pediatrics, and Critical Care segments. It seems nearly every issue in the past two years has offered a new piece—*Can’t Miss ECGs, EM Ultrasounds, Bouncebacks, Research Review, Infectious Disease, Consultant’s Corner,* and *Legal Briefs*.

For my last issue as Editor, I would like to introduce one last section, which comes from one of my favorite emergency medicine books—*Avoiding Common Errors in the Emergency Department*. This publication features over 400 short chapters that begin with a clinical situation, highlights oft-made mistakes, and provides tips for avoiding these pitfalls. This issue’s article will discuss the quandary of radiation exposure in pregnant patients with suspected appendicitis.

The winners of our Photo Contest are also revealed in this issue. Every year, we receive dozens of breath-taking photos from our readers, and this year was no different. After going through over 91 images, the judges have selected the 11 best.

In closing, I would like thank the EMRA Board of Directors and our amazing staff for the additional education I received from EMRA, as well as for all of the memories made while attending the conferences.

I would also like to thank all of the assistant editors and resident authors. In my first article, *A Call to Arms*, I asked for fellow residents to share their talents with *EM Resident*, and they responded in force. The stellar content of *EM Resident* would not be possible without their contribution.

It has been an honor to serve as your Editor.
I am pleased to announce the results for the 3rd Annual EMRA Photo Contest. The number of entries this year was 91 with photographs coming from all over the world. I am still amazed by how multi-talented emergency physicians can be, and our Photo Contest proves this, once again, to be true. Visit EMRA’s facebook page to view all contest entries.

**ART PHOTOGRAPHY WINNER**
3rd Point Malibu, CA
W. Talbot Bowen, MD
LSU-New Orleans
New Orleans, LA

**ART PHOTOGRAPHY RUNNER-UP**
Drink Up
Becky Thilo, MSIV
Baylor College of Medicine
Houston, TX

**TRAVEL & LANDSCAPES WINNER**
Sunrise Over the Waves
Matthew Hodapp, MSII
Albany Medical College
Albany, NY

**TRAVEL & LANDSCAPES RUNNER-UP (tie)**
Sunflower Field in South Texas
Dan Roberts, MD
Christus Spohn Memorial Hospital
Corpus Christi, TX

**TRAVEL & LANDSCAPES RUNNER-UP (tie)**
Longtails (tie)
Anh Nguyen, MD
St. Luke’s Roosevelt
New York, NY
SPORTS & EVENTS WINNER
Blue Angel Air Show
Dan Roberts, MD
Christus Spohn Memorial Hospital
Corpus Christi, TX

PORTraits WINNER
Mother and Son
Christopher Dang, DO
Maimonides Medical Center
Brooklyn, NY

SPORTS & EVENTS RUNNER-UP
Mercedes Benz Fashion Week – Georges Chakra
Matthew Vasey, MD
Lincoln Medical and Mental Health Center
Fountain Hill, PA

PORTrait RUNNER-UP
Blue Dress
Amanda E. Kao, MD
Denver Health EM
Denver, CO

NATURE & WILDLIFE WINNER
Alligator Eating Blue Crab
Dan Roberts, MD
Christus Spohn Memorial Hospital
Corpus Christi, TX

NATURE & WILDLIFE RUNNER-UP
Capitol Reef Lightning
James Stewart
University of New England College of Osteopathic Medicine
Biddeford, ME
This report on the financial state of the Emergency Medicine Residents’ Association marks the culmination of my four years on the Board of Directors. The greatest reward on this journey was having the opportunity to work with such extraordinary individuals—spirited members, tirelessly working staff, countless amazing mentors, and a determined Board of Directors. I would like to extend my sincerest appreciation to all of you for the most incredible experience in my professional life to date. My only request is that we continue to strive for something better than the status quo within our healthcare system.

As a frame of reference before I outline our current financial standings, when I joined EMRA in 2007 our assets totaled $955,248. Our contribution to equity at the end of that year was just over $10,000. To date, the growth trajectory has been staggering despite the financial turmoil that national and international markets have faced. This year has been no different.

We have made great strides through creative marketing, product development, improved branding, and the fostering of new affinity relationships. Our eye has been consistently set on how to broadly improve the value and delivery of EMRA membership while simultaneously maintaining low member dues. Many would be surprised to learn that over the past twenty-five years, EMRA has only increased dues on one occasion. This was a nominal $10 increase to cover for the contractual agreement to provide residents with EM:RAP.

With that in mind, I am pleased to report that our year-end member equity is $1,808,216, while assets total $2,441,647. This is up from 2010 numbers when equity was $1,252,189 and assets totaled $1,715,451. This represents a 44 percent increase in equity and a 42.5 percent increase to total assets in 2011 from 2010.

Net income from operations year-to-date has yielded $370,289. Gains on investments have added another $234,106 for a total of $555,307 compared to a budgeted contribution to equity of $34,814. This represents our largest contribution to equity in EMRA history. Total members equity reserves is at one year’s operating budget which is well beyond what most organizations are able to reserve and affords us a robust fiscal position in the event of any financial collapse.

Regarding membership, here are some numbers compared to the same time period last year. Overall membership is up by four percent. Resident physician membership alone is up by a significant seven percent, while student membership is up by a very healthy four percent. Fellowship membership is even while alumni membership is also up four percent.

In the course of this past year, our finances have provided us with the leverage to make various contributions to our memberships’ collective educational experience. We have increased monies to awards and grants. We have also provided more funding for committee members and regional representatives to attend our annual meetings. We have continued and further expanded our regional meetings and have created new products for medical students and residents.

The most valuable investment this year remains our commitment to the Emergency Medicine Action Fund through a $100,000 donation over a two-year period, because we recognize that all educational endeavors culminate in the need to find a viable, productive, and responsible working environment in which to render medical care for our patients. And what better time to have a meaningful and long-lasting impact than on the regulatory phase of this new healthcare legislation.

Thank you for the honor and privilege of serving you as a sectional delegate to the AMA, as Speaker of the Representative Council, and subsequently as President of the Association. I wish the best of luck to the next generation of EMRA of Director members who will continue to represent your voice within the landscape of medicine.
The long road to subspecialty approval: Dr. Debra Perina to receive EMS Award at Scientific Assembly

ACEP’s Award for Outstanding Contribution in EMS recognizes an individual who has made an exceptional contribution to the development and promotion of EMS. This year’s recipient, Dr. Debra Perina, MD, FACEP, has done just that, and in the process, she has changed the EMS landscape forever.

Dr. Perina is an Associate Professor in the Department of Emergency Medicine at University of Virginia School of Medicine, where she is also the EMS Fellowship Director and the Division Director of Prehospital Care. Before becoming faculty at UVA, she served as the Associate Director for Education and as the Program Director at Richland Memorial Hospital/University of South Carolina Emergency Medicine Residency, where she herself completed residency training.

Dr. Perina has numerous accomplishments. Highlights include serving as president of South Carolina ACEP, president of the Council of Emergency Medicine Resident Directors (CORD), and president of the American Board of Emergency Medicine (ABEM). She also chaired ACEP’s Academic Affairs Committee, worked on multiple ACEP task forces, and served on the Residency Review Committee for Emergency Medicine.

With regards to EMS, Dr. Perina is a charter member of the National Association of EMS Physicians (NAEMSP) and served on its Board of Directors. She has held many medical director roles, including state medical director for South Carolina, medical director for the University of Virginia Pegasus Critical Care Air medical program as well as for local EMS agencies and regional medic training programs.

Arguably, her greatest contribution to EMS has been helping to gain ABMS approval of EMS Medicine as the sixth subspecialty of emergency medicine. This work began in 1990 and involved heavy collaboration with stakeholder groups. Recently, I had the opportunity to ask Dr. Perina a few questions about her personal experience with EMS and about the path to emergency medicine subspecialty certification. To highlight the long road to subspecialty recognition, a timeline of EMS events is also included for reference.

**EMRA:** You started out as a respiratory therapist before going to medical school. What initially sparked your interest in EMS?

**Dr. Perina:** Johnny Gage and the show *Emergency*—isn’t that true for all EMS folks? Actually, I had heard about this new thing called a paramedic and was looking at various types of allied health programs after graduating from college because I didn’t think I wanted to be a physician at that time. It just so happens that I was living in Maryland, where one of the three paramedic programs in the country was based. I researched it and thought I was interested. I went down to apply. At that time, all medics were part of fire departments and all training programs were the same. They were very nice to me but tried to dissuade me from becoming a paramedic. I persisted and finally the fire chief told me, “You can’t be a medic: you’re a woman.” Remember that we are talking about the 1970’s here. My reply was swift and clear, “Really? Then I’ll see you in the emergency department.” Determined to work in the prehospital environment, I became a respiratory therapist because that was the next best way to do transports! Ultimately, I headed to medical school with the goal of becoming an emergency physician and to practice EMS medicine. To think I owe it all to a fire chief!

**EMRA:** It took approximately 20 years to get EMS approved as an EM subspecialty. How were you involved through the years?

**Dr. Perina:** It took approximately 20 years to get EMS approved as an EM subspecialty. How were you involved through the years?
Dr. Perina: I was a charter member of NAEMSP, whose initial purpose was to promote the growth of EMS medicine and to seek physician certification for EMS medical practice. I was involved in various committees over the years exploring how this could happen as well as pushing forward the educational and research agenda for EMS to build the base need for subspecialty recognition. I was a member of an ABEM-led committee in the late 1990’s that explored whether or not EMS had grown to the point that an application could be made. At that time, it was apparent that there was still work to do. NAEMSP together with the ACEP EMS Committee continued to work to address the perceived deficiencies identified from that committee. After I was elected to the ABEM Board of Directors, the roadmap became clearer, and by working with key individuals, the final application was written. I took that application first to the ABEM Board for approval. Then, while ABEM President, I helped guide the application through the formal American Board of Medical Specialties process, culminating in a unanimous vote to establish the subspecialty of EMS.

EMRA: EMS initially fell under the purview of surgeons, and there has clearly been a transition to emergency physicians. What do you feel contributed to this shift?

Dr. Perina: EMS has many roots in various sections of the country. In Great Britain and LA in the early 1960’s, it actually was driven by cardiologists who wanted a way to resuscitate cardiac arrest patients in the field. In the late 1960’s, with Death and Disabilities white paper, EMS saw exponential growth at the hands of surgeons who wanted a rapid way to evacuate and treat trauma victims on the nation’s highways. The majority of these surgeons also worked and staffed the “accident unit’s” in the precursors of today’s emergency departments. When emergency medicine began as an organized specialty in the late 1970’s, it was a natural transition for these “new kids on the block” to take an active role with EMS as they interfaced with them far more than physicians from other specialties did. The growth of EMS actually parallels emergency medicine to a large degree.

EMRA: What has been the greatest challenge in getting ABMS approval for EMS as an emergency medicine subspecialty?

Dr. Perina: Every ABMS specialty board is concerned with setting and promoting the standards in their specialty for quality patient care and practice. As such, they are concerned that new specialties enhance quality in patient care, and where there is overlap with their specialty, there is the ability of their diplomates to access the training and certification should they wish to do so. The biggest challenge was helping the other boards understand what EMS really was and how it impacted their diplomates. The other significant challenge was negotiating with each board the process that would be available for their diplomates to access training and certification into the future.

EMRA: Getting ABMS approval required collaboration between the NAEMSP, ACEP, SAEM, and ABEM. What was it like working with so many groups?

Dr. Perina: It was a true pleasure to see the collaboration between these organizations all working towards the common purpose of EMS subspecialty recognition. Everyone involved had such a passion for it that it was easy to get each group to concentrate on their unique contributions to the effort. The leadership of the all the organizations were very supportive of the ongoing efforts. I think everyone just wanted this to happen and realized that time had matured EMS medicine into a true subspecialty.

EMRA: A group of 12 EMS physicians is currently working on the subspecialty certification exam for 2013. What can test-takers expect?

Dr. Perina: They should expect a secure, proctored computerized exam of roughly 200 multiple choice questions. This will be similar in format to the qualifying and concern examinations.

EMRA: EMS has matured over the years, with dedicated textbooks, journals, and research. Now that there is an approved subspecialty, what does the future hold for the field?

Dr. Perina: I think the future is very bright for the subspecialty. The ACGME is currently in the process of finalizing the EMS fellowship requirement and will shortly thereafter begin accrediting programs. This will lead to standardization in training and promote consistent knowledge of the defined curriculum on the part of fellowship graduates. The ability to achieve certification will likely increase the interest among residents, many of whom in the past did not seek training due to lack of ability to certify. As we have seen in the growth over time in our own specialty and others, certified specialists are sought for positions; meanwhile, state regulators and hospital credentialing committees are producing language reflecting the sentiment that appropriate training and certification are required to practice in specific specialties. I firmly believe the same will happen with EMS specialists in that regulators will promote medical direction to occur at state levels by those so qualified. Over time, EMS agencies and the public will seek the same. Fellowship-trained EMS physicians will continue to add to the scientific basis of the practice with increased outcome-based research.
Tuition for residency? The history and future of GME Funding

The debate on how to reduce the deficit in the United States has been inescapable over the past few months. In fact, if you read the paper today or turn on the news, you will almost certainly hear about the various arguments and proposals being put forward to reduce the debt. The outcome of the congressional “super committee” is still unknown; however, universal budget reductions—including the budgets of Medicare and Medicaid—are inevitable. As a consequence of the escalating deficits, it is likely that resident physicians will be significantly affected.

Graduate Medical Education (GME) is a core mission for over 1500 teaching hospitals and all of the medical schools in the United States. Educating and training young physicians has been a joint effort between these medical institutions and federal payers (i.e., Medicare/Medicaid/VA/DOD) for years. For example, in 2002, Medicare supported teaching hospitals with $7.8 billion, and Medicaid provided over $2 billion. In order to understand how the federal government became an essential partner in the training of U.S. physicians, it is necessary to briefly review the history of GME funding in the United States.

Before 1940, hospitals paid for trainees by building the cost into patient charges. At that time, costs were modest; however, following WWII a dramatic increase in physicians entering specialty residencies occurred, with the total number rising six-fold between 1940 and 1960. This increase was supported by a provision under the GI Bill, which provided residents with a living allowance and hospitals with a subsidy that provided positions to servicemen.

The role of government contributions expanded in 1965 with the establishment of Medicare. Initially, hospitals could include GME costs as a “cost of service,” but in the 1980s payments were changed to a “per-resident payment.” The “per-resident payment” was negotiated in 1983 and has only been increased with inflation since. Since the 1980s, hospitals have also been reimbursed for “indirect costs” which are related to the increased use of tests/ancillary services, inherent inefficiencies in teaching, greater concentration of technology, and greater proportion of patients who are uninsured or underinsured at teaching facilities.

As a result, GME funding has become a significant component of the CMS budget, and many teaching hospitals have come to rely upon such funding. If GME funding were to be abruptly and significantly reduced as a component of Medicare/Medicaid reform, there would be several consequences for our patients and for residents (one out of seven practicing physicians).

One of the most important consequences would be the loss of the link between

“If these institutions were to suddenly lose funding, the primary care shortage in these underserved areas would rapidly increase.”

Jonathan Heidt, MD
Director-at-Large/
RRC-EM Representative
Washington University
St. Louis, MO
GME and service to the Medicare/Medicaid population, as well as the underserved and uninsured. Medicare funding has historically supported GME delivery of care to these populations. Many teaching institutions provide care to a higher proportion of patients who have Medicare/Medicaid or who are uninsured as compared to non-teaching facilities. Medicare funding has allowed teaching institutions to provide this essential patient care through GME. If such funding were to suddenly end, teaching institutions may be financially incapable of continuing this mission.

Medicare funding also supports over 300 institutions that are able to support only one residency program in primary care, which are predominantly located in small, rural, underserved locations. As a result, GME supports most access to primary care for patients in these areas. If these institutions were to suddenly lose funding, the primary care shortage in these underserved areas would rapidly increase.

Teaching institutions that continued to support GME would be potentially forced to alter the infrastructure of their programs in several predictable ways:

1. Redistribution of positions – Many institutions would have to reallocate their residency slots towards the particular needs of the institution. As a consequence, residency positions may be transitioned away from primary board certification and towards subspecialty programs. Residents may also be removed from the Veterans Administration (VA) Hospitals.

