



ED Update

Wright State Emergency Medicine Residency
Department of Emergency Medicine

Volume 34, Issue 3 October 2012

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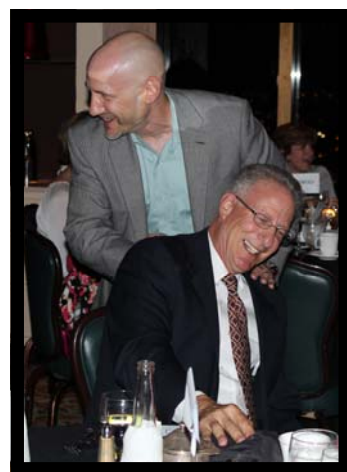
From the Editor's Desk:

Greetings all. I hope this edition of the *ED Update* finds you and yours well. This is our first issue following the retirement of Dr. Singer, and my first go as editor. While you will notice some small changes, our focus will be the same: going on about Dayton involving our residents and faculty, and all things exciting about the WSU EM Residency Program. Of course, we want to hear from all of you out there, our alumni and colleagues.

Many of you reading this know me personally. Others know of me only by reputation. Well, I will try to live up to that reputation by making the *Update* as enjoyable and readable as possible. Given our readership, I will also be keeping things at a PG-13 level (as opposed to my usual NC-17.) So do not fear; those of you with families, children, and a moderate degree of decency can read on safely.

I can only hope I am nearly as successful in this endeavor as editor as was my predecessor. Dr. Singer left some awfully big shoes to fill. So, without any further ado: here goes...

Brian L. Springer



R2 Extrication Course (more pictures on page 14)



Springer's Stuff

- Brian Springer, M.D.

Greetings all. I hope this latest edition of the *ED Update* finds you all well. The Division of Tactical Emergency Medicine has been quite busy these past months, both in support of operations and training.

Ohio Tactical Officers Association had its annual meeting this past spring in Canton. Drs **JR Pickett**, **Pablo Medina** and I ran a self-aid/buddy-aid instructional block for SWAT operators, introducing them to key concepts, equipment and tactics. The final two days of the conference were spent running an instructional track for tactical medics from around the State of Ohio. Along with me and Drs Pickett and **John Wightman** representing DTEM, the medic track was ably run by Dr Bren Hawthorne and his crew from Cleveland MetroHealth. The training included classroom time, hands-on procedure labs, and simulation. We had 24 students who hoofed it through those 48 hours with aplomb. Serving as instructors were Drs **Zack Holt** and **Brian Pennington**, along with Fairborn SRT Medic Chris Slone.



Tactical medics & simulated victim during OTOA mass casualty scenario



OTOA instructors Pennington, Holt, Slone and Pickett; bad to the bone

Tactical Medics International ran a 5-day TEMS class at the Ohio State Patrol Academy in Columbus. Although I could not be in attendance for the entire class, I found time between shifts to sneak over and teach a class on operational concerns such as weather, sleep, and food handling. All the while I was cold, tired, and eating like sh*t. Dayton Police Department added a new block of patrol officer self-aid/buddy for their Academy recruits in July, which was well received. Thanks to Dr **Heidi Abraham** for assisting, along with Greene County Regional SWAT medic Woody Goffinett. Later that month I also zipped out to Ohio Peace Officers Training Academy to teach a medical block at their SWAT school and to ensure that nobody went into cardiac arrest during the fitness test. Success all around.

On the operations side of things, lots of activity from the many law enforcement agencies we support. In particular, I would like to thank Drs **Holt, Alex Keller, Bridget Nestor-Arjun, Jeff Robinson** and **Scott Rubenstein** for all of their hard work with DPD's Special Investigation Division. It is reassuring for those officers having you on-scene when they serve narcotics warrants, as one never knows what is on the other side of that door when they bust it down.



The Beast



Kim the tree-hugger

Personally, it is out with the sport bike and in with the touring bike (again.) I recently purchased a 2012 Honda Goldwing. She is a beast (1800cc fuel-injected opposed 6-cylinder, 100 ponies, 900+ lb curb weight) but oh, she rides sweet. Kim and I took her out to Hocking Hills (of course on the hottest weekend of the summer) and wound up on a few dirt/gravel roads (yikes) and suffering some mild heat exhaustion. Nothing a few cocktails at the bed and breakfast could not fix.

Until the next edition...

Brian L Springer



10 from the medic judges

The key words for this summer were: mass gathering event. Festivals, concerts, and general get-togethers were in full swing throughout the warm months.

