



ED Update

Wright State Emergency Medicine Residency
Department of Emergency Medicine

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From the Editor's Desk:

Greetings all. I hope this edition of the *ED Update* finds you and yours well. It has been a busy fall and winter. Orientation for the new intern class was a success, thanks to the tremendous efforts put forth by the faculty, support staff, and the mid- and upper-level residents. By the time this issue goes to press, the class of 2015 will be well on their way to becoming seasoned veterans. Or at least not peeing their pants when confronted with a critically ill patient. There was another Christmas Party (which I sadly missed) and fun was had by all. And no sooner were the newbies oriented and thrown onto the wards and into the ED, than it was time to begin interviews for next year's crew.

I hope you all had an enjoyable holiday season. Here is the latest and the greatest from the WSU EM Residency Program. Read on...

Brian L. Springer

CONGRATULATIONS NATHAN!



Our very own Nathan Schlicher, a 2009 graduate, is now a member of the Washington State Senate. Congratulations Nathan!

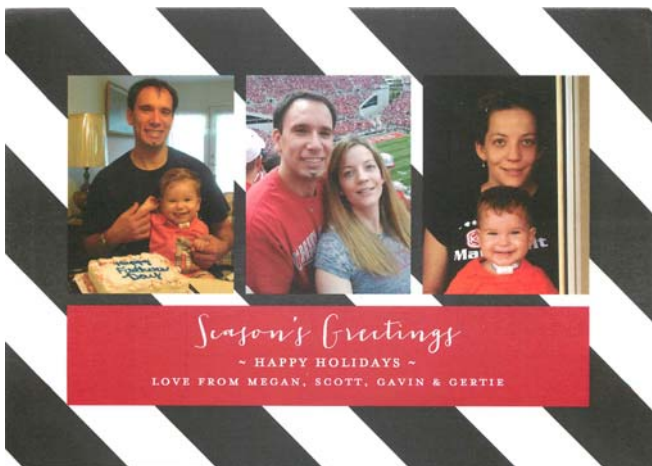
Christmas Greetings from alumni!



laughing all the WAY



THE WILLIAMS FAMILY
nathan, melissa, abigail,
nathan, jacob



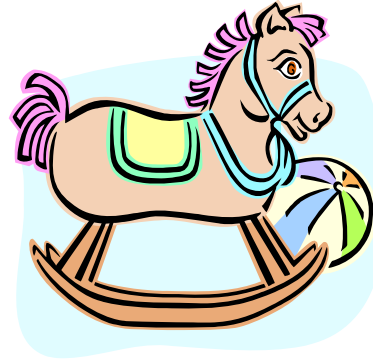
Love,
The Stuart Family



CONGRATULATIONS!!!

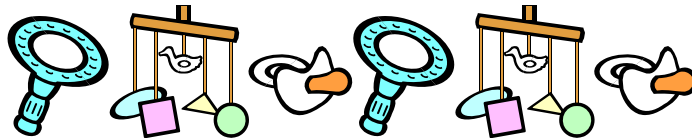
Congratulations **Michelle** and **Dan Hosta** on your growing family!

We received this surprise picture in a Christmas card from them. We are so happy for you both!

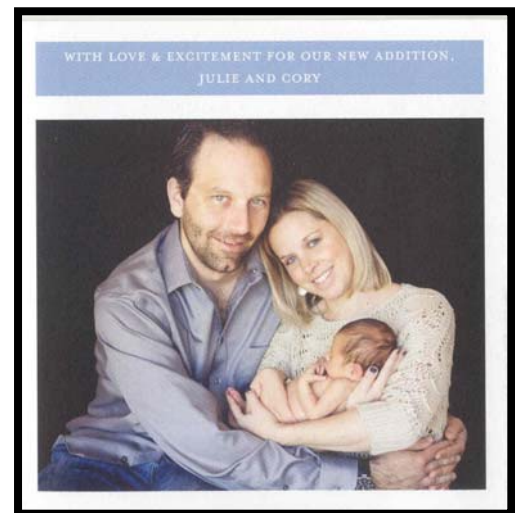


Congratulations **Cory** and **Julie Long**!