2. Industry funding – Teaching institutions may be forced to turn towards industry to support residency positions. Such an alteration in funding would allow new influences upon the training of young physicians.

3. Funding by tuition – Physicians voluntarily choose to participate in a relatively long training process. After the multiple student loans required for undergraduate and medical school education, many residents accrue significant and burdensome debt. If residents also had to pay tuition for the right to train, residents would be discouraged from entering lower-paying specialties. Also, our most talented young minds would encounter increasing disincentive to even embark upon a career in medicine.

4. Duty hours and learning environment standards – An Institute of Medicine study on duty hours demonstrated that an additional $1.7 billion may be needed to adequately implement these changes in the learning environment. If reductions in payment were to occur, these reforms may be altered or abandoned.

5. Incomplete training – In the United States, requirements for a medical license range from one to three years. However, specialty certification requires a minimum of three years. Physicians may be forced to abandon specialty training and enter into practice early to meet the demands of their increasing financial burden.

In summary, in an era of rapidly increasing deficits, no program or institution will be immune to the effects of spending reductions; however, since WWII, Medicare and Medicaid have developed a relationship with GME that results in care to underserved populations and training of young physicians. An abrupt decrease or withdrawal of funding would dramatically alter an essential component of healthcare in the United States.

References

As a consequence of the escalating deficits, it is likely that resident physicians will be significantly affected.”
How to tackle the scholarly project: An interview with Brian Roberts, MD

There are few things as daunting as conceiving of and completing a residency scholarly project. This project is a Residency Review Committee (RRC) requirement but is approached differently by various programs. For some, a photo submission to a journal might be adequate, whereas some programs may require original work that gets published.

Residents often find themselves at a loss over how to get started or how to find the right project to perform with limited availability of non-clinical hours. Some dread the requirement, as they never really had an interest in research. It is reassuring to know that some of the most accomplished emergency medicine researchers never had any intention on dedicating their lives to research. Brian Roberts is one of these.

Brian has a strong kinship to his native state of New Jersey. He went to medical school at the University of Medicine and Dentistry of New Jersey (UMDNJ), residency at Cooper Health, and now is one of the shock fellows at Cooper with 50 percent protected time for research. He reports that research was the least of his interests when he was in medical school. Now, several publications and grant awards later, his career is very much in academics with a focus on post-cardiac arrest care. We sat down to discuss the scholarly project.

Mentorship

A good project starts with good mentorship. It is important to develop relationships with people you share common interests with and see if you can collaborate to create research that is meaningful to both mentor mentee.

As a third year medical student at UMDNJ, Brian returned to the Camden campus of UMDNJ to complete his medical training. At a student-faculty meet and greet, he first became acquainted with his long time mentor, Dr. Stephen Trzeciak. Dr. Trzeciak is triple boarded in EM/IM/CC and was advertising his interest in sepsis and shock care to the gathered medical students.

Brian reached out to Dr. Trzeciak to see how he could get involved with some research in the area. They met and started brainstorming ideas for projects. According to Brian, a good mentor is someone who has a niche in a mutual interest and most importantly, has a history of finishing what he or she starts. Furthermore, a truly great mentor is someone who has a love for teaching and has the mentees best interest at heart. Brian discovered his interest in research by finding satisfaction in the ideas he would talk about with his mentor.

Picking a project

In Brian’s case, it was critical care and shock. Many research questions attempt to answer basic questions that have yet to be studied. Brian’s first project looked at post-cardiac arrest patients and hemodynamic instability. Did hypotension portend a worse prognosis in this patient population? Often the original hypothesis will balloon into multiple other research project ideas.

Brian was instrumental in writing the first hypothermia after cardiac arrest (HACA) protocol for Cooper Hospital. A second project he worked on looked at how effective they were with the protocol. In the study, Brian found that 90 percent of patients were successfully being cooled.
and being kept hypothermic for the allotted time using their protocol.

**Finding sponsorship**

There are many funding opportunities for research at the local and national level. Many academic institutions have internal funding available through their research committees. In addition, EMRA offers a $500 research grants and EMF offers a $5000 research grant for residents as well. Brian received his first EMF grant as a PGY-2 and his second EMF grant, the Emergency Medicine Basic Research Skills Grant, as a PGY-3.

**Resident resources and time management**

Many residents find it difficult to put aside enough time to finish a research project, as it is more involved than a case report or a photo submission. You may be surprised in how helpful both your medical school director and residency director can be in this respect. Brian dedicated one elective block towards research. During his elective time as a medical student, he met with his mentor to go over research methodology and write manuscripts.

As a resident, he received recommendations from his faculty and approval from his residency director to attend the Emergency Medicine Basic Research Skills (EMBRS) workshop in Dallas. He funded the trip with money from his first EMF grant. EMBRS is an 11-day conference mostly designed for junior faculty to introduce them to research from conception to publication. In the fall, they meet to discuss grant writing, and in the spring, they present your final grant to the assembly. He received additional mentorship and oversight through his involvement at EMBRS and recommends it to any senior residents or junior faculty that is interested in pursuing a career in research.

You, too, can fall in love with a scholarly project. Remember that the more interested one is in the topic of choice, the less tedious it will be to dedicate your post and pre-shift time to the project. A good mentor will teach research methodology in return for the mentee doing the heavy hitting in the data collection and writing departments. Recruit medical student and residency program directors to your cause early. See if you can get a shift reduction or dedicated elective time to make your project truly worthy of publication.

**References**

1. EMRA research grant http://www.emra.org/emra_about.aspx?id=42380
Vomiting in the newborn: Reflux or a surgical emergency?

Case
Our next patient in the emergency department is a one-month-old female with the chief complaint of “vomiting.” Walking to the bedside, you mentally rehearse your favorite reassuring speech about the size of a baby’s stomach and the risks of overfeeding. But as the story unfolds, you realize that this is not a standard case of benign vomiting. The parents relate that their daughter has been forcefully vomiting after feeds for the last two days. Sometimes, it feels as though the baby’s entire meal flies across the room and hits the opposite wall. Your examination of the patient reveals a one-month-old girl with slightly sunken eyes, dry mucus membranes, and what feels like a hard mass in the epigastrium.

Background
In both my pediatric clinic and in the emergency department, I frequently encounter parents who say that their baby “throws up all the time.” On further questioning, you learn that they are trying to fit eight ounces of formula into a two-month-old stomach that is not yet equipped to handle that volume. On their growth chart, these same children jump up percentile lines as quickly as they are adding on rolls. When overfeeding is the problem, reassurance and sympathetic counseling may be all that is needed. There are times, however, when vomiting can signal a life-threatening emergency.

Bilious vomiting
First, it is important to elucidate whether or not the emesis is bilious, as this is never normal and may indicate a potential surgical emergency. Aggressive investigation is needed to determine a cause, usually due to bowel obstruction distal to the ampulla of Vater. The differential diagnosis for bilious vomiting includes malrotation with volvulus, any atresia (of the duodenum, jejunum, ileum, colon, or rectum), Hirschsprung’s disease, and meconium ileus or plug. If you suspect any of these causes, it is important to obtain a surgical consult as soon as possible.

Malrotation with volvulus causes sudden-onset bilious vomiting and is a surgical emergency. Significant morbidity and mortality can result as the blood flow to the intestine is compromised. If malrotation with volvulus is suspected, an upper GI series with small bowel follow-through can identify obstruction in the second to third portion of the duodenum, with a lead point around the SMA. These patients need to be fluid resuscitated, given IV antibiotics, and promptly evaluated by a surgeon. The diagnosis needs to be made quickly, as delayed diagnoses can lead to bowel ischemia and perforation.

Another source of bilious vomiting is duodenal atresia, in which 85 percent of cases occur distal to the ampulla of Vater. An abdominal radiograph will reveal the “double bubble” sign. A heightened suspicion of this diagnosis should be entertained in babies with Down syndrome.

Rarely, bilious vomiting may occur in babies with Hirschsprung’s disease. Of these patients, 95 percent present within the first 24 hours with no passage of meconium, but they can also present later in life with chronic constipation, abdominal distension, and bilious
vomiting. These babies are at increased risk of toxic megacolon and death. Barium enema may show a distal bowel narrowing with more proximal dilation and delayed emptying of contrast. These babies ultimately need referral to a surgeon, confirmation with rectal tissue biopsy, and surgical repair.

Meconium ileus or plug should be included on the differential, especially in infants who present with bilious vomiting shortly after birth. Meconium ileus and plug are unrelated, although similar in presentation. Cystic fibrosis (CF) should be strongly considered in babies who present with a meconium ileus as 10-15 percent of babies with CF develop a meconium ileus. There is no known association between CF and meconium plug. A barium enema may be diagnostic and therapeutic in both cases, but be aware that 50 percent of cases of meconium ileus can present with complications, including volvulus and perforation.

**Nonbilious vomiting**

We all feel good when we can write on a patient’s chart that their vomiting is “nonbilious,” since most causes of nonbilious vomiting are benign and self-limiting. But there are exceptions to the rule, including pyloric stenosis and infection.

Patients with pyloric stenosis usually present between birth and five months of age, and this condition is four to eight times more common in boys than in girls. It is the most common indication for surgery within the first six months of life. As in the described case, these patients are insatiably hungry but experience projectile vomiting shortly after feeding. Ultrasound is now the test of choice for diagnosis, although if you feel the olive mass (the baby has to be very relaxed for this) imaging may not be necessary. A basic metabolic panel is indicated in these patients, since most are dehydrated and may need fluids and electrolyte correction prior to surgery.

Infection is also a relatively common cause of vomiting in babies without primary gastrointestinal pathology. Remember to keep infectious causes like meningitis, urinary tract infection, acute otitis media, and viral syndrome on your differential diagnosis for all babies presenting with vomiting.

**Conclusion**

In the described case, our patient was found to have a hypokalemic, hypochloremic metabolic acidosis. She was admitted for fluid resuscitation and was taken to the operating room for a pyloromyotomy. Within two days, the patient was eating normally and discharged home.

It is important in our care of infants with vomiting to remember the serious causes of vomiting. Perform a thorough evaluation to rule out the time-sensitive diagnoses that may require early intervention.

**References**

When evaluating a pregnant female presenting to the emergency department with appendicitis, perform any medically indicated diagnostic radiography in order not to compromise the health of the mother despite radiation exposure to the fetus.

When a pregnant woman presents to the emergency department with abdominal pain, you must take certain considerations into account during evaluation as your choice of radiological modality not only affects the patient herself but also affects the growing fetus. Although the American College of Radiology recommends ultrasonography as the safest choice for evaluation due to its lack of nonionizing radiation, you should not fear using computed tomography (CT) when the morbidity/mortality of the mother becomes compromised if a critical diagnosis is missed via ultrasound as utilization of CT can increase your level of certainty and lead to more timely surgical intervention.

The American College of Obstetricians and Gynecologists (ACOG), in 1995, established that an exposure >50 rad (0.5 Gy), regardless of the stage of gestation, puts the embryo at significant risk. However, they also recommended that the threshold exposure for birth defects during the most sensitive stage of development (gestational days 18 to 40) is 20 rad (0.2 Gy). Moreover, the 8th to 15th week of gestation is the most sensitive period for induction of mental retardation. As such, ACOG recommends accurate gestational dating when considering radiation.

Regardless of the gestational stage, they have reported that 5 rad (0.05 Gy) has not been associated with increased fetal anomalies or pregnancy loss; as such, use this threshold as the limit for radiation exposure. In reference, a chest x-ray exposes the fetus to 0.02 to 0.07 mrad, while the CT of the abdomen can be up to 3.5 rad.

During pregnancy, peritoneal signs are often absent as the anterior abdominal wall is lifted and stretched, thus preventing any underlying inflammation to be in contact with the parietal peritoneum. Moreover, the abdominal organs are displaced by the expanding uterus, altering the usual nongestational anatomy. The pregnant woman who has suspected appendicitis does not present with the typical signs and symptoms as in the nongestational period.

Graded compression ultrasonography is the recommended diagnostic aid in appendicitis in pregnancy, but the size of the gravid abdomen can often limit visualization of the appendix. Ultrasonography has a reported sensitivity and specificity as high as 100 percent and 96 percent, respectively, in diagnosing appendicitis.

However, Lazarus et al. stated that CT established the diagnosis in 35% of women with abdominal pain and confirmed appendicitis in 30% of women who had negative ultrasound findings. This study established a negative predictive value of 99% for CT accurately diagnosing appendicitis. It is reported that in the setting of a perforated appendicitis, there exists a 20% risk of
fetal loss. Therefore, the diagnosis of appendicitis is critical for both maternal and fetal mortality and morbidity, and so, if you have a high clinical suspicion of appendicitis despite a negative ultrasound, a CT scan of the abdomen should highly be considered. As stated above, the level of radiation exposure is still below the recommended ACOG levels.

Magnetic resonance imaging (MRI) has been under discussion as a radio-graphic modality in diagnosing appendicitis in pregnancy. Although no adverse fetal effects have been documented by the National Radiological Protection Board, its utility has not been fully investigated. MRI is useful in diagnosing appendicitis when ultrasound is inconclusive with a sensitivity and specificity of 100% and 94%, respectively. However, MRI in the evaluation of appendicitis often involves using gadolinium, and in its free form, this contrast can be toxic to the fetus. Overall, although MRI is a good choice for evaluation, many radiologists still overwhelmingly prefer CT in the evaluation of appendicitis in a pregnant patient when ultrasound is inconclusive.

In conclusion, if you have a high clinical suspicion for appendicitis in a pregnant patient, you should first obtain an ultrasound. If the ultrasound is inconclusive and you believe the risk of appendicitis is significant, you should obtain a CT scan of the abdomen as the risk estimate is critical in assessing the risk-benefit ratio for the patient and the growing fetus. So, the next time one of your radiology colleagues will not approve the use of a CT scan in a pregnant patient with a negative ultrasound study and a high clinical suspicion of appendicitis, tell him or her that the literature published by his or her colleagues recommends going forward with the scan. Do not be afraid to order that scan because if it is appendicitis, you potentially saved the patient and her fetus.

Suggested Readings

Avoiding Common Errors in the Emergency Department succinctly describes 400 errors commonly made by attendings, residents, medical students, nurse practitioners, and physician assistants in the emergency department, and gives practical, easy-to-remember tips for avoiding these pitfalls. This pocket book can easily be read immediately before the start of a rotation or used for quick reference on call.

Each error is described in a short clinical scenario, followed by a discussion of how and why the error occurs and tips on how to avoid or ameliorate problems. Areas covered include psychiatry, pediatrics, poisonings, cardiology, obstetrics and gynecology, trauma, general surgery, orthopedics, infectious diseases, gastroenterology, renal, anesthesia and airway management, urology, ENT, and oral and maxillofacial surgery. Sections that focus on non-clinical aspects of emergency medicine practice—such as proper documentation, communication with consultants, and interactions with lawyers—are also included.
Scientific Assembly—a time for reflection

The history of medicine is fascinating to me. In 1799, George Washington died of an upper airway obstruction (epiglottitis versus peritonsillar abscess). His physician, while knowing about the procedure, had never done nor seen a tracheotomy before. He certainly didn’t want to experiment on a person of George Washington’s distinction. Interesting, no? Granted, the history of medicine itself interesting, but it is also enlightening to understand the context in which things came about—giving you a taste of the “hows” and “whys” of medical advancements.

There is no more perfect time to remember the story of EMRA and emergency medicine than during ACEP’s Scientific Assembly, in wonderful San Francisco as this issue of EM Resident comes hot off the presses.

Emergency care has been delivered by physicians since the time of Hippocrates. Designated emergency rooms have been present in hospitals for over one hundred years; however, the emergency medicine specialty is a much newer concept. In the early 1960s, Dr. James Mills led a group of five physicians who left private practice to devote themselves to staffing the emergency room at Alexandria Hospital in Virginia—keeping it open 24/7. (Yes, they were called emergency rooms at the time, not emergency departments.) This had never been done before and was a bold and risky decision by these pioneers. Five years later, ACEP was born at a 29-person meeting led by Dr. Leidelmeyer from Fairfax, Virginia.