MASCALpalooza (formerly Cinco de MASCAL) was a great success due to the hard work of Drs **Pablo Medina**, **Brian Pennington**, and many others, following in the footsteps of Dr **John Dorsch**. In addition to the usual carnage, this year's event included a CCATT mission on a C-17, which we flew around Chicago and back while running patient simulations. Drs **Deann Allbee** and **Nate Holloway** staffed the first aid tent at the Convoy of Hope, arriving with a well-timed break in the heat. This event of 9000 people brought a sizable dose of patient contact: over 60 in a few hours. This marked the first year that WSU DEM has not participated in the Dayton Air Show. While a big disappointment, there is hope that things will work out so we may continue as part of this Dayton institution. The Downtown Dayton Revival Festival lit up a weekend in September, drawing an estimated 20-30,000 people for 30 bands including John Legend, Rusted Root, Guster, Mat Kearney, and Train. Drs **Valerie Nelson**, **John-Adam Bonk**, **Heidi Abraham**, **Katie Imhof**, and two Grandview EM residents staffed the 2-day event covering a 6 square block area of downtown. X-Fest was cancelled this year by the promoter, citing poor ticket sales and depriving us of the opportunity to rock out while providing care to one of the more interesting crowds in Dayton. Happily they plan to return next year. The USAF Marathon again found us manning several first aid stations along the course, coordinated by **Dr Meaghan Keville**.

PICKETT'S AFTER ACTION REPORT

- JR PICKETT, M.D.





There are quite a few residents acting as Assistant Medical Directors for area fire departments. Dr **Alan Dupre** has taken the reigns at Vandalia Fire Department, Dr **Heidi Abraham** at Fairborn, Dr **Marlea Miano** at Butler Township, Dr **Katie Imhof** at Englewood, and Dr **Michael Pearson** at Dayton. Drs Abraham and **Mike Mack** gave presentations at the Critical Thinking in EMS Symposium. Planning for the 7th annual EMS Cadaver Anatomy and Procedure Lab is underway, with Drs Miano, Keville, Abraham, Dupree, **Katie Ellis**, **Susan Geiger** and **Jeff Robinson** at the helm. We now have a Facebook page, officially joining the 21st century.

The R-3 EMS rotation has shifted from didactic 2 week "vacation rotation" to an intense, month long experience encompassing patient care, teaching, quality assurance, and administrative duties. Exciting things for this rotation are just on the horizon: more about it in the next *Update*. We have not decided if WSU will offer an EMS fellowship, though the area offers great opportunities for EMS education. The date for the first ABEM EMS subspecialty board exam looks to be fall of 2013, with multiple paths to certification. More details can be found at ABEM.org.

Alumni news: Dr **Robert Sarlay** has been a huge help at Calamityville, developing and teaching a wide variety of courses. Dr **Stephanie Illanes** sits on the Anchorage EMS Council and serves as medical director for EMS at Joint Base Elmendorf-Richardson. Dr **Ryan Bence** took over medical direction of 5 EMS agencies on the south side of Indianapolis. Dr **Joey Mauro** became medical director at Riverside FD.

On a personal note, Becky and I lost our beloved husky Dakota this summer after a wonderful nearly 14 years together. Our other husky, Sukey, was just settling in to being the only dog in the house when we adopted a 6 week old husky/shepherd puppy from the Clinton County Humane Society. She is not sure what this little thing is doing with her toys, but she does not like it. Spartacus, however, is fearlessly determined to slaughter that stuffed hedgehog. He and Julianna are inseparable. Her plans for him are many, and I believe I heard her utter the word "tutu". My parents were able to sell their house in DC after 2 years on the market, and have moved to Springboro to be closer to Julianna. Their husky, Mischief, is training Spartacus in the finer points of being a troublemaking house dog.

j.r.

FROM THE OTHER SIDE

- Jon Singer, M.D.

RETIREMENT

Retirement has been very, very good to me. I have had but one migraine headache since June 30th. It came at 2 in the afternoon as I felt pressure to complete the task I had traveled to Dayton to accomplish (see ERAS ACTION). I have set no alarms and have made it to 7 or 7:15 before spontaneously awakening. I plan my day and accomplish each day's tasks. So far, there have been no empty moments. Whereas I once considered acquisition of labs to support a hunch or pulled the trigger on an invasive procedure, I now contemplate finishing the chicken salad or violating the pork chops, which may have been on the menu for dinner. The tasks of which I now speak are: whose house do I paint at today-mine, or one of my kids? To date I have redone our garage, the downstairs and hallway upstairs at Pete's, the rooftop deck staining at Matt's, and for outdoor variety, some transplanting at Liz's. There are equivalent chores at home and each household such that they will take me till spring or even summer, so life will remain fulfilling.