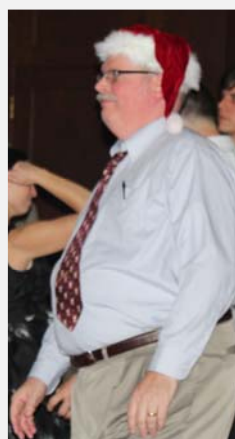
Logan William Long was born on September 16, 2012 at 3:35 pm. He weighed 6 pounds and 7 ounces, and was 20 inches long.



Congratulations **Brian** and **Kate Pennington**! Adalae Marie Pennington was born on January 3, 2013 at 7:00 pm. She weighed 6 pounds and 11 ounces, and was 19.5 inches long.



CHRISTMAS PARTY 2012





Springer's Stuff

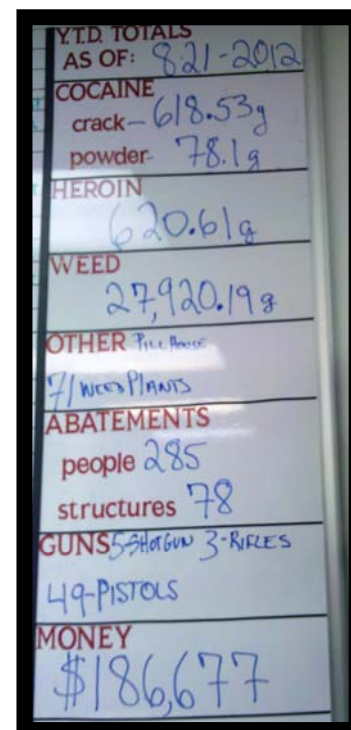
- Brian Springer, M.D.

Fall kept the Division of Tactical Emergency Medicine on the move. Lots of training and lots of operations. Dr. **Alex Keller** has proven himself a useful tool for tactical medical support. During his last two Dayton PD SWAT callouts, the suspects shot themselves upon his arrival. Perhaps not the best ending for a standoff, but neither officers nor innocent bystanders got hurt. That said, Dr. Keller would not make a very good crisis negotiator.

Local law enforcement continues to stomp out crime with the assistance of our residents and faculty. Dr. **Edward Smith** went on his first narcotics warrant service with Dayton's Special Investigations Division, and is getting spun up to work with SWAT. Dr. **Justin Warix** has proven himself a formidable tactical physician, sneaking up stairwells with the team to apprehend ne'er-do-wells. Dr. **JR Pickett** has already recruited three quarters of the intern class to be SWAT docs, even though we only can afford protective and medical gear for two of them. Dr. **Scott Rubenstein** has been single-handedly coordinating medical care for Montgomery County SWAT, although EM Chair and OSD ("Original SWAT Doc") Dr. **James Brown** has been seen poking around in the field again. Finally, Dr. **John Wightman** remains active training with the Greene County Regional team, and is pushing for an agreement that would allow USAF faculty to participate in civilian SWAT missions while working with the residency program.



Keller and Springer prepped for patrol; bad guys beware



Helping Law Enforcement get drugs, guns, and dirtbags off the street

In October, I attended the International Association of Chiefs of Police annual meeting in San Diego. A beautiful town; the last time I was there was in 1991 after returning from the Persian Gulf War. Still great food, still great weather, and still lots of homeless people to step over. Along with other members of the IACP's Police Physician Section, I presented an overview of the newly revised Trauma Key educational series, and introduced some new concepts in self-aid/buddy aid. The presentations were well received, and the IACP is slowly moving from a purely "occupational medicine" view to one of more comprehensive "law enforcement medicine."

FLORIDA

As the leaves changed colors and fell, the motorcycle found itself being my primary commuter vehicle. Gold Wings have their advantages: heated seats and grips, engine vents that can direct hot air towards the pilot, and plenty of wind protection. Kim and I finally took a non-work-related travel week to visit my parents' condo in Hollywood, Florida. They were out of town, so we had the place to ourselves. Itinerary: wake up late, go to pool, nap, wander down boardwalk, drink and eat, sleep, repeat. Nice. We visited Tubs, one of Oprah's favorite burger joints. Wow, no wonder she has trouble staying thin. Of course, any burger tastes delicious when washed down with a couple of Key West Sunset Ales. Until the next edition...