The battle for gaining recognition by the American Board of Medical Specialties was a long one. Final approval did not come until 1979. By then, a number of emergency medicine residency programs had started, with the first program opening at the University of Cincinnati in 1970. Can you imagine the courage of these first residents who committed to residencies for which there was no board certification? Fortunately, many of these residents were strong-willed and committed to the success of emergency medicine as a medical specialty.

EMRA played a substantial role in binding residents together and pushing for recognition as a specialty. In 1974, Drs. Waeckerle, Sullivan, Walker, and Tomlanovich, all residents in newly-formed emergency medicine programs, met in Dallas and shared thoughts about their uncertain futures. They decided to form a group called the Emergency Medicine Residents’ Association (EMRA). They pitched their organization to the ACEP Board of Directors, who saw the value of engaging residents and students committed to developing emergency medicine as a unique medical specialty.

Students have been a part of EMRA almost since the very beginning. In 1979, there were 14 medical student members of EMRA. Medical student membership grew consistently, and in 1992, the Medical Student Affiliate, precursor to the Medical Student Council (MSC), was formed. Within two years, the MSC organized the first Medical Student Symposium at Scientific Assembly. Since then, the Council has continued to contribute to EMRA’s growth and to medical student education.

Today, EMRA has over 1,400 medical student members. As students, we each play a critical role in keeping EMRA strong. Thank you for your membership and for your commitment to emergency medicine. EMRA would not be the incredible organization it is without your involvement.

Remember that you are standing on the shoulders of giants, many of whom continue to practice emergency medicine in our academic centers and community hospitals. We owe them a debt of gratitude for their courage and efforts and should always remember where we’ve come from as medical students interested in emergency medicine.

As always, if you have any questions or suggestions for the Medical Student Council, please don’t hesitate to contact me at msgc@emra.org.
Pimpin’ ain’t easy...or is it?

At the end of my first year of medical school, I remember my pulmonology professor saying, “On your clinical rotations, if you are asked anything about the lungs, reply ‘V/Q mismatch.’” I went nearly two years with this information stored somewhere in my brain, and then one day during pediatric rounds, I found that I needed it. I was in the back of a crowd of residents and med students, my concentration divided between a student’s case presentation and a meticulous mental cataloguing of what food I had stored in my backpack. Then, it happened. “James,” my attending said, “what’s the mechanism of ___________ (all I remember is that it was a kid with asthma)?” I replied, “Uh, V/Q mismatch?” “That’s correct,” he said, and praise arose from all of my colleagues. Finally! I had successfully answered the much dreaded “pimp question,” and I felt vindicated. Everyone who has entered their clinical years has a story about “getting pimped” – some good, some bad and some terrifying. As I wrap up my third year, I would like to share some of the techniques I've learned and the traps that I have fallen into, with the hope that they may assist those of you who have just begun your clinical clerkships. Additionally, I have included some comments from one of my favorite attendings to help demystify this tradition in medicine.

Dr. Jon Schrock, an emergency medicine attending and well-respected teacher at MetroHealth Medical Center in Cleveland, Ohio is particularly astute at using the Socratic Method—better known as “pimping.” According to him, “Many instructors use this method because we can quickly gain insight into what students know while we attempt to fill in any educational gaps. This method is effective for most learners, but some students may take offense to an instructor’s repeated questioning, particularly if it is in an area in which the student is not very knowledgeable. Ultimately, the instructor should be encouraging and, if the student’s educational gap is large, [they] should switch to a different teaching method.”

That being said, being a newbie on the wards is an awful lot like trying to interact with the opposite sex during middle school. For one thing, both are extremely stressful. Both involve lots of sweating, increased heart rate, dry mouth and mental cursing as unintelligible words are mumbled. Both ventures, when met with success, provide an exhilarating rush of adrenaline and time and practice will usually make future experiences better. Here are a few suggestions from my personal experience that have worked for me (as well as a few that didn’t):

**Do's**

Read up on cases, especially in surgery. **Surgical Recall** is great when you get the question, “So tell me everything you know about prostate cancer” while scrubbing in. Breaking out that old copy of Netter's and really learning the anatomy (novel idea, I know) is often even more helpful. Also, search the Web, literally minutes before the case to brush up on basic anatomy, since nearly 75 percent of the questions I was asked were anatomy-based. Moreover, your ticket to participation in the surgery lies in your knowledge of these questions.

Finally, for all rotations, do practice trying to anticipate pimping questions when studying and when you are preparing to present a patient. **Briefly reviewing UpToDate** for the pathophysiology, indications for treatment (like CHADS2 for A-fib anticoagulation), treatment protocols (like for asthma exacerbation), and indices for discharge. This killer combination will make you look like a pro on rounds and during your emergency department rotations.

**Don'ts**

Never ask questions just to look interested because it usually backfires; especially if

continued on page 22

James Luz, MSIV
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“While historically, pimping has had negative connotations, I choose to believe that most attendings are not vindictive and that they are trying to get us to think more, to take more responsibility for our patients.”
Pimpin’ ain’t easy... or is it?

continued from page 21
it’s something you can look it up on your own and you aren’t prepared or willing to answer follow-up questions on the topic.

Also, don’t try to impress an attending by saying, “Hey, I remember you; you gave us a lecture a few months back,” unless you are prepared to talk about it. I was on my first day in the OR, when I committed this gaffe. The attending replied, “Oh yeah? What was the lecture on and tell me three things you remember from it?” Thankfully, a bit of Divine inspiration hit me, though not before I was left with a sickening fear that I might have just ruined the opportunity to make a good first impression (and subsequently, my grade).

In the end, right or wrong, I actually remember nearly every question I was pimped on – from the NY criteria of heart failure to the mechanism of action of macrolides (I was asked this one twice). While historically, pimping has had negative connotations, I choose to believe that most attendings are not vindictive and that they are trying to get us to think more, to take more responsibility for our patients, and to keep us engaged.

In the end, we can all reminisce on making it through the bittersweet tension between honors and humiliation. So despite what rapper Big Daddy Kane says, with some well-focused preparation using these simple suggestions, you too can be in the ranks of those who have survived their clinical years and be able to say, “Actually, pimpin’ is easy.”

Still not convinced? Read the “Pimping Protection Procedures” portion of this recent JAMA article to learn how to strategically avoid getting pimped:
Detsky, A. The Art of Pimping, JAMA, 2009;301(13):1379-1381.
If you are a medical student looking for the perfect residency program be sure to attend our Residency Fair!
Do you remember the anxiety of medical school? Who helped you through it? How did you find your way to the place you are today?

Chances are it was a combination of mentorship and hard knocks. What if you could mentor someone and spare them some of those struggles?

For the last three years, I’ve been a resident mentor through the EMRA Student Mentorship program. Mentoring has renewed my excitement about emergency medicine, exposed me to new ideas, and given me a chance to develop a key career skill. I’m now mentoring my second student through this program, having already helped one navigate medical school and the match. I’ve been asked several questions about this program.

What are the roles and responsibilities of the resident mentor?
The resident mentor helps to develop a medical student interested in emergency medicine through regular communication, career advice, and reviewing key documents. The frequency of communication can vary. Most commonly, residents communicate with their mentees every two to three months, although the frequency may increase around key junctures, such as before ERAS submission and during the interview season. The communication can be by email or phone. Residents are most commonly paired with students who are not at their home institution, but who share some similar interests.

The mentor should model and encourage positive, productive behavior and skills, and encourage the student to succeed. It helps a great deal to find out about the goals and aspirations of the student, so you can help him reach those goals. Mentorship can also involve teaching how to evaluate a project, how to choose achievable goals in medical school, and how to strike a work-life balance. Resident mentors can share what they learned on the interview trail and help students find a good fit for residency training. Mentors are expected to not denigrate other residency programs and to maintain appropriate confidentiality.

What are the responsibilities of the student?
The student should respond promptly to communication and be mindful of the time constraints of the mentor. The student is responsible for taking the initiative to ask questions; however, mentors may think of key questions that the student would not think to ask.

What are the benefits to the resident?
Mentoring is a core career skill. The process of being a mentor has educated me about how to seek more effective mentorship. There is pride in the student’s achievements and successes, and a reminder of what you’ve overcome to get to where you are. Mentoring is recognized by departments of emergency medicine as a valuable activity, and should be listed on a CV. The National Institutes of Health recognizes the importance of mentorship, and even financially supports senior scientists who mentor. Finally, the process of mentoring allows you to reflect on, define, and share your own values.

But I think I’m going into community practice. I really don’t need another line on my CV
The process of mentoring is not confined to academics. In any job, you will need to find effective mentors to help you maximize your productivity and succeed.
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October/November 2011 25
We all need somebody to lean on

As my term as Vice Speaker ends and term as Speaker begins, I’ve been thinking back on the reasons I was attracted to EMRA and desired to run for a position on the Board of Directors. At the same time, I’ve started asking myself, “Were these some of the same reasons I ventured into emergency medicine and medicine in general?”

Short of playing major league baseball or being a pro golfer, we have the best jobs. Many of us would agree that part of what makes our jobs so great is that luxury of having plenty of time off and getting the opportunity to treat a wide spectrum of patients with a wide spectrum of medical problems. I would like to dive into the part of our job that usually gets less attention in this publication—our time away from work—and to challenge ourselves, as the next generation of emergency medicine physicians and upstanding U.S. citizens, to think about what our mark is outside of shift work.

If there is one word we need to define, it’s “passion.” What makes us get up in the morning, rearing to go? I present this rhetorical question because the answer will be different in almost every emergency medicine resident and physician you ask. We need to find this within us and realize that this is the place we can make our mark.

I am going to highlight a few broad ideas to give our members something to think about in the years to come. You will read plenty of medical articles and see plenty of patients, but what else are you going to be known for?

PARENTING/MENTORING: As a parent of three children under five, I experience the importance of parenting and fostering relationships every day. But often, especially in our profession, we are urged to be a physician first while everything else is secondary. We are missing out if we desire to have a family and continue believing this to be true.

While becoming a parent might not be for everyone, think long and hard about those who have influenced your life and gave you a fighting chance to succeed. In turn, I would encourage each resident and graduate to become a mentor. It is quite fulfilling and a way to give back to the future of our country.

PHILANTHROPY: Growing up, I remember asking, “Why can’t it just be called giving back?” After several years had passed, a friend’s father explained to me that being a philanthropist is a lifestyle: it is a decision to give back to the community and encourage growth for its citizens and beyond. This stuck with me—I have made the decision to be a philanthropist.

At our residency program last year, I challenged my fellow residents to get involved, even if it is slightly outside your comfort zone. We, as residents, pooled money together and showed up in numbers to work a Salvation Army Christmas gift drive. After the fact, several residents relayed their awe of just how many communities need our help.

To this end, EMRA has organized a blood drive on October 16 at the Hilton San
Francisco Union Square to give back to the population of the Bay Area. Your regional representatives have made this a priority, and I commend them for doing so. We want to encourage philanthropy in the cities where you are training and in the communities where you will eventually settle in the coming years.

**ADVOCACY:** In the past several months, EMRA has highlighted the importance of advocacy and training in residency programs. I am going to use this term in a slightly more broad sense and use EMRA as an example of being an advocate outside of the confines of the emergency department.

Many of us are innately passionate about our careers and patients. In turn, we need physicians in leadership positions and advocates for the future of our specialty. This typically cannot be done while simultaneously caring for three critical patients in the emergency department. We must make an extra effort in some of our “off” time to participate locally, statewide, and nationally to ensure a better future for our profession.

In closing, I am not trying to redefine the definition of life; however, I do want to help tie our lives together. Working in “the pit” is something we do for less than a quarter of our lives. There are a lot of venues outside of work where we can aid future generations. While being vice speaker and an emergency physician were both choices that have changed my life, those decisions were made to affect many more lives than just mine.

**Representative Council Events**

**Sunday, October 16**

1:00 pm – 1:30 pm  **EMRA Representative Council Conference Committee Orientation**
Union Square 12
This is a mandatory meeting for those individuals who are serving on the Conference Committees. This includes Reference Committee, Sergeant at Arms and Tellers/Credentialors.

1:30 pm – 2:30 pm  **EMRA Regional Representative Meeting**
Union Square 12

2:30 pm – 4:00 pm  **EMRA Reference Committee Public Hearing**
Golden Gate 8
**REQUIRED FOR EMRA PROGRAM REPS**
During this meeting, the Reference Committee hears testimony from the authors of resolutions being brought forth from the Council and from anyone who would like to speak for or against the resolutions. This is your opportunity to understand more completely the reasoning and history behind the business being brought before the Rep Council. A great way to learn, understand and participate in the Rep Council the following day.

4:00 pm – 6:00 pm  **EMRA Reference Committee Work Meeting**
Union Square 12
This work meeting is a closed session for the Reference Committee to prepare reports to be presented to the full Rep Council the following day.

**Monday, October 17**

7:30 am - 8:30 am  **EMRA Representative Council Welcome Breakfast & Candidate’s Forum**
Golden Gate 6
**REQUIRED FOR EMRA PROGRAM REPS**
This is an informal breakfast meeting for all Rep Council members where you can meet other program representatives, the EMRA Board of Directors, Rep Council officers, Regional Reps and the Candidates who are running for the EMRA office.

7:30 am – 8:30 am  **EMRA Representative Council Registration**
Golden Gate 8
**REQUIRED FOR EMRA PROGRAM REPS**
All Program Reps are required to register to receive their voting credentials for the Rep Council meeting. Be prompt, registration closes at 8:00 am sharp.

8:30 am – 12:30 pm  **EMRA Representative Council Meeting and Town Hall**
Golden Gate 8
**REQUIRED FOR EMRA PROGRAM REPS**
This is a formal business meeting where elections and resolution votes will take place. The Town Hall Forum is an open discussion forum following the business session. This mandatory meeting is your chance to shape the organization and the specialty. Don’t miss it!
Ultrasounds in EM

Krithika M. Muruganandan, MD
Brown University
Providence, RI

Bedside ultrasound in international medicine

The utility of bedside ultrasound in emergency medicine has grown considerably in recent years, stimulating a global increase in the popularity of this imaging modality. Ultrasound technology has also improved, resulting in machines that are sturdy, lightweight, portable, and affordable. These changes have extended its use from the traditional hospital setting to more austere environments.

There has been an increase in medical literature supporting its use internationally in prehospital care, rural clinics, remote hospitals, and urban tertiary care centers. Point of care ultrasound has expanded the diagnostic capabilities of local providers, particularly in settings where diagnostic radiographic support is limited. Bedside ultrasound can provide immediate insight into life-threatening conditions, facilitate accurate diagnoses, and minimize delays in needed treatment.

Identifying critically-ill patients in a mass casualty event or disaster is challenging. Ultrasound has been used as a triage tool to quickly identify severe thoracoabdominal injuries requiring surgical intervention. Reports on the utility of ultrasound in caring for patients injured in natural disasters have been made, including the recent earthquakes in Turkey, China, and Haiti, the mudslides in Guatemala, and the cyclone in Australia. In addition to identifying major thoracoabdominal injuries, ultrasound has also been used in the evaluation of patients with crush injuries to determine the need for dialysis.

Studies evaluating bedside ultrasound techniques have demonstrated their usefulness in identifying cardiac, pulmonary, abdominal, obstetric/gynecologic, and other surgical pathologies. Ultrasound improves diagnostic capabilities, changing patient diagnosis in 20-60 percent of cases when compared to physical examination alone.

Other novel uses have been developed. Its utility as an adjunct in diagnosing cerebral malaria by measuring optic nerve sheath diameter has been reported. Ultrasound has also been used in the determination of pediatric hydration status and is used for visual guidance with various bedside procedures. Additional research evaluating the long-term impact on patient care, patient outcome, and sustainability is needed, with the hope of transforming and modernizing global patient care.

Case

A 27-year-old male presents to a rural hospital in Haiti with fatigue and dyspnea on exertion for several years. On physical exam, his vital signs show a blood pressure of 105/80, heart rate 90, respiratory rate 17, and oxygen saturation of 92 percent on room air. Generally, he is a thin cachectic male with perioral cyanosis. He has a loud 4/6 systolic murmur and a thrill over his mid-chest. Lung exam is normal. He has
“Point of care ultrasound has expanded the diagnostic capabilities of local providers, particularly in settings where diagnostic radiographic support is limited.”

no peripheral edema, but demonstrates bilateral clubbing of his fingernails. His chest x-ray reveals cardiomegaly but clear lung fields.