REJECTIONS

One of the first things I did upon not driving north was to submit portions (or when requested, the entire manuscript) of a play. So far, I have been rejected. This of course is not unexpected, but I will continue to pursue the distribution. I have also decided to start work on the 6th play which I will bear the words "stuck" and "stitches." This of course implies something to do with medicine, but it is not. I am considering nicknames for the characters so I will entertain good ones from the readership. I am talking names like Tuna, Stretch, etc. If you have any, send 'em!

THANKS FOR THE MEMORIES

You all know from elsewhere in this newsletter that the department threw me a retirement bash the day before I started the winter growth on my chin. I looked good (I think) for what was a marvelous evening. I so very much appreciated the concept, hard work and expense that went into carrying things out. My initial reaction to having an opportunity to speak was to write notes on a legal pad, get them to Shirley, and have her make white-on-blue slides. I resisted the notion in that it was too much "me." Instead I thought about what I wanted to say and put a few words on paper (which I referred to only once or twice) with the intent to be reactive and spontaneous. Perhaps I embarrassed my family in a few spots, but what the heck. There were several groups and individuals I wanted to thank who have done so much for me and meant so much to me over the years, but I stopped short, sensing I had gone too long already. But as Cassie said to me later, "they know how you feel, even without you saying it." It is true I hope. Being there meant the world. Cards and emails were also great to receive. Thanks, even if it seems superfluous.



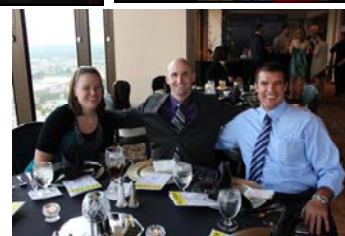
ERAS ACTION

As indicated above I traveled north to ERAS sleuth. Unbelievable! I had expected to review a trickle of apps. Incredibly, we had 450 applications within one week of the program startup date. With Chris' help we sent out invites to 60 or so. I will likely be able to do my reviews from home in the future. However, today I also arranged some Cassie time. We worked on the next non-children children's book "The Miracle of Twins." If I continue to do good deeds for the department and Cassie concurs that I am not too disruptive, we will collaborate on future works. Titles in mind are 1) "Why Daddy Got Snipped;" 2) "Why Grandpa Got Stented;" 3) "Granny Goes Bionic;" and 4) "Mama's Got a Hangover." If you have suggestions, send them as well.



Praise on the Roof

A Celebration for Dr. Singer's 30 years with the Wright State Department of Emergency Medicine





Research Results

- Jim Olson, Ph.D.

Summertime, and the lab is busy...

As shown in Figure 1, the lab was busy this past summer. In addition to three masters students and one PhD candidate from WSU, we had undergraduate students from Wright State, University of Illinois and Johns Hopkins, collaborators from local companies and the WSU Department of Pharmacology and Toxicology, and a recent bachelors graduate. Needless to say, the summer months were very productive.

Siera Martinez (Johns Hopkins) refined our methods for measuring ATP, Carly Graham (University of Illinois) measured amino acid loss from swollen cells, and Melissa Bradshaw (WSU Grad-Prep student currently MS-I at OU) evaluated signaling in astrocytoma cells. The WSU graduate students evaluated swelling-induced cell injury (Karen Guyton), brain volume regulation (Mandy Gutwein), cell injury in stroke (Michelle Durrant, WSU graduate and current BSOM MS-I), brain cell-specific protein modifications (Amanda Freeman), and ion channels activated by edema (Courtney Moore). Meanwhile, Ron Riechers (Spectral Energetics), Rob Spokane and I worked to develop non-invasive assessment of brain swelling, and Guangze Li worked with Yanfang Chen and Jiaolin Zheng (WSU Pharmacology and Toxicology) on brain signaling during stroke. None of this work would have been possible without the support of Nancy Andrews who coordinated our meetings and made sure supplies were available when needed. With this productivity, my fall and winter will be spent writing manuscripts to publish the important findings we made.

Presentations and Publications.

An abstract submitted to the Society for Neuroscience by Melissa Bradshaw and me has been accepted for presentation. Melissa (who joined our lab in January) was able to demonstrate the essential requirement of extracellular purinergic signaling for volume regulation in an astroglial cell line. These complement other studies from our lab and will be incorporated into a manuscript in the coming months.

An article by me, Katrina Choe and Charles Bourque was recently published in the *Journal of Neuroscience*. It describes for the first time the role of astroglial cells in controlling neuronal activity in the brain stem. Katrina is a student in Dr. Bourque's laboratory in Montreal whom I met at the Society for Neuroscience meeting in 2008. Together we designed experiments which critically test the gliotransmitter hypothesis; our lab then processed samples which she sent.