Mmm, tasty burger



*Kim enjoying the
Florida sun*





Research Results

- Jim Olson, Ph.D.

THE BIG EASY TRIPARTATE

Department of Emergency Medicine laboratory researchers presented three posters at the Society for Neuroscience annual meeting held in New Orleans last October. Amanda Freeman, (BMS M.D./PhD. candidate) presented results from her dissertation research. Her data demonstrate translocation and internalization of the taurine transporter protein in swollen neurons, and suggest cell-specific intracellular signaling pathways in neurons and glial cells which regulate the trafficking of this transporter protein on the plasma membrane. This has significant implications for designing treatments for cytotoxic brain edema accompanying head trauma and ischemic stroke. Melissa Bradshaw (WSU Grad-Prep Program) evaluated the capacity for cell volume regulation in human cell lines genetically engineered to express different surface receptors. The results demonstrated the importance of purinergic signaling for volume regulation of cells following swelling. In a collaborative effort with Tulane University, we examined cell volume regulatory response of the brain during a hypoxic episode. Our results suggested that a hypoxic brain with insufficient quantities of taurine may suffer excessive injury. In addition to the stimulating science, fantastic food, and great photographic opportunities I found at New Orleans, one of the high points of the meeting was the chance to perform “Romance” on a classical guitar and to cover Dylan’s “Leopard Skin Pillbox Hat” on electric guitar and harmonica at the Society for Neuroscience music social.

BRAIN EDEMA EXPANSION

I teamed up with the Miami Valley Hospital Multi-Disciplinary Research Committee to expand studies on head trauma using retrospective data from the trauma registry. Along with Drs. Priti Parieh and Jonathan Saxe, we are examining the influence that controlled and uncontrolled hypertension has on neurological outcomes following head injury. We will also examine the value of obtaining a second CT scan in patients transferred to the hospital and in patients who come to the MVH emergency department with their initial presentation. We are aided in this work by a Boonshoft School of Medicine second year student, Jodi Mrosko. Our previous data on the influence of brain edema on outcome following head trauma are in the final stages of analysis. These studies were initiated by former WSU medical students and Emergency Medicine residents, Drs. **Jill Aston**, **Elena Caraman**, and **Megan Dines**.

STUDENT SYNOPSIS

Masters students in the Department of Neuroscience, Cell Biology, and Physiology are making progress in the lab (and are actually graduating with their degree!) Mandy Gutwein is evaluating mechanisms of cell swelling and recovery in brain tissue during periods of physiological activity. Recovery from this swollen state does not occur by the same mechanisms as swelling caused by osmotic or oxidative stress. Courtney Moore is examining specific extracellular and intracellular signaling mechanisms which activate osmotic volume regulation in glial cells. Karen Guyton is looking at the consequences of swelling on cell survival and the role that swelling-induced oxidative stress plays in this response. Finally, Brian Tucker graduated with his Masters degree. Brian had left the lab to begin medical school after completing the necessary experiments for his dissertation. Three years later he returned with a completed thesis and successfully defended his research in late summer. Brian also came back to WSU last fall to interview for a residency position in – what else? – Emergency Medicine.

FEATURE THIS....

- Ed Fieg, D.O.

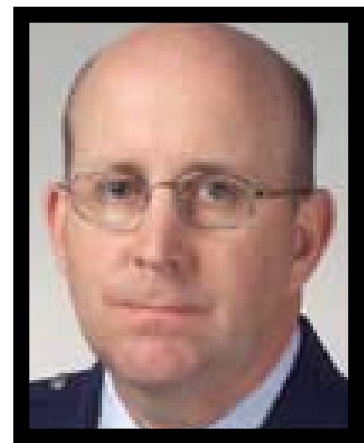


WELCOME...

We welcome back to the department Dr. Ed Fieg. He joins us as the Associate Program Director. Here is his new column, "Feature This."