**Ultrasound findings**

Bedside ultrasound of this man’s heart yield several interesting findings. The parasternal long axis view reveals a ventricular septal defect (VSD), right ventricular hypertrophy, and overriding aorta. In the parasternal short axis view, his right ventricular wall is noted to be significantly thickened, equaling the width of the left ventricle. There is also flattening of the ventricular septum, suggesting chronically elevated right-heart pressure due to pulmonary valve stenosis and a shunt effect from the VSD. These findings were confirmed on formal ultrasound, suggesting Tetralogy of Fallot as the cause of this man’s symptoms.

Point-of-care cardiac ultrasound is typically used in the evaluation of patients with chest trauma, hypotension, dyspnea, or cardiac arrest. The goals of emergent cardiac ultrasound include evaluation of cardiac contractility and identification of pericardial effusion. In a resource-limited setting with limited availability of specialists, physicians performing bedside ultrasound are responsible for a greater purview of pathology. Fortunately, ultrasound is effective at identifying rheumatic heart disease (characterized by mitral valve stenosis or regurgitation), endocarditis, cardiomyopathy, pericardial disease, and congenital cardiac defects. Tetralogy of Fallot is usually diagnosed and repaired within the first year of life in the United States, since mortality increases significantly with delayed surgical repair; however, this Haitian patient remained undiagnosed until his third decade, when his condition was detected through the use of bedside ultrasound. He was subsequently referred for formal echocardiography with evaluation for possible surgical intervention.
Looking ahead to 2012

While the 2012 elections may still be a year away, campaign season has already begun. The action is heating up in Iowa, with frequent visits by the Republican frontrunners, and even President Obama finding time to check in on the Midwest. While they speak of big changes for the future, the past year has been devoted to crisis-driven legislation, with our divided government seemingly only able to make a decision with a deadline hours away on critical financial issues. This focus on the immediate crisis (first the federal budget, then the debt ceiling) has taken legislators’ time and attention away from the ongoing crises facing medicine: medical liability reform and threats to Medicare reimbursement.

As advocates of emergency physicians and emergency patients, we have promoted HR 157. This legislation would improve liability protection for emergency physicians and on-call physicians providing emergency care and would thus improve emergency patients’ access to specialists. In addition, we have continued to advocate for a long-term fix to the Sustainable Growth Rate (SGR), the formula used to calculate Medicare physician reimbursement. Without a legislative patch, the SGR mandates a 29.4 percent cut in Medicare’s payments to physicians on January 1, 2012.

These critical legislative issues were addressed at the first meeting of the Emergency Medicine Action Fund in Washington, DC on July 14. Representatives from each of the 18 groups that hold seats on the Board of Governors attended the inaugural meeting. Nathan Deal, EMRA President, and I attended as the EMRA representatives. Each of the other five stakeholder organizations (American Academy of Emergency Medicine, Association of Academic Chairs of Emergency Medicine, American College of Osteopathic Emergency Physicians, Emergency Department Practice Management Association, and Society for Academic Emergency Medicine) was also represented, along with ten groups and coalitions who made large donations to the Action Fund.

ACEP’s Washington, DC staff partnered with our health policy consultants to provide an overview of the legislative and regulatory scene from our nation’s capitol. We discussed the popular legislation to repeal the IPAB (Independent Payment Advisory Board), which is gathering co-sponsors in both the House and the Senate, and the growing momentum of HR 5 (the HEALTH Act), which would improve the medical liability climate for all providers. However, our discussions focused on the regulatory issues which will be the focus of the Action Fund’s work.

At the Centers for Medicare and Medicaid Services (CMS), excitement abounds over the potential of Accountable Care Organizations (ACOs). These groups of providers would assume responsibility for a defined population of Medicare beneficiaries and work to provide high-quality care while reducing overall costs. If the ACO succeeds at these dual goals, Medicare would then share the cost savings in part with the provider network.

CMS has yet to finalize the rules for how these systems will work, and they remain controversial amongst providers. Many are concerned about the millions of dollars in start-up costs required to form an ACO. Smaller physician-based groups (rather than large hospital systems, like the Mayo Clinic) may find it impossible to raise the capital required to become an ACO and may never reap the shared savings necessary to pay back their initial investment. The rise of ACOs may pressure the two-thirds of emergency physicians working in practice groups contracted with hospitals to instead become hospital employees. In addition, the 65 quality measures used to determine the quality of care provided may be added to existing quality measures already in place, and the burden on physicians to report dozens of measures may become unmanageable.
ACEP has already produced a comment letter for review by CMS while they consider the final rules for ACOs. However, our leverage as a specialty is improved by the formation of the Action Fund. Through the Action Fund, multiple organizations (including ACEP, EMRA, AAEM, SAEM, ACOEP, and many practice groups) can speak to critical regulatory organizations like CMS with one voice—requesting a role for emergency physicians in ACOs, optimal ability for physician groups to join ACOs, and minimally burdensome quality reporting requirements.

Other potential changes to Medicare reimbursement were also discussed, including the national pilot program on Payment Bundling which will begin in 2013, the latest in Value Based Payment, and the evolution of the Physician Quality Reporting System (PQRS). While reporting quality measures will yield financial incentives (0.5 percent increase in payments) through 2014, penalties will be initiated in 2015 (-1.5 percent of your Medicare reimbursement for failing to participate). The good news is emergency medicine has established a great track record of participation and has the highest participation percentage of all specialties, with 63 percent of eligible practitioners submitting data. We must, however, continue our efforts to ensure that these quality measures offer a reasonable and evidence-based assessment of the excellent care we provide.

A recent flawed measure has been introduced which penalizes emergency physicians for frequently obtaining brain CTs on Medicare patients with an atraumatic headache. Unfortunately, there is no high-quality evidence to define the appropriate usage of brain CT on patients over age 65 with acute headache, so this measure is not evidence-based. In addition, the measure analyzes the utilization rate of brain CT, instead of analyzing the appropriate usage of this imaging in a given patient population. For these reasons, ACEP and the Action Fund will continue to work with CMS to modify or eliminate this measure from their quality reporting system.

Several new quality measures for emergency medicine have been recently proposed, including the use of anticoagulation for acute PE; pregnancy test for female abdominal pain patients; ultrasound determination of pregnancy location for pregnancy patients with abdominal pain; and Rhogam for Rh(-) pregnant women at risk of fetal blood exposure. ACEP and emergency physicians were instrumental in the development of these measures, which provide a reasonable analysis of the quality of care we provide in the emergency department. Working as a team on the Action Fund, we can continue to promote evidence-based quality measures and fair reimbursement for emergency physicians.

Early in residency, many of these issues may seem like part of a distant future, but the legislation and regulations being established now will shape our employment environment for decades into the future. Will ACOs put independent physician groups out of business? Will you be expected to report hundreds of quality measures to the government by 2025? EMRA is representing your future interests with our seat at the table on the Action Fund.

All of the members of the Action Fund agree that your training is important; the group identified issues of emergency medicine workforce, training, and education as a top issue for the Fund in the coming year. The Action Fund will be seeking ways to influence regulators to expand GME funding and increase the availability of residency-trained emergency physicians to serve emergency patients nationwide. As your Legislative Advisor, I am excited to represent emergency medicine residents at this critical time in healthcare.

Congratulations to the 2011-2012 EMRA-ACEP Health Policy Mini Fellowship Recipients

Arjun Venkatesh, MD, MBA
Brigham & Women’s Hospital
Boston, MA

Brandon Maugham, MD
Brown University
Providence, RI

Applications for the 2012-2013 Health Policy Mini Fellowship are due
July 15, 2012

Visit www.emra.org for details
Understanding clinical prediction guides

Medical decision making in the emergency department can be a fast and furious endeavor. Life-and-death decisions must be made quickly, often with limited information; consequently, practitioners of evidence-based medicine are continually challenged to reconcile a patient’s clinical presentation with their own medical experience and expertise to arrive at an appropriate diagnosis or disposition. Clinical Prediction Rules (CPRs), otherwise known as clinical prediction guides, can serve as decision aids in such circumstances. In order to use CPRs effectively, residents and students must understand how these rules are created and the level of evidence behind them.

Ultimately, CPRs seek to guide clinical decision making by providing probabilities of a diagnosis or predicting outcomes. They achieve this goal by combining components of a patient’s history and physical examination with the results of basic diagnostic studies, including EKG, medical imaging, and laboratory test results. Some CPRs are intended to be used as diagnostic tools, including the Wells Criteria for Pulmonary Embolism and the Centor Criteria for Acute Pharyngitis. Others are used to determine a patient’s prognosis, such as the Pneumonia Patient Outcomes Research Team (PORT) score.

The Pulmonary Embolism Rule-out Criteria (PERC) Rule is an example of a CPR that utilizes historical components, physical exam findings, and vital signs to identify patients at low risk for pulmonary embolism (PE), allowing them to forego unnecessary additional testing (see Figure 1). If all eight of these criteria are satisfied, the risk of PE is less than two percent.

![PERC Rule](image)

<table>
<thead>
<tr>
<th>FIGURE 1 PERC Rule</th>
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<tbody>
<tr>
<td>1. Age &lt; 50</td>
</tr>
<tr>
<td>2. Heart Rate &lt; 100</td>
</tr>
<tr>
<td>3. O₂ Sat &gt; 94 percent</td>
</tr>
<tr>
<td>4. No prior history of DVT or PE</td>
</tr>
<tr>
<td>5. No recent trauma or surgery</td>
</tr>
<tr>
<td>6. No hemoptysis</td>
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<tr>
<td>7. No exogenous estrogen use</td>
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<tr>
<td>8. No clinical signs suggesting DVT</td>
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CPR development occurs through a series of well-defined steps (see Table 1). During the derivation phase, potentially important factors are collected and analyzed. Logistic regression is used to identify those factors that are most relevant to the outcome of interest in a retrospective sample of patients. Although it may be tempting to use CPRs that have just passed the derivation phase, these rules have not yet been validated and may yield unreliable results. The Laboratory Risk Indicator for Necrotizing Fasciitis (LRINEC) score is an example of a CPR that has only undergone derivation and has not progressed beyond a split-sample validation.

Progressing to the next step in its development, a CPR typically undergoes validation in a different sample of patients at the same institution. This is known as internal validation. External validation occurs when the rule is used outside the institution in which it was developed and it performs well. Not surprisingly, a CPR’s performance usually declines when it is applied to a different patient...
population than the one in which it was developed; however, those rules that pass this hurdle are ready for widespread clinical application. An example of such an externally-validated clinical prediction rule is the Canadian CT Head Rule for Minor Closed Head Injury.

The final step in CPR development is impact analysis. During this phase, clinical prediction rules are evaluated for ease of use, improvement in patient outcomes, and economic outcomes such as resource utilization. CPRs with a high impact are easy to use, easy to remember, improve patient care, and reduce costs without compromising patient outcomes. An example of a high-impact CPR is the Ottawa Ankle Rule for predicting the likelihood of ankle fractures on plain films.

As CPRs progress through these stages of development they become more credible. Guyatt and colleagues have described a hierarchy of evidence for CPRs (see Table 2). Clinical prediction rules function better when addressing straightforward clinical problems (e.g., NEXUS Criteria for Neck Injury), rather than complex problems (e.g., San Francisco Syncope Rule). Level four evidence is granted to derived but unvalidated CPRs, while those successfully completing impact analysis are afforded level one status.

Clinicians must evaluate the strength of a CPR before applying it to their clinical practice. These guidelines have the potential to improve our decision-making in the emergency department when applied appropriately. But users must recognize that CPRs are not hard and fast “rules” that must be followed under any circumstance. Even the best CPR has its own limitations and exclusion criteria. When used appropriately, however, CPRs can help emergency medicine physicians to provide evidence-based care to their patients in a rapid and cost-effective manner.

EMRA produces a Clinical Prediction Card containing several common CPRs that serves as a pocket guide to the use of the CPR in the emergency department. Look for it on the EMRA website.

“When used appropriately, however, CPRs can help emergency medicine physicians to provide evidence-based care to their patients in a rapid and cost-effective manner.”

<table>
<thead>
<tr>
<th>TABLE 1</th>
<th>Development of a Clinical Prediction Rule</th>
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<tbody>
<tr>
<td><strong>Step 1: Derivation</strong></td>
<td>Identification of predictive factors for the rule.</td>
</tr>
<tr>
<td><strong>Step 2: Validation</strong></td>
<td>Application of the rule in a similar clinical setting (internal or narrow validation) or application at multiple sites or different institutions (external or broad validation).</td>
</tr>
<tr>
<td><strong>Step 3: Impact Analysis</strong></td>
<td>Evidence that application of the rule impacts physician behavior, patient outcomes, or economic outcomes.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>TABLE 2</th>
<th>Hierarchy of Evidence for CPR’s</th>
</tr>
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<tbody>
<tr>
<td>Level IV</td>
<td>Rules that need further validation before being applied to clinical practice. CPR’s that have only been derived or validated in a split sample</td>
</tr>
<tr>
<td>Level III</td>
<td>Rules that clinicians might consider using if patients in study are similar to those in clinical practice. CPR typically has undergone internal validation alone.</td>
</tr>
<tr>
<td>Level II</td>
<td>Rules that can be use in clinical practice in various settings as the CPR has been shown to demonstrate accuracy in several setting and patient samples.</td>
</tr>
<tr>
<td>Level I</td>
<td>Rules can be widely used as the CPR has been shown to change physician behavior, improve patient outcomes, and potentially reduce costs.</td>
</tr>
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</table>

References


All night, residents and faculty stood by Tim’s side. Their families came and a portion of the waiting room was designated for their needs. She underwent surgery by the orthopedists and ENT, as well as having a stent and coil placed by the interventional neurosurgeons.

She received a tracheostomy and, after 15 harrowing days, was discharged to physical rehabilitation. Tim took time off from residency to help her recuperate. He went to the gym with her, and they adopted a rigorous strengthening and conditioning workout. She was discharged, decanulated, and sent home with her jaw wired shut from her most recent surgery.

Day by day, slowly but surely, Alison gained strength, surpassing her expected outcome. Her progress, however, nearly unraveled one evening at home. As they were getting ready to sleep, Alison suddenly screamed “Oh, my head” and then began to seize.

Thoughts racing through his head, Tim called 911. His instincts as an emergency resident kicked in as he realized that the tenuously-coiled aneurysm had ruptured.

As he waited for the ambulance, he grabbed a trach tube that he had in his house and went for her neck. He located the landmarks around her semi-healed stoma and plunged the tube in without any anesthesia, her eyes opened as she winced in pain. Tim later said that it was the hardest thing he ever had to do. The wait for the ambulance was agonizingly long.

At the hospital, CT confirmed his worst fears—the aneurysm had ruptured leading to a subarachnoid bleed and some stroke-like symptoms. She was taken to the NSICU for intensive care. Though she initially experienced difficulties with fluctuating ICP’s, Alison finally stabilized enough to allow an external carotid to internal carotid bypass. Alison again resumed her dogged fight back to recovery and was discharged soon thereafter.

Many residents were intimately involved in Alison’s care. There was a resident on the other aircraft, in the emergency department, and on the SICU, NSICU, and trauma services. It was difficult for some, but also gave many a sense of fulfillment as residents were able to “take care of one of our own.”

The faculty was also extremely supportive. The night of the accident, a Saturday night, numerous faculty came into the emergency department on their own to support the residents and other staff who were affected. Those who were having difficulty
with the situation were sent home with faculty coverage.

The residency held a night out where all emergency medicine residents were free from clinical responsibilities (thanks to faculty coverage) together with the chairman, past chairman, current CEO, and numerous faculty to enable all to debrief and discuss their feelings. In a remarkable show of unity, many residents from other programs came out to show their support. This had a very positive effect and not only boosted morale, but also helped create a cohesive bond among the residents.

Tim’s co-residents also stepped up graciously. Many cancelled vacation plans at the last minute and switched rotations to enable Tim to have the time to spend with his wife and recuperate without additional stress. Upper level residents and even faculty took junior level shifts to ensure adequate emergency department staffing. Tim and Alison say that the support from the residents and faculty, the constant stream of visitors, and the interventions (dragging him home after staying in the hospital for 11 days straight and at the point of delirium!) were crucial to getting them through this experience.