New Laboratory Equipment.

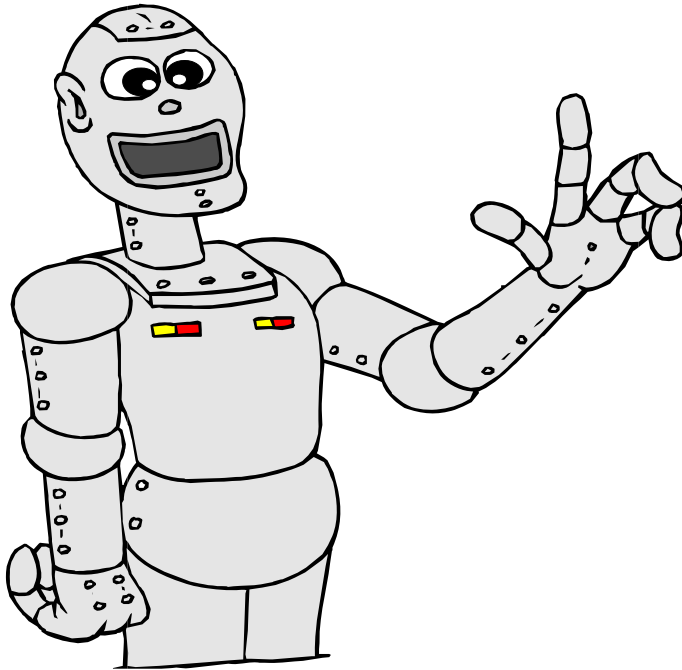
Funded by a Boonshoft School of Medicine Seed Grant, we are assembling a sophisticated microscope for imaging live cells. The microscope includes a sensitive camera with associated hardware and software. Additional equipment will maintain cells in a viable state during imaging. This set up will permit analysis of a variety of cell functions including cell volume, reduction/oxidation state, ion concentrations, and other parameters. In the first project slated for study with this system, Karen Guyton (NCBP masters student) will evaluate cellular production of reactive oxygen and signaling pathways during cellular edema.*

**Editor's note: the above article was edited for content, but still remains only partly comprehensible to non-geniuses.*



Figure 1. Standing left to right: Nancy Andrews (Research Secretary), Guang-ze Li (Research Faculty), Karen Guyton (Masters Student), Mandy Gutwein (Masters Student), Amanda Freeman (M.D./Ph.D. Student), Melissa Bradshaw (Graduate-Prep Student), Courtney Moore (Masters Student), Carly Graham (Undergraduate Research Assistant), and Jim Olson (Research Laboratory Director)

Sitting left to right: Ron Reichers (Faculty Collaborator), Jaiolin Zheng (Visiting Scientist), Yanfang Chen (Faculty Collaborator), Michelle Durrant (Graduate Research Fellow), Robert Spokane (Faculty Collaborator), Siera Martinez (Undergraduate Research Assistant)



With spring we experienced a ramp-up in our EMS simulation activity. In addition to working with new EMS units in Brookeville and Lewisburg, we had an opportunity to start a second round of simulations with some of the agencies we had the pleasure of working with in the past. Thanks to support provided by Good Samaritan Hospital, we have been able to bring our simulation ambulance to many of the EMS units in the area and provide a safe setting in which they can practice their response to high-risk, low-volume cases.

After four years of conducting interprofessional medical team simulation exercises with the Kettering College Nursing Department and our emergency medicine residents, we initiated our first endeavor with the WSU College of Nursing and Health in April. The pilot session was a success and has led to an expansion of our efforts to incorporate an additional 200 senior nursing students in the 2012-2013 academic year. We will continue to use the Team STEPPS Essentials presentation as a primer for these sessions which allow simultaneous exercise of physician skills, nurse skills, and medical team skills.

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

- Ray Ten Eyck, M.D.

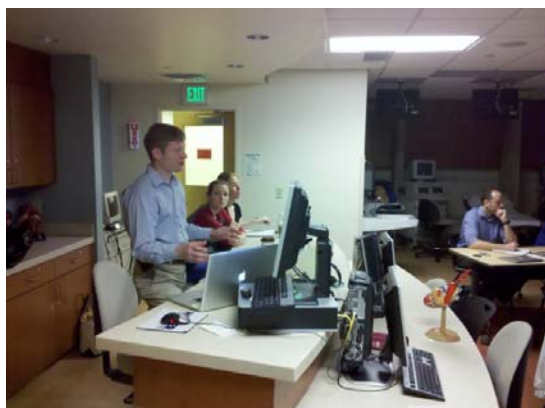
In May, we were able to support the mass casualty exercise on Wright-Patterson AFB. Through the combined efforts of our staff and residents we deployed a variety of task-trainer models and the simulation van in order to support the organizers' key learning objectives. Toward the end of the month, I had the pleasure of presenting to the Boonshoft School of Medicine Biennium-I Committee. This helped generate additional opportunities for the Department of Emergency Medicine to support the MS-2 curriculum with new simulations for two courses, Renal and The Mind.