GOOD SAMARITAN HOSPITAL FIRE EVACUATES THE EMERGENCY DEPARTMENT

On a busy evening shift on New Year's Day, the Good Sam ED staff and patients were suddenly alerted by rumbling and roaring sounds like a plane landing on the roof, flickering of lights, shut down of the computer systems, and loss of all electrical power save emergency back-up circuits. The ED was mostly dark; most of the patient rooms were dark, including patients in the active throes of lumbar puncture, rapid sequence intubation and central venous cannulation.



Moments later the ED filled with noxious, pungent smoke reminiscent of an electrical fire while rain-coated men with funny-shaped hard hats and flashlights scurried about through the building here and there looking for the source. Staff (and patients) donned particle masks and started moving patients away from the heavily smoke filled areas. Within minutes, it became obvious that the ED had to be evacuated -- it was unbearable. The nursing staff dusted off their nonexistent alternate facility plan and, since it was evening *and* a holiday (with the other ambulatory clinical areas dark) the clear choice was to move everyone to the Cardiac Day Procedure Center.

WSU faculty and several residents were on duty at the time and all stayed beyond their assigned shifts to help. ED nursing leadership rushed from home to assist with the transition and routine operations in an area without supplies, equipment, computer or admin support conducting ED operations. But oddly enough, with all hands pulling on the same rope in the same direction, supplies were gathered, equipment obtained, and with inbound ambulances diverted, calm organization prevailed. Business was conducted as usual for the balance of the evening and the entire overnight shift, until the ED could be vented, cleaned, and refitted. The cause of the fire? Electrical fire within the building air-handlers, generating mostly smoke but not flames. Clearly this event is very rare but every Emergency Department should have regularly exercised plans in the unlikely event that evacuation is indicated. What would you do if this happened to you?

Know-Nothing

John Wightman, Education Director

This academic year's didactic curriculum is in full swing. We've covered endocrine & metabolic, nontraumatic musculoskeletal, and abdominal & GI topics so far. We've finished the lab testing TEM, and are now in the midst of clinical prediction rules. This last piece was added three years ago and it has been one of the more popular TEM curricula. **Katie Ellis** is doing an excellent job as Chief Resident in charge of board-review for the February ABEM in-training examination.

Brian Springer and I took our ABEM recertification exams this fall. This was his first recert, and my second. **Ray Ten Eyck** did his third last year. They studied on their own, but I went to the Ohio ACEP Review Course. Brian was done in about an hour, and I took the whole time allotted. Everybody has their own methods, but we all passed. I had done a different review course for my first recert, but was not going to weekly residency conferences, since I was assigned to USU at the time. I scored the same as I did on the certifying exam. This year, I scored 8 points higher, but either score would have been a comfortable "pass."

What this experience did teach me is how much more I know when I dedicate more time to reading and studying the basics.

读

Dú is the Pinyin character meaning to read or to study. I try to read a few journals regularly, though often in big batches instead of a little every few days. That keeps me up with new stuff, and on my toes with the residents. Journals add depth of understanding on specific topics, but don't often cover the breadth of emergency medicine like textbooks and review materials do.

The Pinyin characters that combine to mean "depth" are *shēn* and *dù*. Individually, they mean deep and capacity, respectively.

深度

I found myself getting deeper into some areas of study at the expense of breadth. The combined characters meaning breadth are *kuò* and *dù*, or broad capacity.

阔度

Emergency physicians need that broad capacity to avoid missing infrequent or downright rare problems that can present at any time.

For instance, I've read dozens of articles on DVT and PE. After my board review, I realized how much I had forgotten about other hematological disorders such as hemophilia, von Willebrand's disease, sickle cell crises, DIC, HUS, TTP, *etc.* – and honestly may not have been able to recall much about these at the bedside.

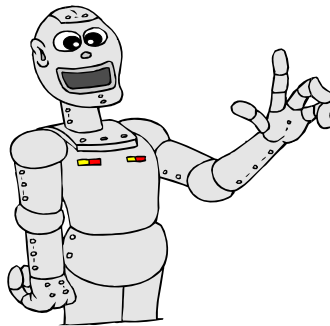
I've noticed some gaps in the basics when talking to residents and attendings as well. Think about the balance you are striking between the basics and the cutting edge. Sometimes it takes a review of topics in which you are weaker to remember what you don't know, so you won't miss a diagnosis because your memory dumped it when you had to fit something else in.