Tim returned to work in January. Dr. Bill Hinckley, the AirCare medical director, stayed with Tim that first shift to shadow him and make sure all went well on his first flight. The tones went off for a scene in Indiana. The call was eerily similar; a young woman with a striking physical similarity to Alison was badly injured in an automobile accident and had severe head injuries. Despite the reminder of his wife’s recent tragedy, Tim was cool, calm and collected. He sedated and intubated her, started three percent saline, and began resuscitation. It was apparent that Tim was back in the groove of saving lives. As a result of his experiences, Tim has developed a newfound interest in critical care.

Alison is now nearly fully recovered. Her rigorous training has restored much of her strength; except for a trace of residual aphasia and some scars, you would never know the extent of her injuries. She has been cleared to return to work as a pediatrics resident and recently returned to a full-time schedule.

Adversity causes people to show their true colors—either bringing them together or tearing them apart. Tim and Alison say the hardship they faced helped strengthen their relationship. She and Tim are running together again, having recently completed the 5km component of the upcoming Cincinnati Flying Pig marathon—a race Alison won in 2005. 

Special thanks to Dr’s Tim and Alison Delgado for allowing me to share their story. With appreciation to the Faculty and residents of the UC Department of Emergency Medicine as well as the best team in HEMS the amazing flight nurses, pilots, dispatchers and mechanics of UC AirCare who foster a culture of excellence. It is an honor to work with all of you.
Just Announced!

AHC Media, publisher of:

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Large saddle pulmonary embolism treated with direct pulmonary catheter TPA

“Thrombolytic therapy is indicated in the setting of syncope, heart failure, hypotension, or severe hypoxia.”

Abstract
Saddle pulmonary embolism (PE) is a serious medical condition. It results from a deep vein clot that dislodges and travels to the pulmonary arterial vasculature, then settles at the bifurcation of the pulmonary artery trunk. Patients are typically middle-aged or have a BMI greater than 30kg/m² and have non-specific symptoms such as dyspnea at rest, pleuritic chest pain, or syncope [3,5]. We report a case of a large massive saddle pulmonary embolism diagnosed by CT pulmonary angiogram that was treated with direct pulmonary catheter thrombolitics, anticoagulants, and IVC filter placement.

Case Report
A 64-year-old white male presented to the ED with a chief complaint of acute onset of dyspnea and syncope. Per EMS, the patient was hypotensive with a blood pressure of 83/33, and had an O2 saturation of 92 percent. He came into the ED as a STEMI alert with a questionable EKG, and therefore was given aspirin, sublingual nitroglycerin, and started on a 15 liter non-rebreather mask. He had no significant past medical history, previous surgeries, or current medications.

The patient stated he had a syncopal episode and hit the back of his head. He was found by his wife, who also noted incontinence of urine. The patient had chest pain described as pressure, as well as acute onset of left leg pain and swelling earlier in the day. A review of systems was positive for weakness, shortness of breath, dyspnea on exertion, nausea, and vomiting.

On physical examination, the patient was normotensive with a heart rate of 75 and respiratory rate of 18. Oxygen saturation was now 100 percent on the NRB mask. The lungs were without wheezing, rales, or rhonchi; good air exchange was noted bilaterally. The exam of the extremities revealed left leg swelling with pain on palpation.

PO² on an ABG was 59. Other labs, including CBC, CMP, BNP, coags, and cardiac enzymes were within normal limits. The initial EKG showed normal sinus rhythm with a rate of 75, non-specific ST changes, and flat T waves in the lateral leads. A CT pulmonary angiogram demonstrated a large saddle embolus with thrombus extending into bilateral upper, lower, and right medial lobes of the pulmonary arteries.

A heparin bolus was given as the patient was urgently transferred to the interventional radiology suite for pulmonary angiography. Ekos catheters were left in place in the pulmonary artery, the right ventricle, and pulmonary arteries. The next day he was started on lovenox and coumadin. On hospital day three, the patient was stable and able to maintain an oxygen saturation above 97 percent on room air. He was then discharged home with orders to continue outpatient anticoagulation and to follow up with his primary care doctor.

Discussion
Saddle PE is a feared sequelae of deep venous thrombosis because of its potential devastating effects on the cardiovascular and pulmonary systems. At autopsy, 29 percent of patients with PE as the cause of death had a saddle PE [6]. Most originate as thrombus formed in the iliac, femoral, or popliteal veins at areas of decreased blood flow, such as bifurcations or valve cusps.

Approximately 1 in every 500 to 1000 emergency room visits per year is for PE, but only 2.5 to 5.2 percent of them are defined as saddle PE [2,3,4]. The most common presenting symptoms of PE were acute onset of dyspnea, pleuritic pain, cough, and calf or thigh pain / swelling; moreover, the symptom of syncope is most distinct to saddle PE [1,3,4,5]. The most common signs of both PE and saddle PE are tachypnea, tachycardia, rales, decreased breath sounds, and jugular venous distention [1].

A D-dimer is a highly sensitive test with low specificity for PE, and is better used to help exclude the diagnosis of PE. A D-dimer level greater than 2500 ng/ml highly suggests the presence of PE, while a level less than 500 ng/ml, along with a low clinical probability, can aid in ruling out PE [2,8].

Although pulmonary angiography is considered the “gold standard” for definitive diagnosis, its use has declined dramatically. The non-invasive helical CT angiogram has fast become the diagnostic modality of choice. It has a sensitivity of 90 percent and specificity of 95 percent for PE, and sensitivity and specificity of 100 percent for saddle PE [9,11].

With 75 percent or greater obstruction of the pulmonary artery, the right ventricle must generate systolic pressures in excess of 50 mmHg to preserve perfusion, thereby creating an unsustainable demand on the RV [10]. As the ability of the RV to maintain cardiac output and adequate left ventricular filling deteriorates, hemodynamic collapse occurs [10]. The degree of RV strain represents the
Saddle PE is a feared sequela of deep venous thrombosis because of its potential devastating effects on the cardiovascular and pulmonary systems.

The greatest predictor of morbidity and mortality [12].

Current modalities aimed at reducing obstruction include anticoagulants, thrombolytics (both parenteral and direct pulmonary catheter), and various techniques of mechanical embolectomy. The role of anticoagulation is to prevent further worsening of the clot, but it will not decrease the size of existing embolism and thrombus. The only way to acutely reduce embolic burden is through use of thrombolytics or embolectomy. Thrombolytic therapy is indicated in the setting of syncope, heart failure, hypotension, or severe hypoxia [13].

Patients with a saddle PE have a 90-day mortality rate around 50 percent [7]. Systemic thrombolysis has not been shown to reduce mortality in this patient group, and is associated with a 20 percent rate of major bleeding complications [14]. Minimally invasive catheter directed therapy has become the preferred therapeutic modality because of its ability to reduce quickly alleviate clot burden without systemic effects [14]. The overall goal of therapy is to reduce clot burden, relieve RV strain, and achieve hemodynamic stability.

References
EMRA gratefully acknowledges these organizations for their generous support of the many activities during Scientific Assembly.
**EMRA Schedule at Scientific Assembly**

**Wednesday, October 12**
- 9:00 am – 5:00 pm: EMRA Board of Directors Meeting, Union Square 19

**Thursday, October 13**
- 6:00 pm – 10:00 pm: EMRA Board of Directors Meeting, Union Square 3

**Friday, October 14**
- 1:00 pm – 5:00 pm: EMRA MSGC Meeting, Union Square 3
- 5:30 pm – 7:30 pm: EMRA MSGC Mixer, Infusion Lounge, 124 Ellis Street

**Saturday, October 15**
- 8:00 am – 2:00 pm: **EMRA Medical Student Forum**
  - Continental Parlor 1
  - Refreshment Breaks Sponsored by Liberty Mutual
  - Hot Topics in Emergency Medicine – Angela Siler-Fisher, MD, FACEP, Baylor College of Medicine, Ben Taub General Hospital
  - Career Opportunities in EM – Discussion Panel – Sara Lary, DO, Loma Linda University Medical Center, Peter Sokolove, MD, FACEP, UC Davis, Haney Mallenat, MD, University of Maryland, and Derek Robinson, MD, MBA, FACEP, Centers for Medicare/Medicaid
  - Medical Student Breakout Sessions:
    - MSIV – Interview Day Tips – Janis Tunepis, MD, FACEP, University of Wisconsin, Continental Parlor 1
    - MSIII – Taming the Application Process – Micelle Haydel, MD, FACEP, Louisiana State University, New Orleans, Continental Ballroom 4
    - MSIV – Opportunities for EM during Preclinical Year – Kenneth Heard, MD, FACEP, Rocky Mountain Poison & Drug Center, Denver Health and University of Colorado School of Medicine, Franciscan A
  - Application and Interview Advice – Intern Panel Discussion – Shae Sauncy, MD, Louisiana State University, New Orleans, Nathan Wilson, MD, University of California, San Francisco, Aaron Danielson, MD, University of California, Davis and Cameron Decker, MD, Baylor College of Medicine, Continental Parlor 1
  - Medical Student Networking Lunch/Roundtable Discussion with Program Directors; Grand Ballroom Salon A
  - Managing Student Loans, GL Advisor – Jason DiLorenzo, MD, University of Colorado School of Medicine, Franciscan A
  - MSIV – Opportunities for EM during Preclinical Year – Kenneth Heard, MD, FACEP, Rocky Mountain Poison & Drug Center, Denver Health and University of Colorado School of Medicine, Franciscan A
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  - Medical Student Networking Lunch/Roundtable Discussion with Program Directors; Grand Ballroom Salon A
  - Managing Student Loans, GL Advisor – Jason DiLorenzo, MD, University of Colorado School of Medicine, Franciscan A

- 12:00 pm – 1:30 pm: EMRA Regional Representative Meeting, Union Square 12
- 1:30 pm – 2:00 pm: **EMRA Job Fair**, Grand Ballroom Salon B
- 2:00 pm – 3:00 pm: EMRA Job Fair Exhibitor Registration, Yosemite
- 3:00 pm – 5:00 pm: EMRA Job Fair, Yosemite

**Sunday, October 16**
- 7:30 am – 8:00 am: EMRA Reps to ACEP Committee Meeting, Union Square 9
- 7:30 am – 8:30 am: **EMRA Resident Forum: Life after Residency**
  - Golden Gate 8
  - Refreshment Breaks Sponsored by Hospital Physician Partners
  - Mechanics of the Job Search – Liudvikas Jagminas, MD, FACEP, Yale New Haven Hospital
  - Business of EM: Contract/Malpractice – Todd Taylor, MD, FACEP, Microsoft Corp Health Solutions Group; Joseph Wood, MD, JD, FACEP, Mayo Clinic Medical School
  - Financial Planning for Young Physicians – M. Shayne Ruffin, CFP, CFP, AEP, The Benefit Planning Group
  - Resident Networking Lunch (Been There Done That: Tips from EMRA Alumni on Life after Residency), Golden Gate 2
- 8:30 am – 12:00 pm: EMRA Representative Council Meeting and Town Hall, Golden Gate 8
- 1:00 pm – 1:30 pm: EMRA Rep Council Conference Committee Orientation, Union Square 12
- 1:30 pm – 2:30 pm: EMRA Regional Representative Meeting, Union Square 12
- 2:30 pm – 4:00 pm: EMRA Reference Committee Public Hearing, Golden Gate 8
- 4:00 pm – 6:00 pm: EMRA Reference Committee Work Meeting, Union Square 12
- 4:00 pm – 5:00 pm: EMRA Exhibitor Job Fair Registration, Grand Ballroom Salon B
- 5:00 pm – 7:00 pm: **EMRA Rep Council Meeting and Town Hall**, Golden Gate 8
- 9:30 pm – 2:00 am: **EMRA Party**, Temple Nightclub, 504 Howard St

**Monday, October 17**
- 7:30 am – 8:30 am: **EMRA Representative Council Welcome Breakfast & Candidate’s Forum**, Golden Gate 6
- 7:30 am – 8:30 am: **EMRA Representative Council Meeting and Town Hall**, Golden Gate 8
- 8:30 am – 12:30 pm: EMRA Board of Directors Meeting, Union Square 2
- 12:30 pm – 2:00 pm: EMRA Board of Directors Meeting, Union Square 2
- 2:00 pm – 4:00 pm: EMRA Board of Directors Meeting, Union Square 2
- 4:00 pm – 6:00 pm: **EMRA Board of Directors Meeting & Committee Updates**, Union Square 7
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Sunday, October 16, 2011
5:00 pm - 7:00 pm • Grand Ballroom Salon B

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Resurrection Medical Center
Thomas Jefferson University Emergency Medicine
UCSF – Fresno
University of Arizona – Department of Emergency Medicine
University of California, Davis
University of Maryland Emergency Medicine
University of Rochester
University of Texas Houston Health Sciences Center
University of Utah Division of Emergency Medicine
University of Virginia Department of EM UT Southwestern Medical Center
Washington University SOM Medical Toxicology Fellowship

Academic
Baylor College of Medicine
Emory University – Department of EM EPMG
Indiana University Health Physicians
Loma Linda University
MedStar Emergency Physicians: Georgetown University/Washington Hospital Center EM Residency
Staten Island University Hospital – NSLIJ
SUNY Downstate
UCSF–SFGH
University of Maryland Emergency Medicine
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Global Medical Staffing
TripleO Medical Recruitment
Vista Staffing Solutions

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4M Emergency Medicine Systems, Inc.
Apollo MD
Aurora Health Care
Best Practices, Inc.
CEP America
CompHealth
EPMG
EmCare
Emergency Medicine Consultants of Lorain County
Emergency Medicine Physicians

North East
Apollo MD
Bassett Healthcare Network
Best Practices, Inc.
CVPH Medical Center
Doctors for Emergency Service
Eastern Maine Medical Center
ECI
EmCare
Emergency Medical Associates
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Emergency Physicians of Tidewater, PLC
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Florida Emergency Physicians
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Schumacher Group
Scottsdale Emergency Associates, Ltd.
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Special thanks to Florida Emergency Physicians and Team Health for sponsoring the refreshments at the Job Fair!

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A 32-year-old woman with headache: A classic bedside diagnosis

This case is from the newly recently released book *Bouncebacks!: Medical and Legal*, by Michael Weinstock and Kevin Klauer, with legal commentary per Greg Henry.

Though it is easy to predict the usual etiology of common complaints by “playing the odds,” we also need to include life threatening causes in our differential. In law, we are innocent until proven guilty. In medicine, we are required to prove certain diseases are not occurring; we are in a sense, guilty until proven innocent: A 50-year-old man with chest pain and diaphoresis has an MI until proven otherwise. A 22-year-old woman with lower abdominal pain has an ectopic pregnancy until proven otherwise. We can’t afford to be usually right.

In *Bouncebacks*, we provide the documentation of an actual patient encounter, discuss patient safety and risk management principles, and then reveal the patient’s “bounce-back” diagnosis. This month’s case is unique as it did result in a devastating outcome and resulted in legal action.

As you read the case, pay close attention to the differential diagnosis. What would you have done differently? Would you find this case defensible in court?

**Medical**

**I. The patient’s story** – Kelli Flood works for Stem Outdoor Advertising, making just under $50,000 per year. She is smart, has a sharp wit and a good work ethic. Several days after the birth of Jacob, on July 30th, 1999, Kelli presents to her primary care physician with a headache, is diagnosed with sinusitis and placed on Amoxicillin. The headaches continue to the point that on August 8th her head pain is “indescribable, like my head was going to come off or split in two.”

**II. Initial ED Visit:** 32-year-old female with a headache

**Date:** August 8th, 1999 at 18:32

**Chief complaint:** Throbbing head, migraine comes on suddenly

**Nurse note:** This headache was of sudden onset half an hour ago. Had an epidural. Ice to forehead, crying, headache 10/10.