We've had a couple of visiting professors. Last summer, we brought in Ed Callahan, Program Director at Medical College of Wisconsin.

Ed and I were residency classmates at University of Illinois in Chicago. Over lunch, he talked about the four mass-casualty incidents he's been involved with during his career. His Grand Rounds presentation was on resiliency, something he has lectured on nationally at ACEP, CORD, and SAEM. He used a variety of media and case examples to help us understand resiliency to stress and traumatic events, and reviewed several programs to help prepare us to be better survivors.

In a prior *ED Update*, I recommended *Deep Survival: Who Lives, Who Dies, and Why* by Laurence Gonzales. The same author released a new book, *Surviving Survival: The Art and Science of Resiliency*. It is equally well-researched and well-written, and I avidly recommend it to anybody struggling with stress.

This fall, we brought in Jerry Hoffman from Southern California. I'm sure you all know his name and many accomplishments. **Ed Fieg** has known him for many years. Jerry conducted a two-hour session on emergency physician professionalism. During lunchtime Friday, he answered a variety of questions submitted by the residents, demonstrating his breadth and depth of knowledge. Grand Rounds was well attended by many healthcare personnel to hear Jerry talk about "Overdiagnosis: A National Epidemic." He made a strong case that new technology diagnoses clinically unimportant entities, in turn exposing patients to undue risk of the test(s) and actions taken because of the results. If you want details, read his letter to the editor in *Archives of Internal Medicine* 2012; 172(15):1123-4.



Update from the Center for Immersive Medical Education and Research (CIMER)

- Ray Ten Eyck, M.D.

The successful pilot program with Wright State University College of Nursing and Health last spring led to significant expansion of our interprofessional healthcare education programs. They now involve our EM residents from all three years and nearly 300 senior nursing students from Wright State and Kettering College. As part of the expanded efforts we are collaborating with the nursing school faculty to conduct preliminary research on the impact of interprofessional programs on attitudes and expectations of senior nursing students.

With the simulation curriculum for our EM residents and the clinical medical students well established, we are trying to better meet the needs of our learners as we add additional modules each year. This fall we presented the simulation-based Preparation for Internship Elective with some modifications following our initial launch of the program from last year. One of the most significant improvements resulted from the efforts of Dr. **Ryan Mihata** who enhanced the note and order writing portions of the elective with a dynamic presentation. Each student subsequently had the opportunity to apply the principles presented in the care of a series of acutely ill simulated patients and to further develop their skills based on Dr. Mihata's insightful review and comments on their work.

One of several new challenges met this year was to support Dr. **JR Pickett** as he organized the education program for the 2012 Special Operations Medical Association meeting. By modifying our preexisting simulation cases, writing new cases, and creating several new innovations, our simulation center was able to help Dr. Pickett provide a high quality educational program for all participants. We were happy to have made a special effort this year, but the success of our portion of the program was due largely to the support provided by faculty, residents, and staff including Drs. **John Wightman, Robert Sarlay, Heidi Abraham, Alex Keller, Michael Mack, Jeffrey Robinson**, Mr. Dave Cherolis and Mr. Dave Shablak.



10 from the medic judges

PICKETT'S AFTER ACTION REPORT

- JR PICKETT, M.D.

The biggest news on the EMS front: the Department of Emergency Medicine (DEM) has entered into a partnership with City of Dayton and Dayton Fire Department to enable our residents to respond directly to scenes and provide patient care. As part of their EMS rotation (now a full 4 week block), R3s will be assigned an emergency response vehicle to be dispatched on all high priority calls, including cardiopulmonary arrests, entrapments, industrial accidents, structure fires, and mass casualty incidents. The resident will be equipped with specialized equipment and medications specific to physician-level care. (imagine the Pickett Bag, expanded to vehicle size.) When not snatching people from the hungry jaws of death, the residents will perform training at DFD and participate in disaster planning, mass gathering events, and other prehospital activities. The Wright State Foundation is helping us find a vehicle and equipment through philanthropic donation. No, Heidi, you cannot use my Highlander.

The first EMS board certification exam is being offered October by ABEM. There is a practice track for those who are not fellowship trained. If you have been active as an EMS medical director or other EMS leadership position, or provided sufficient hours of prehospital care, then you can challenge the exam. This grandfathering period will last for 5 years, after which you will need to complete an EMS fellowship to sit for the exam. The deadline for submitting applications is June 30, 2013. The first EMS fellowship program applications are in, and 20 of the 23 programs have been accredited for 1-3 years. Wright State did not submit an application this year; we are concentrating on resident EMS training and will wait to see the demand for fellowship-trained EMS physicians.

The DEM took a huge role in teaching at the Special Operations Medical Association conference in Tampa in December. David Cherolis, David Shablak, and **Ray TenEyck** took the CIMER road show to a whole new level in front of an international audience. Drs. **Mike Mack, Alex Keller, Heidi Abraham, Jeff Robinson, and John Wightman** taught didactic and practical skills rotations. The weather was beautiful and the days were long, and a great many medics and physicians from military and civilian special operations teams were very impressed with the great teaching they received.

As the presidential campaign rolled to a close, several DEM residents helped staff rallies with President Obama, VP Biden, and Governor Romney. Mass gathering events continue to be a big part of the EMS involvement at WSU.

The EMS Cadaver Anatomy and Procedure (CAP) Lab was a huge success thanks to the hard work of a great many of our residents. Drs. **Marlea Miano, Katie Ellis, Susan Geiger, Meaghan Keville, Mike Mack, Jeff Robinson, Alex Keller, Heidi Abraham, Jessica Rando, Alan Dupre, Brooke Smith, Eric Masters**, and many others strutted their teaching stuff. The CIMER once again challenged EMS providers with death-defying feats of moulage. Screams of agony and terror resonated through Fred White Hall from our disaster scenario role players. Alum Dr. **Rod Fontenette** stopped in to share his wisdom, and also show off his car.

In our own world, Becky and I are happy to announce that we are adopting another baby girl, due at the end of March. Julianna is very much looking forward to being a big sister. She has cast her vote to name her "Princess Ariel Snowflake". Becky and I reserve the right to veto.

J.R.

FROM THE OTHER SIDE

- Jon Singer, M.D.



RETIREMENT NEWS HOURS ARE CONSUMED

There have been a few times when I wondered, "What am I going to do?" But, thank goodness, those times have been rare. Sleep for older folks is not as rich, and I have appreciated the times I made it to 7 am. I usually do physical labor for 2-3 hours/day. I get in a 2 mile walk around the neighborhood with a stop at either the library, fire house or city hall. If there has been lousy sleep I surrender to a nap in front of the Golf Channel. I have downed 1-2 drinks of an alcoholic beverage/day, staying under the defined moderate threshold. I exceeded this aliquot on Super Bowl Sunday and just the other night when all the male spouses gathered at a separate restaurant from the wives (who had gathered for their monthly book club.) On both occasions I downed three and did not drive home.

My evenings have been filled with relaxation and/or reading novels. This routine, which I recognize borders on the horrors of your future life, is broken up by Wednesdays at St. Mary's Elementary. There I read my authored books to the kindergarteners, tutor 4th grade English class, and on the first of the month supervise consecutive recesses outdoors. I almost came to a poetry moment as I watched 5 year olds try to catch snowflakes in their mouths.

The other adventure is more sporadic and varied; we are looking to downsize. So far we have put one bid on a house and escalated in negotiations, but not to the extent of the sellers. We have looked in 4 different Cincinnati communities and when we line up a visit this week, we will have looked in 4 Kentucky neighborhoods. As we have lived in our current home for 40-plus years, this is a new and exciting adventure. In contrast to many of you military brats who were acclimatized to a new area many, many times we have hung around in very few places.

That is about it in a nutshell. Perhaps to **Jim Olson's** dismay, I have not written a poem since retirement. I did complete a 10 minute play with Alaine's help (Cut, Stuck and Stitches) and Cassie has helped with two kid's books. "Why Mama is Hungover on Wednesday" is out and I have disseminated the work of art to family members. I should see a few of you on the trip up soon to work on the one next in line.

Until then, stay well.

Jon

CAP LAB 2012

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