**Vital signs**

<table>
<thead>
<tr>
<th>Time Temp(F)</th>
<th>Rt. Pulse</th>
<th>Resp</th>
<th>Syst</th>
<th>Diast</th>
<th>Pos.</th>
<th>O2 sat</th>
</tr>
</thead>
<tbody>
<tr>
<td>18:42</td>
<td>97.0</td>
<td>68</td>
<td>18</td>
<td>156</td>
<td>95</td>
<td>97%</td>
</tr>
</tbody>
</table>

**History of present illness (18:55):**

32-year-old female, 8 days post partum. Presents for severe headache which began at 1800 and is the worst of her life. She had been asleep and woke up with the discomfort. No trauma. Was recently diagnosed with sinusitis. Since that time, she has had two other headaches, which were not quite as severe. HA is frontal and bi-temporal discomfort with photophobia and nausea, but no vomiting. There is no phonophobia, numbness, or tingling.

**Past medical history**

**Allergies:** Sulfa

**Meds:** Trimox, Tylenol, PNV

**PMH/PSH:** Negative

**FH:** Father - diabetes

**Physical exam**

**CONSTITUTIONAL:** A&O x 3, moderately uncomfortable.
SKIN: In general has normal texture and turgor. No lesions
EYES: EOMI. PERRL. Fundi are normal.
ENT: Minimal nasal mucosal erythema. There is bifrontal region tenderness to palpation and pressure.
NECK: Supple without masses, no lymphadenopathy
LUNGS: CTAB. No respiratory distress.
HEART: RRR without rubs, clicks, or murmurs. Carotid pulsations are 2+ and symmetric.
NEUROLOGIC evaluation including sensory, motor, cerebellar, and cranial nerve II-XII examination is intact. No meningeal signs present.

Ed course
19:20 - Testing: Brain CT: (reading per ED doctor): No evidence of intracranial bleeding or mass lesion. The bone windows do show evidence for mucoid material within both frontal sinuses with possible ethmoid involvement.
19:50 - After discussing the situation and the possible effect of narcotics on the baby, who is breast fed, mother did agree to an injection of Demerol 75mg IM and Phenergan 25mg IM.
20:15 – Repeat vitals: Pulse 64, respirations 18, BP 176/50
20:35 - Meds: Biaxin 500mg PO

Doctor progress note: Moderate relief of discomfort after meds. The patient has cephalgia, which I believe is related to sinusitis. I recommend liquids and rest. Recheck in three to four days if there is no improvement in the overall symptoms, sooner if there is significant worsening.

Diagnosis
1. Acute sinusitis.
2. Acute cephalgia.

Plan: Biaxin 500mg BID #20, entex LA BID #20, Darvocet N-100 Q 6 hours PRN pain #6
Released ambulatory at 20:35

Next day CT overread by radiologist (08:45): No intraparenchymal hemorrhage, extra axial fluid collections, midline shift. The brain is normal in morphology. The paranasal sinuses are clear. CONCLUSION: Normal head CT

III. Discussion of Risk Management Issues

Error #1: Over reliance on test results and incomplete work-up
Discussion: The phrase “worst headache of life” means a lot to patients and lawyers, but it is really questionable how much it should mean to us. After all, the first headache of your life is also the worst headache of your life. If you are going to document this and do a brain CT, it is important to realize it’s limitations. In the first 12 hours, the sensitivity of CT for SAH is over 90%, but at 7 days it drops to only 58%.

Teaching point: If a brain CT is done to evaluate for SAH, an LP should always follow.

Error #2: Anchoring bias and diagnosis momentum
Discussion: Once the physician found erythematous nasal mucosa and ‘sinus tenderness’, they anchored on sinusitis. This was likely coupled with diagnosis momentum, as the patient was actually taking amoxicillin for a previous diagnosis from the primary care doctor. Curiously, there was no documentation of clinical sinus symptoms such as rhinorrhea, post-nasal drip, facial/tooth pain, or fever.

Teaching point: Symptoms and signs should support a diagnosis (as opposed to finding a diagnosis then looking for findings to support it). Start fresh on every patient.

Error #3: Too narrow of a differential diagnosis
Discussion: Whereas the two most immediately concerning diagnoses in patients with non-traumatic headache remain SAH and meningitis, there are other “can’t miss” secondary headaches including:
1. Brain mass
2. Temporal arteritis
3. Acute angle closure glaucoma
4. Pseudotumor cerebri (idiopathic intracranial hypertension)
5. Carbon monoxide toxicity
6. Rocky Mountain Spotted Fever/Lyme Encephalitis
7. Carotid artery dissection
8. Cavernous sinus thrombosis
9. Preeclampsia/eclampsia

Postpartum preeclampsia (which can occur up to 30 days after delivery) is concerning in our patient, as her headache was present with increased blood pressure and is post-partum. Additional findings which would have been helpful to explore included:
• Hyper-reflexia/clonus
• Abdominal pain
• Proteinuria
• Edema
• No previous history of hypertension

Another easily arrived at diagnosis is post-dural puncture headache. Worse when sitting up and better when lying flat – a diagnosis arrived at by history alone.

Teaching point: Maintain a high index of suspicion for high-risk headache patients.

continued on page 46
Bouncebacks!

continued from page 45

Error #4: Over-reliance of antibiotics for sinusitis

Discussion: Sinusitis is usually viral. The number needed to treat (NNT) with antibiotics to get one patient better faster is between 8 and 12. When the decision is made to use a second-line antibiotic, the NNT skyrockets to 100. Whereas it is OK to “bump up” the antibiotic from amoxicillin to Biaxin with our patient, the fact that they failed an antibiotic in the first place should prompt a re-evaluation of the diagnosis.

Teaching point: Think twice when you put a provisional diagnosis of sinusitis for a headache patient.

Error #5: Misread CT

Discussion: The ED physician did document a thorough discussion of the CT reading. Unfortunately, their reading contrasted with the radiologist’s reading. When there is a question, teleradiology should be employed; providing an interpretation on a CT, without the assistance of the radiologist may increase risk for the patient and the emergency physician. Sinus findings on CT are sensitive, but not specific.

Teaching point: Avoid interpreting brain CTs.

Error #6: Unrecognized vital sign abnormality

Discussion: Whereas the initially elevated BP could be explained by pain, when her symptoms improved after the narcotic injection, her BP increased. A recheck or discussion would have gone a long way to reveal the thought process of the EP.

Teaching point: Ignore abnormal vital signs at your peril.

IV. The bounceback

The next day, Kelli’s headache worsens. After dinner, she begins to shake all over and her eyes roll back in her head. Her husband calls 911.

ED record

- **At 21:32 - Chief complaint:** Possible seizures
- **Vital signs:** Temp 97.4, pulse 78, resp 16, BP 172/99, sat 97% (RA), glucose per EMS 92
- **PE:** Pt. moaning with pain and shaking her head from side to side and crying. No gross neurological deficits
- **Testing:**
  - **CT brain:** WNL
  - **Testing:** Labs normal
- **ED course:** The patient’s BP increased to 190/115, with worsened headache and crying. Mental status remains unchanged. Lasix IVP. Nipride drip. Demerol 25 mg and Phenergan 25 mg I.V.
- **Discussion:** LP was deferred as per neurologist due to limited laboratory at the hospital. Patient was admitted to the ICU.

Final diagnosis

1. Severe cephalgia, with acute mental status change, and first time seizures.
2. Consider encephalitis, herpes simplex.
3. Cannot entirely rule out undetectable subarachnoid hemorrhage

Hospital course

- **EEG** was unremarkable. Lumbar puncture: WBC 1, RBC 84, protein 77, glucose 46.
- **Repeat MRI**’s showed cerebral infarcts in the frontal, parietal and occipital lobes.
- On 8/19/99, 10 days after admission, she had another seizure and was transferred to a tertiary care facility. They reassess and list a differential which included postpartum cerebral angiopathy, cerebral vasculitis and eclampsia. Treated with high dose IV steroids and magnesium.
- **Hospital course** was prolonged and complicated by coma, sepsis, and tracheostomy.

Final outcome: She remains triplegic (use of left hand only), lives at home, and is cared for by her husband.

Legal

**Why sue?** This patient had a horrible outcome; a young mother now triplegic, requiring life-long medical care and assistance. Before her turn for the worse, she was sitting in the hospital room playing cards with her husband, waiting to go home to be with her family and newborn child. Suddenly, she experienced a seizure from which she would never recover.

**Plaintiff attorney to Kelli Flood (defendant) on day 6 of trial**

Q Would you describe Jacob for us?
A He’s a wonderful little boy. He’s three and a half. He is extremely active. He’s just… I can’t say enough about him. I’m a very proud mother.

Q Does Jacob love you?
A Yes, he does.

Q How do you know that?
A Because he tells me so. He throws his arms around my neck and says, “Mommy, I love you.”

At trial, Plaintiff argued that the Defendant Physician failed to differentially diagnose postpartum preeclampsia and failed to presumptively treat with magnesium sulfate. She sought compensation of approximately $12,000,000.
• **Plaintiff argument:** Neither ED doctor had properly considered pre-eclampsia/eclampsia in the differential diagnosis, despite patient being post-partum and hypertensive in the ED. Even if it had been properly considered (as he contended in deposition), it was not properly evaluated with search for proteinuria, edema, or hyperreflexia.

  o Plaintiff attorney: “In a study published in the New England Journal of Medicine there were 1,049 patients [with] eclampsia. They gave them magnesium sulfate. Guess how many of the thousand forty-nine continued to have seizures? Zero. It’s been known for a hundred of years. It’s the drug of choice.”

• **Defense argument:** The EP considered post-partum pre-eclampsia but it was low on the differential because 1) she had not had pre-eclampsia during her pregnancy and 2) it is exceedingly rare.

  o Defense attorney: “Plaintiffs contend that there’s a magic bullet here of magnesium sulfate. But it can be a very dangerous drug, causing respiratory distress and death. They mentioned a study where none of the patients given magnesium had seizures, but did not mention in the same study, of the patients who did not receive magnesium, only 12 had a seizure. There are some countries, for instance England and Canada, that never use magnesium sulfate; it’s unheard of.”

• **Verdict:** Jury ruled for the defense. The plaintiff was awarded nothing.

**Discussion of Post-Partum Headache**

The differential for headache in the ED includes infection to vascular to mass effect to eye pathology and environmental toxins. Add post- or peripartum female and your differential gets more daunting, including angiopathies, coagulopathies, and post-epidural anesthesia complications.

Sinusitis is not commonly considered to cause a headache. While common is common, sinusitis that’s failed a course of antibiotics should prompt consideration of an alternate diagnosis. Continuously high blood pressure in the patient despite analgesic therapy should prompt further investigation. The pain-free patient doesn’t preclude deadly pathology.

The deadly diagnoses that can plague the post-partum female are diverse including angiopathies, coagulopathies, and post-epidural anesthesia complications, so get your specialists on board early.

**Summary of case and risk management principles**

- Think twice about faulting sinusitis as a cause of new-onset headaches.
- Add eclampsia to your list of deadly headaches in peripartum women.
- Don’t get trapped by diagnostic momentum.
- Don’t ignore abnormal vital signs, especially when they stay abnormal after treatment.
- Consider early transfer to a tertiary care center if your hospital does not have the resources to deal with complex and critical diagnoses of patients.

**References**
Money matters

Serious business!

As we approach the fall of 2011, the Scientific Assembly is around the corner and with it, the official start of the 2012 job-hunting season. If you are planning to make the transition into practice next summer, the following topics will likely be of interest to you.

Type of practice
The three most common types of emergency practice are to work as an independent contractor (IC), a private group, or as an employee for a hospital. Here are some things to keep in mind, with each:

Independent contractor
As an IC, you will have the most flexibility in practice, as well as the challenges of being self-employed. Take time to understand self-employment income, set up a dedicated bank account and credit/debit card to separate business and personal expenses, set up an additional account to track tax payments and plan a forward-looking budget. Plan to establish a SEP IRA or Solo 401(k) as soon as possible to begin funding retirement and reducing your tax liability. 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
This is a hybrid of an IC and hospital employee. Consider that you will commonly have one to three years as an employee before making partner and becoming self-employed. During the employee period, you should have fixed income, minimal business expenses, and a limited ability to contribute to retirement. Simply, you will not have to think like a business person. As you transition into a partner role, it will be important to have an accountant and other financial advisors to assist you in navigating the changes in areas like taxation, retirement eligibility, and medical benefit limitations. This is a very comfortable and effective path for entrepreneurial types who do not want the complete solidarity of being an IC.

Hospital employee
Typically, the least flexible in terms of personal goals, 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 do not earn as much as private practitioners and have less flexibility in designating money to retirement and other important programs. For many, a significant advantage of hospital work is the ability to commit to research, train residents, and be involved in the collaborative, educational side of medicine.

If you are unsure of what type of practice you are interested in, take advantage of the Job Fair and various lectures during the EMRA events at the Scientific Assembly to meet prospective employers, understand contract negotiation, and gain advice on developing a financial transition plan.

From my perspective, the three core financial topics that you should understand are

• How to evaluate and purchase appropriate disability insurance.
• How to plan for retirement now and in the future
• How to allocate increased income

Disability insurance for emergency residents
Currently in the field of EM there are five very competitive contracts, in most states. The competitive features to understand are:

• Own occupation definition of disability
  – Each of these contracts will consider you totally disabled if you can not perform the substantial and material duties of your occupation, regardless of outside income or earnings. Understand that all disability claims are unique situations and are handled in a similar way by any company. All of the
companies want to pay as much as an insured is eligible for but certainly not more than is reasonable. An own occupation contract does not guarantee that you will receive full benefits in every situation, but it does offer the most comprehensive, flexible level of income protection, in the most diverse set of potential claim scenarios.

- **Benefit limits** – This is where current residents really benefit. Current guidelines allow a resident or fellow within the last six months of training to obtain up to $6,500 of tax free monthly income protection. Do this prior to completing training and you may be able to start in practice with greater than 100% of your net income insured. This is well above the normal industry guidelines and the opportunity expires as soon as you complete your training.

- **Out of pocket cost** – The relative benefit cost is as low as it has been in 10 years. For the most significant price reductions, obtain disability as a group of at least three people. Males can save 10-12%, females can save 45%! Look for one of the five companies to reduce their rates in Q1, 2011.

**Allocating income**

Take the time, before you graduate, to create a budget. For quantifiable objectives, such as a home down-payment, vacations, and emergency savings, create a separate account at your bank for each goal and contribute a fixed monthly amount via bank draft. For retirement, education for children, debt repayment and other larger items, develop an end-goal and make contributions that are in line with those objectives.

Having a well-planned budget will allow you to maximize available income, minimize income taxes, and maintain confidence in your personal financial situation.

For more detailed information on this topic, review the Disability Filter video, located at [www.integratedwealthcare.com/education](http://www.integratedwealthcare.com/education).

**Retirement planning**

There are three critical factors to understand about future retirement planning:

- **Set a goal** – You need some understanding of what you want to accomplish and when. This will validate the amount of ongoing retirement contributions as well as guide the investment structure.

- **Invest appropriately** – Try to achieve maximum growth with minimal risk. This can be a complex topic, so if you are not comfortable making your own investment decisions, pay someone for their expertise.

- **Reduce income taxes** – As income goes up, so does your relative tax bracket. Look for 403(b), 401(k), 457 and SEP IRA plans to allow for significant tax reduction. If you are self employed, the SEP IRA or solo 401(k) allow for very high pre-tax contributions.

**M. Shayne Ruffing, CLU, ChFC, AEP** is the creator of the Confidential Transition Plan™ for medical residents, the Physician Disability Income Analyzer™ and the Physician’s Financial Navigator™. Shayne specializes in executive benefit planning for physicians and medical practices. He can be reached at 800.225.7174, or via e-mail at shayne@mybpginc.com or on the web at www.IntegratedWealthCare.com.

Shayne is an Financial Advisor offering Securities and Advisory Services through NFP Securities, Inc., a Broker/Dealer, Member FINRA/SIPC and Federally Registered Investment Advisor. The Benefit Planning Group is not an affiliate of NFP Securities, Inc.
1. Which of the following patients requires emergent head CT scanning?
A. 23-year-old woman with a gradual onset, throbbing, bilateral frontal headache
B. 38-year-old woman who is at 28 weeks’ gestation with hypertension, severe headache, and blurred vision
C. 65-year-old woman with a new onset seizure but no focal neurologic findings
D. 79-year-old woman with near syncope and an old right hemiparesis

2. A 20-year-old man with a history of Crohn disease presents with fever, mild diarrhea, and severe right hip pain for 1 day. He is ill appearing and denies trauma or a fall. Vital signs include blood pressure 100/60, pulse 120, and temperature 38°C (100.4°F). Examination reveals mild abdominal and lumbar tenderness and severe gait antalgia with normal hip and extremity range of motion. Following a CT scan, what is the appropriate next step?
A. Administer corticosteroids
B. Begin intravenous antibiotics and arrange for surgical drainage
C. Insert a rectal tube for bowel decompression
D. Perform ultrasound-guided hip arthrocentesis

3. 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

4. A patient presents with blood-tinged sputum 3 days after undergoing a tracheostomy. Vital signs are stable with no respiratory distress. What should be the next step in management?
A. Change the tracheostomy tube
B. Deflate the air in the cuff
C. Obtain ENT consultation
D. Perform deep tracheal suctioning

5. A 21-year-old man presents with lacerations over the second and third metacarpophalangeal joints of his right hand after being involved in a fistfight the previous evening. Which of the following statements regarding his treatment is correct?
A. Absorbable sutures should be used because he might not get followup care
B. Antibiotics are not indicated because the likelihood of infection is low
C. Delayed primary closure or healing by secondary intention is appropriate
D. First-generation cephalosporins should be used as first-line treatment
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Risk management pitfalls in the treatment of drowning and submersion injuries

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1. “A 6-year-old male in cardiac arrest presented to my ED today with unknown down time. He was hypothermic upon arrival, so we continued the code past shift change. I have heard of amazing survival reports in the literature, and I was hopeful I could save this child. My ED director was waiting for my sign out and told me I should have stopped the resuscitation an hour ago when the potassium came back at 11.5. How was I supposed to know when to stop?” A potassium level greater than 10 is not compatible with successful resuscitation in hypothermic patients. Severe hyperkalemia indicates significant ischemia occurred prior to hypothermia. The code should have been called when this lab value was known.

2. “An 18-month-old female was brought in by the family maid after she was found with her head in a bucket of cleaning water. I didn’t believe this could happen and called the police.” Unfortunately, a toddler drowning in an unattended bucket of water is not uncommon. Though one should always consider the possibility of non-accidental trauma in drowning cases, the story is plausible.

3. “A 2-year-old male was brought in to the ED in cardiac arrest and required epinephrine prior to regaining a weak pulse. He remained comatose and minimally responsive. I told the mother that the child had no chance of normal survival after a drowning incident, and she filed a complaint to administration.” There are multiple case reports of surprising survival in drowning victims that do not always follow consistent resuscitation expectations or statistics.

4. “A mother brought her son to our ED, but I thought something was wrong with her story. She said ‘I didn’t know the child was drowning because I didn’t hear him panic and he did not call for help.’” Most people are unable to call for help during a drowning event. This is an important educational reminder to parents regarding supervision and drowning prevention.

5. “We pronounced the child dead after working on him for over an hour. His core temperature was 29°C. I thought there was no chance of survival. We received a call from the morgue that the child was moving.” Children with hypothermia upon arrival should not be called dead until they are “warm and dead.” Rewarming should occur until the child is approximately 34°C.

6. “I discharged the patient after he improved with albuterol. I watched him for an hour (he had a history of asthma). How could I know he was going to return with worsening respiratory distress?” Symptomatic patients should be admitted after drowning, especially if they have underlying pulmonary pathology. They have the potential to deteriorate.

7. “The child drowned in a hot tub but was only submerged for about 5 minutes. I told the mother his prognosis should be good as his submersion time was so short. How was I supposed to know that he had neurologic damage?” As hypothermia has neuro-protective effects, hyperthermia can adversely affect the time in which neurological injury can occur.

8. “A 4-year-old child presented after he fell into the family pool. A sibling immediately rescued him, and he choked a bit but was spontaneously breathing when paramedics arrived. I wanted to admit him for fear he may deteriorate. My pediatrician recommended I send him home. Should I accept the liability?” There are no prospective randomized controlled trials evaluating when to discharge patients after drowning. Case series seem to suggest that a child who has a normal oxygen saturation and pulmonary examination may be safely discharged 4 hours after the drowning event.

9. “A 10-year-old child was found floating in his neighbor’s pool. It had been hours since he was last seen. The child is cool, apneic, and pulseless on scene. Paramedics are calling in requesting you to call the code. Should you?” It is always best to err on the side of caution, especially with respect to pediatric submersion injuries. When in doubt, always resuscitate. Very few pediatric codes should be called in the field.

“6-month-old female presents in cardiac arrest after being found submerged in the bathtub. The mother looked so nice and polite that I didn’t even consider non-accidental trauma.” Unfortunately, one should always consider non-accidental trauma in bathtub-associated drowning. The primary caregiver (often the mother) is the most frequent culprit.
Risk management pitfalls for management of sepsis

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1. “She isn’t febrile, so this can’t be sepsis.”
   Particularly in the elderly, the febrile response to infection – even major infection – can be blunted.

2. “He has a history of congestive heart failure and was dyspneic and edematous, so I put him on BiPAP, and since his blood pressure was kind of low, I just gave him a little furosemide. The lab just called with a BNP of 550, so this is definitely congestive heart failure.”
   Dyspnea, peripheral edema, hypotension, and elevations in troponin and BNP could all be present in sepsis; in elderly patients, fever is not universal.

3. “This guy was really sick, so I just threw in the central line quickly.”
   The Institute for Healthcare Improvement’s 100,000 Lives campaign identified a number of interventions that hospitals could institute to decrease mortality. Among the interventions with a noticeable impact on morbidity and mortality was adoption of a hospital-wide policy on central line placement, encouraging full sterile technique with full sterile drape, sterile gown, masks, and surgical caps.

4. “My nurses always struggle measuring CVP, and he had good peripheral access, so I didn’t want to risk a central line.”
   While it may not be the absolute best predictor of response to fluids, multiple studies have demonstrated a survival benefit from goal-directed therapy that relies upon establishing an adequate CVP as a surrogate for cardiac filling pressures. Central venous oxygen saturations are also critical to demonstrating the success of interventions intended to reverse the oxygen delivery derangements seen in sepsis.

5. “He wasn’t in the hospital long, so I treated the pneumonia with my usual regimen.”
   Patients with pneumonia who have had any recent contact with hospitals or nursing homes have risk of MRSA. Community-acquired MRSA is on the rise and is an emerging entity as a cause of pneumonia.

6. “She is a dialysis patient, so I didn’t want to give her too much fluid.”
   Dialysis patients require the same volume resuscitation as other patients even if it leads to a higher rate of intubation. The initial studies on EGDT demonstrate that patients receiving “standard” therapy eventually get as much or even more fluid in the first 36 hours of care.

7. “I’ve been taking care of sepsis patients for years. I don’t need a bundle.”
   Clinical experience is invaluable, and high-volume EDs do seem to perform better in decreasing mortality of even very sick patients, but the hospital-wide adoption of guidelines for the care of the sepsis patient has demonstrated mortality benefit, and the benefit seems to increase with level and duration of compliance.

8. “He has a vascular catheter for dialysis and had been getting vancomycin for persistent fevers at dialysis, so I added gentamicin and switched to linezolid for Gram-positives.”
   Candida is the fourth most common causative agent cultured from the blood of septic patients. Patients at increased risk for fungemia include those with central lines and those receiving antibacterials. Patients with persistent illness despite antimicrobials should prompt investigation for fungal sources and in the ED may benefit from empiric coverage with fluconazole or caspofungin.

9. “He didn’t have a history of heart failure, so there was no need for dobutamine.”
   In patients with a CVP of 8-12 cm H2O, a hematocrit of greater than 30%, and ScvO2 still less than 70%, oxygen delivery is inadequate for demand and an inotrope is indicated to improve cardiac output. Also, circulating myocardial depressants and nitric oxide cause functional changes within the myocardium and decreased ejection fraction.

10. “The patient’s family said they wanted everything done, so I did 20 minutes of CPR.”
    There is no universal understanding amongst medical professionals – much less laypersons – about what “doing everything” means. Cardiac arrest in sepsis is end-organ failure, and resuscitation techniques developed for primary cardiac arrest and dysrhythmia are very unlikely to be successful in the short-term or allow survival to discharge. It is possible that “doing everything” means ensuring comfort and not applying therapies that are painful and unlikely to affect the outcome.
**Call for nominations**

**Deadline: Tuesday, December 7, 2011**

Nominations are sought for the election for the resident board of directors member of SAEM that will be held in 2012. The Nominating Committee will select a slate of nominees based on the following criteria: previous service to SAEM, leadership potential, interpersonal skills, and the ability to advance the broad interests of the membership and academic emergency medicine. This is a one year term.

Interested members are encouraged to review the appropriate SAEM orientation guidelines (to consider the responsibilities and expectations of an SAEM elected position).

The Nominating Committee wishes to consider as many candidates as possible and whenever possible will select more than one nominee for each position. Nominations may be submitted by the candidate or any SAEM member.

Orientation guidelines are available at www.saem.org. Please submit your CV and letter of interest to saem@saem.org.

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**October 24-28, 2011**

EMRA’s Health Policy Committee is hard at work finding ways to expand advocacy education in residencies nationwide. While we anticipate that the Advocacy Handbook will expand interest in these important issues, we have decided to hold a nationwide “Advocacy Week” from October 24-28, 2011.

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Indiana, Northwest: EPMG is currently interviewing physicians for administrative and staff opportunities at Franciscan St. Anthony Health and Chesterton Health Center. Both facilities are located within 60 miles of Chicago, on the beautiful shores of Lake Michigan. EPMG physicians are employed partners and enjoy paid medical benefits, prescription, dental, vision, life, LTD, performance bonus, paid malpractice, 401(k), CME, relocation, and much more. To learn more contact Heather Smith at 800.466.3764 Ext. 326 or hsmith@epmgpc.com. Visit us at www.epmgpc.com or at ACEP booth #1032 or ACOEP table #9.

Iowa, Clinton: New Contract! Staff physician opportunities are currently available at Mercy Medical Center – Clinton. The facility has an annual volume of 21,000 with 13 beds. The ED is a certified Level IV community Trauma Care facility and has 24 hours of physician coverage daily, with 12-hour shifts. There is an additional 12-hours of mid-level coverage daily. EPMG physicians are employed partners and enjoy paid medical benefits, prescription, dental, vision, life, LTD, performance bonus, paid malpractice, 401(k), CME, relocation, and much more. To learn more contact Tynia Arnold at 800.466.3764 Ext. 335 or tarnold@epmgpc.com. Visit us at www.epmgpc.com or at ACEP booth #1032 or ACOEP table #9.

Louisiana, Lake Charles: FT/PT BC/BP EM physician sought for private group in 35,000 volume ED. Total package over 500k

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compensation. Practice site Lake Charles Memorial Hospital, region’s largest family-centered medical complex, serving healthcare needs of Southwest Louisiana and Southeast Texas. Established in 1952, consists of 324-bed facility at main campus. Area’s recognized leader in trauma care, most BC residency trained EM physicians, most medical specialties & subspecialties, only PEDI ICU, only PEDI intensive care specialist, most ER trauma trained specialists on staff, only psychiatric triage center, and the only family medicine residency program in the area. Located in Calcasieu Parish, Louisiana with a population of just under 200,000, Lake Charles is home to McNeese State University and the 12th largest seaport, the Port of St. Charles. Low crime, great State University and the 12th largest seaport, 200,000, Lake Charles is home to McNeese Louisiana with a population of just under in the area. Located in Calcasieu Parish, Louisiana with a population of just under 200,000, Lake Charles is home to McNeese State University and the 12th largest seaport, the Port of St. Charles. Low crime, great State University and the 12th largest seaport, 200,000, Lake Charles is home to McNeese Louisiana with a population of just under.

Maryland: Is variety the spice of your life? Join the MEP Travel Physician Team! Variety is just one benefit of this unique position. Enjoy working at our 6 distinctive campuses, earn top-of-the-market compensation, and be part of the most dynamic Emergency Medicine practices in the mid-Atlantic! MEP is seeking ambitious, experienced BC/BP Emergency Medicine Residency-Trained Physicians to join the MEP Travel Physician team. Candidates must have ED experience to be considered, and willing to travel to our various sites. MEP offers a generous guaranteed hourly rate and benefits package totaling in excess of $340k. Sign on bonus, per diem and additional quarterly performance bonuses are also provided for this position. Only 120 hours of clinical work per month required. MEP Travel Physicians are cross credentialed and work at all MEP campuses. From the mountains of Western Maryland to the Chesapeake Bay, you will be an integral part of each MEP campus. MEP sees more than 350,000 patients per year in our EDs, from 50k community hospitals to Level III Regional Trauma Centers. If you crave something different, and have the experience and cultural fit we seek, this is the job for you! Visit EmergencyDocs.com to learn more about MEP and our facilities. For more information and to apply, contact Sharon Doggett at 214-860-6008 or e-mail CV to SDoggett@EmergencyDocs.com. Visit us on Facebook! http://www.facebook.com/pages/MEP-Medical-Emergency-Professionals/78328874408.

Maryland, Cumberland: Small Town Lifestyle, Big City Compensation in Scenic Cumberland, MD. MEP is seeking experienced BC/BP Emergency Medicine Residency-Trained Physicians to join our team at the Western Maryland Regional Medical Center (WMRMC) in Cumberland, MD. MEP offers an exceptional productivity based compensation plan, a significant sign-on bonus, and a comprehensive benefits package including A-rated malpractice with tail coverage. Total compensation package of over $345,000. Leadership and ownership opportunities are available. WMRMC has an annual volume of over 55,000 with 40 hours physician coverage, and is the designated area-wide Level III Trauma Center. WMRMC offers a comprehensive range of general and specialty services in a new $268 million state-of-the-art hospital with 275 inpatient beds. Scribes assist physicians with charting on every shift, and a Rapid Treatment Unit (RTU), increases throughput. Only a short driving distance from Pittsburgh, Baltimore and the Washington, DC area, Cumberland is an ideal area to enjoy award winning dining and local attractions. Affordable housing, great schools and year-round recreation, Cumberland has it all! MEP is a privately owned physician managed.

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Two of Texas’ primary emergency medicine groups, Dallas-based Questcare and GHEP of Houston, have teamed up to create a higher level of EM services in San Antonio.

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DISTRICT OF COLUMBIA - The Department of Emergency Medicine of the George Washington University is seeking physicians for our academic practice. Physicians are employed by Medical Faculty Associates, an independent, University-affiliated, not-for-profit multispecialty physician group. The Department provides staffing for the Emergency Units of George Washington University Hospital, Prince Georges Hospital Center, the Walter Reed National Military Medical Center and the DC Veterans’ Administration Medical Center. The Department sponsors an Emergency Medicine Residency, 8 Emergency Medicine Fellowships and a variety of student programs.

We are seeking physicians who will participate in our clinical and educational programs and contribute to the Department’s research and consulting agenda.

Basic Qualifications: Physicians should be residency trained in Emergency Medicine. University faculty rank will be commensurate with experience. Application Procedure: A CV is considered a completed application. Review of applications will begin on October 10, 2011 and continue until all positions are filled. Please submit CV by mail to Robert Shesser MD, Chair, Department of Emergency Medicine, George Washington University, 2150 Pennsylvania Avenue NW, Suite 2B-417, Washington DC 20037 or by email at: rshesser@mfa.gwu.edu.

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in mid-Michigan where the area is known for year round outdoor activities. EPMG physicians are employed partners and enjoy paid medical benefits, prescription, dental, vision, life, LTD, performance bonus, paid malpractice, 401(k), CME, relocation, and much more. To learn more contact Carrie Dib at 800.466.3764 ext. 336 or cdib@epmgpc.com. Visit us at www.epmgpc.com or at ACEP booth #1032 or ACOEP table #9.

Michigan, St. Joseph: EPMG is accepting applications for staff physician opportunities at the Lakeland Health System in St. Joseph and Niles, Michigan. The system is home to a new Osteopathic EM residency program and is on the beautiful shores of Lake Michigan. EPMG physicians are employed partners and enjoy paid medical benefits, prescription, dental, vision, life, LTD, performance bonus, paid malpractice, 401(k), CME, relocation, and much more. To learn more contact Andy Roy at 800.466.3764 ext. 329 or aroy@epmgpc.com. Visit us at www.epmgpc.com or at ACEP booth #1032 or ACOEP table #9.

Nebraska, Omaha: Ideal opportunity offers excellent compensation, equity ownership and desirable setting! BP/BC EM physician sought for 25,000 volume ED in suburban Omaha. This appealing facility has 9-hour physician shifts plus additional MLP coverage. Excellent package includes shareholder opportunity at one year with no buy-in! Also included is guaranteed rate plus additional incentive; as well as family medical plan, employer-funded pension, malpractice, expense account and additional benefits. As Nebraska’s largest city, Omaha provides both metropolitan amenities and friendly, Midwestern charm. Home to several Fortune 500 companies, Omaha is a thriving city with something for everyone including the U.S.’s largest community theatre, 11 colleges and
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Please contact:
Ann Homola - phone: 207-973-7444
e-mail: emmccvs@emh.org
www.emmc.org

New Hampshire, Derry: Emergency Physicians of Derry in Southern NH is looking for a RT BC/BP EM MD. ED volume is 26,000 with double PA coverage. This fee-for-service group has an excellent compensation package with health, liability insurance, CME, and retirement benefits. Derry is a very desirable community, approx. 1 hour from the mountains, the seacoast, and Boston. Contact Dr. Thomas Scott at Thomas Scott@HCHealthcare.org or phone 603-421-2225.


New Hampshire, Portsmouth: Portsmouth Emergency Physicians PC in Portsmouth NH is looking for a full-time RT BC/BP physician for 2011. Portsmouth Regional Hospital [Level II] receives transfers-in for cardiac and neurosurgery and is strong in all call categories. ED volume is 28,000 with 20% admission rate, and we have double and triple coverage. This fee-for-service group has an excellent compensation package including health, liability insurance, plus retirement, etc. On the coast of NH, Portsmouth is a very desirable community.

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Rochester General Health System, a top 100 Integrated Health Network is currently seeking Emergency Medicine trained physicians to join our dynamic, progressive team. These opportunities boast new state-of-the-art Emergency facilities, a dedicated night staff and an excellent compensation and benefit package including a $32,000 sign-on bonus. The healthcare system encompasses two Emergency Departments, Rochester General Hospital (RGH) ED and Newark Wayne Community Hospital (NWCH) ED. RGH ED’s 110,000 patients per year and urban location along with NWCH ED’s rural community location provide physicians with an opportunity to treat a full spectrum of patients. The department provides a fast-paced atmosphere of learning and professional growth to its physicians. In addition, Rochester General Hospital has a brand new state-of-the-art Observation and Clinical Decision Unit.

Rochester General Health System is the 3rd largest employer in the region and an integral part of the community. The Hospital’s nationally recognized programs have consistently demonstrated quality outcomes that positively impact our patients, their families and the entire community. Among Rochester General’s superlative programs is the Rochester Heart Institute, a state-of-the-art cardiac center affiliated with the Cleveland Clinic. Rochester General also has a dynamic, developing tertiary referral center with a newly built Emergency Department, CTICU, and other units. We are currently underway with the deployment of an EMR system and have formed strategic partnerships with Rochester Institute of Technology inclusive of a Research Center of Excellence. Our Centers of Excellence include Rochester Heart Institute, Lipson Cancer Center, Orthopaedics, Women’s Health, Primary Care, Surgical Services, and Behavioral Health. For additional information, please visit our website at www.rochestergeneral.org.

Located on the shores of Lake Ontario and proximity to the Finger Lakes Region, Rochester provides residents with an exceptional quality of life. We have the arts, sports, and culture of a big city and the comfort and easy commutes of a small town. Ranked 4th on Forbes magazine’s list of most affordable cities and 6th best place to live by ‘Places Rated Almanac’, Rochester boasts extensive cultural, educational, recreational activities in addition to affordable and charming communities to live.

If you are looking for an outstanding opportunity at a nationally recognized Hospital in an attractive and affordable community, please contact: kathy.peishel@rochestergeneral.org or alison.ayres@rochestergeneral.org in the Office of Physician Services.
The Department of Emergency Medicine at Lehigh Valley Health Network—now managing 5 sites in Pennsylvania—has grown. Our 70+ salaried Emergency Medicine physicians and 30+ PAs and NPs enjoy a collegial atmosphere and evaluate over 200,000 patients annually. Whether you want to work in a large 48-bed ED in a Level I trauma center or in a smaller ED with a more community-type setting, we have the fit for you. Credibility, respect, fairness and pride are values that are at the heart of everything we do for our patients and each other. We know that creating a place where the best people want to work is what makes it possible for us to provide the best possible care to our community.

Candidates must be clinically excellent, patient-focused, EM Board Prepared or Board Certified. We have a paperless ED, a dually accredited 56-resident Emergency Medicine Residency, the largest Level I Trauma program in Pennsylvania with Primary Angioplasty, a Stroke Alert, and an MI Alert Program, and an 18-bed Burn Center, along with 13 additional accredited programs. We have just opened a new 12-bed Children’s ER—staffed with Pediatric Emergency Medicine fellowship-trained physicians. We offer a competitive salary, wonderful work environment with excellent physician and mid-level coverage, and robust benefits including healthcare with no employee contribution, 3 methods of retirement saving, medical liability coverage, 6 weeks of PTO plus 1 week of CME annually, ACEP/ACOEP boards paid, + more. Opportunity for teaching, research, and career advancement. Our ED locations are in the Lehigh Valley and in Hazleton, PA. All locations are within 1.5 hrs. of NYC and 1-2 hrs. of Philadelphia. Our members find a healthy lifestyle, moderate cost of living, excellent public schools and pleasant neighborhoods. No long commutes.

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North Carolina, Charlotte: EMP is partnered with 7 community hospitals in Charlotte, Gastonia, Lincolnton, Pineville and Statesville. A variety of opportunities are available in urban, suburban and smaller town settings with EDs seeing 20,000 -70,000+ pts./yr. EMP is an exclusively physician owned/managed group with open books, equal voting, equal profit sharing, equity ownership, funded pension, full benefits and more. Contact Ann Benson (careers@emp.com), Emergency Medicine Physicians, 4535 Dressler Rd, NW, Canton, OH 44718. 800-828-0898 or fax 330-493-8677.

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**Ohio, West side of Cleveland:** Emergency Medicine Consultants of Lorain County (www.emcolc.com), an independent physician-owned and directed emergency medicine group seeking full time/part-time BC/BP Emergency Medicine Physicians to work in the ED and/or Primary Care Physicians with ER/Urgent Care experience to work in the fast track. Independent Contractor status. Excellent Compensation. Please contact Wendy Weitzel (440) 329-7450, or email wweitzel@emhrhs.org.

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Pennsylvania, Multi-Cities: Emergency Medicine positions with UPMC Hamot in Erie, Warren, Kane and St. Marys, Pennsylvania. Opportunity in Erie at 412-bed level II trauma center. EM volume over 66,000 patients per year and growing. EM residency onsite. Also rural positions in 30 to 90 bed acute care facilities located in...
Pennsylvania, Greenville/Sharon: UPMC Horizon, with hospital sites in Greenville and Farrell, PA, serves the Mercer County region in northwestern PA and offers a wide range of services at both campuses. The Greenville Campus ED sees 17,000 patients annually with 24 hours of physician coverage (12 hour shifts) and 10 hours of mid-level provider coverage. The Shenango Valley Campus ED sees 15,000 patients annually with 12-hour physician shifts. The cost of living is low, the patient population is pleasant, outdoor activities are plentiful, and the amenities of Pittsburgh are easily accessible. We offer an excellent salary with full benefits including: paid malpractice insurance with tail, employer-funded retirement plan, paid health insurance, CME allowance, and much more. Board certification/prepared in EM is required. Call Dr. Robert Maha at 888-647-9077/Fax 4124327480 or e-mail: mahar@upmc.edu.

Pennsylvania, Pittsburgh:Alle-Kiski Medical Center in Natrona Heights boasts a brand new ED to see 36,000 emergency pts./yr. Proximate to Pittsburgh’s most desirable residential communities, the area also affords easy access to abundant outdoor recreation and nationally ranked schools. Outstanding partnership opportunity includes equal profit sharing, equity ownership, funded pension, open books, full benefits and more. Contact Ann Benson (careers@emp.com), Emergency Medicine Physicians, 4535 Dressler Rd, NW, Canton, OH 44718. 800-828-0898 or fax 330-493-8677.

Pennsylvania, Sharon: Sharon Regional Health System has an extremely supportive administration/medical staff, newer ED, and full service capabilities making this a great place to work. 35,000 patients treated annually. Small city setting offers beautiful housing and abundant recreation less than an hour from Pittsburgh and Cleveland. Outstanding partnership opportunity includes equal profit sharing, equity ownership, funded pension, open books, full benefits and more. Contact Ann Benson (careers@emp.com), Emergency Medicine Physicians, 4535 Dressler Rd, NW, Canton, OH 44718. 800-828-0898 or fax 330-493-8677.

Pennsylvania, Uniontown: Outstanding financial opportunity with Emergency Resource Management. Uniontown Hospital is a full service community hospital with a modern ED and excellent physician and mid-level provider coverage. The surrounding community offers a great lifestyle with plentiful outdoor activities, a low cost of living and the amenities of Pittsburgh are easily accessible. We offer an outstanding compensation/benefit package including: paid malpractice insurance with tail, employer-funded retirement plan, paid health insurance, CME allowance, and much more. Board certification/prepared in EM is required. Call Dr. Robert Maha at 888-647-9077/Fax 412-432-7480 or e-mail: mahar@upmc.edu.

South Carolina, Greenville: Mountains nearby/beaches 3 hrs away provide abundant outdoor recreation. Perfect year-round climate. Want to make the right decision the first time after completing your residency? We are a private, well established, democratic ED group with over 20 years of stability looking for an additional BC/BE emergency physician. Additionally, we are looking for IM trained physician for our Chest Pain Center. Greenville is a growing, vibrant, cosmopolitan “NEW SOUTH” city with excellent educational and cultural opportunities, yet maintains a small town charm. Our group provides coverage to four local hospitals, including level 1 trauma center and Peds ED. Flexible contract hrs. Excellent physician staffing –less than 2 pt/hr. Please send CV via email to bcout123@aol.com and jcolker@bellsouth.net or call 864-297-5207.

Texas, Odessa: EM Opportunity in Odessa, TX. Wonderful immediate opportunity for a BC ER physician who desires to live in Odessa, Texas and succeed in a busy Emergency Room (24,000 annual visits). This would be a hospital-based employment arrangement. Hospital offers Level IV Trauma, Novarad PAC System, Level III Nursery and 10 Operating Rooms along with an active Hospitalist program. Physician coverage is 24/7 with 12 hours of mid level coverage outside winter months – 2 mid levels during peak winter season. Admission rate is low for most ERs (11-15%) including observations. There is a high pediatric volume, although there is a Pediatric After Hours Clinic which attempts to capture non-emergent Pediatric volume. Facility recently obtained Chest Pain Accreditation and should have Stroke Accreditation soon. Intensivist coverage will be added effective September, 2011. The Hospital has earned a 5-star rating from HealthGrades for three straight years. The facility is located in the beautiful “Open Sky” country of Odessa/Midland in west Texas. Enjoy the great sense of community, excellent schools, and reasonable cost of living in this quality medical community. Area has a wide variety of cultural and sporting events. Odessa is known for its diversity, contrasts and hospitality. Please e-mail CV: ihudson@iasishcalthcare.com, fax: 615-467-1293 or call Irene Hudson at 877-844-2747, x1280.
Texas, Texarkana: Emergency Medicine Opportunity – Wadley Regional Medical Center, Texarkana, TX – A 370-bed hospital with 40,000 emergency room visits per year has an opportunity for two (2) BC Emergency Medicine Physicians desirous of an employment arrangement with IPP. Facility is working to earn Level III Trauma designation in TX and AK. Primary service area has population of 65,000 and secondary population of 250,000. All specialty physicians available for consult. Very strong hospitalist group with UAMS FP residents rotate in hospital. Experience using CORAL helpful, but not required. Seeking candidates interested in making Texarkana “home.” As the oldest hospital in Texarkana, Wadley Regional Medical Center has a century-long tradition of providing compassionate, high-quality healthcare. As part of its commitment to provide innovative and outcome-based care, the hospital has pioneered many firsts for Texarkana. As the area’s first Joint Commission II certified Primary Stroke Center, Wadley also is proud to offer Texarkana’s only hospital-based prenatal and geriatric behavioral health unit, as well as the area’s only da Vinci Si Surgical System. In 2010, Texarkana Independent School District was ranked No. 4 on Forbes magazine “Best Schools for Your Housing Buck” in cities where the median home value is less than $100,000. Its diversified economy is supported by manufacturing, agriculture, medicine, transportation, education and retail. A thriving metro-center serving nineteen counties in four states, it is conveniently situated one hour from Shreveport, two hours from Little Rock and three hours from Dallas. Please e-mail CV: lhudson@iasishealthcare.com, fax: 615-467-1293 or call Irene Hudson at 877-844-2747, x1280.

West Virginia, Charleston: BP/BC EM physician opportunity within academic environment. This three-hospital system has 100,000 annual ED visits including a Level I facility. There are numerous allopathic & osteopathic residencies including a solidly established Emergency Medicine Residency Program. Equity-ownership group provides outstanding package including family medical, employer-funded pension, CME, malpractice, plus shareholder status at one year with no buy-in. Contact Rachel Klockow, Premier Health Care Services, (800) 406-8118, rklockow@phcsday.com, fax (954) 986-8820.

West Virginia, 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 66 hours of physician coverage, plus 48 MLP hours daily; and new scribe program. An excellent 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 Health Care Services, (800) 406-8118; e-mail rklockow@phcsday.com; or fax CV to (954) 986-8820.

West Virginia, Wheeling: Ohio Valley Medical Center is a 250-bed community teaching hospital with a brand new-ED under construction. AOA approved Osteopathic EM and EM(IM residency program. Enjoy teaching opportunities, full-specialty back up, active EMS, and two campuses seeing 29,000 and 24,000 pts./yr. Outstanding partnership opportunity includes equal profit sharing, equity ownership, funded pension, open books, full benefits and more. Contact Ann Benson (careers@emp.com), Emergency Medicine Physicians, 4535 Dressler Rd, NW, Canton, OH 44718. 800-828-0898 or fax 330-493-8677.

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fax 806-723-2476
E-mail: kfortney@covhs.org
For telephone inquiries call 806-725-7875
10 best tourist attractions

- Golden Gate Bridge
- Alcatraz Island
- Pier 39 and Fisherman’s Wharf
- Lombard Street
- Coit Tower
- A Ride on a Cable Car
- California Palace of the Legion of Honor
- Haight Ashbury intersection
- Chinatown
- AT&T Park

Source: http://www.frommers.com/articles/5573.html

San Francisco songs

- “(Sittin’ On) The Deck of The Bay” – Otis Redding
- “I Left My Heart in San Francisco” – Tony Bennett
- “Lights” – Journey
- “San Francisco (Be Sure To Wear Flowers in Your Hair)” – Scott McKenzie
- “San Francisco” – Judy Garland
- “San Francisco Blues” – Peggy Lee
- “Frisco Blues” – John Lee Hooker
- “Come Monday” – Jimmy Buffett
- “Misty Mountain Hop” – Led Zeppelin
- “We Built This City” – Starship
- “Taxi” – Harry Chapin
- “Welcome to Paradise” – Green Day

Best San Francisco movies

- Bottle Shock (2008)
- Vertigo (1958)
- The Maltese Falcon (1941)
- There Will Be Blood (2007)
- Counting the Days (2005)
- Greed (1924)
- Shadow of a Doubt (1943)
- Out of the Past (1947)
- The Birds (1963)
- Rise of the Planet of the Apes (2011)
- Days of Wine and Roses (1962)
- Birdman of Alcatraz (1962)
- Bullitt (1968)
- Escape from Alcatraz (1979)
- The Kite Runner (2007)
- Almost Famous (2000)
- Milk (2008)
- The Rock (1996)
- Point Blank (1967)
- What’s Up, Doc? (1967)

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