June marked the end of one academic year as 11 of the graduating residents, who chose to complete their scholarly activity with a simulation case, successfully submitted their cases for publication on the MedEdPORTAL (the decision of the reviewers is pending, at the time of this writing). It also marked the start of a new academic year with the Department of Surgery's simulation boot-camp for new R-1s and chief residents in mid-June. As we transitioned to July (I mean Block 1), the new cycle was in full swing with orientation sessions designed to prepare our emergency medicine R-1s for duty at their clinical sites. As we completed the orientation month and finalized the new 13-block calendar for the 2012-2013 academic year, we look forward to improving some of our existing offerings while initiating several new simulation courses.

The Acoustic Window

John Wightman, Ultrasound Director

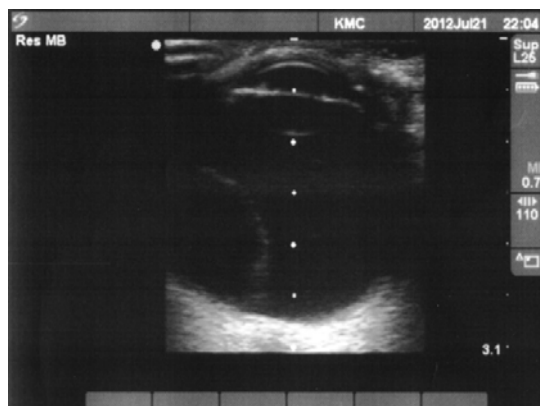
Over the years, we have employed a number of methodologies to introduce new R1s to limited bedside ultrasonography. This year, we brought in James Palma from the Uniformed Services University [standing at left] to lead a two-day course.



Joe Novak, the new ultrasound-fellowship-trained attending at WPMC [seated at right] and I, plus a few of the senior residents, assisted in the small-group hands-on portions.

Dr Palma conducted a world-class course of evidence-based didactic discussions and practical methods of bedside scanning. R1 feedback was universally positive.

One of these new R1s, **Christi Makas**, brought me some examples of her using the ultrasound in the ED at KMH to diagnose a retinal detachment.



Echogenic reflections from the cornea, iris, and lens can be clearly visualized close to the probe [top of image]. Note the echogenic membrane in the posteronasal [left] vitreous. That shouldn't be there.

I recently used bedside ultrasound to exclude significant papilledema or increased intracranial pressure in a patient with pseudotumor cerebri presenting with headache and blurred vision. Because she dramatically improved with medication in the ED, I was able to avoid a diagnostic and therapeutic LP.

Based on these cases, I decided to devote this month's column to ocular applications of limited bedside ultrasound in the ED. The best overview article I could find for readers was from Boston University: Leo M, Carmody K. Sonography assessment of acute ocular pathology. *Ultrasound Clin* 2011; 6(2):227-234.

Potential ED diagnostic applications include determination of consensual pupillary reactivity or globe rupture when lids are swollen shut; identification of intraocular foreign body, hyphema, lens subluxation and dislocation, vitreous hemorrhage, vitreous detachment, retinal detachment, central retinal artery occlusion, papilledema, and retrobulbar fluid collection; and measurement of optic nerve-sheath diameter as a surrogate marker correlating with intracranial pressure.

As with any ultrasonographic imaging, it is often easier to identify abnormalities than to be sure everything is normal, because the techniques are so dependent on operator knowledge, skills, and abilities. Nonetheless, with relatively minimal training and experience it can significantly aid in diagnosis and rapid decision-making; improving throughput in many cases even counting the extra time the provider is at the bedside to perform and interpret the study.

Military Maneuvers

John Wightman,
Associate Program Director

Roy Johnson has returned safely from his recent deployment to Afghanistan, so this should be my last such article in *The Update*.

The new military R1s have arrived and made it through their orientation month. Now they are off to the various hospitals to start the more hectic life of interns.

Anthón Lemon was the first to rotate in the WPMC ED, and tried to figure out how to see patients and document encounters in Essentris without getting too bogged down. Maybe if he gets it figured out, he can let us all know.

Not much alumni news from over the summer to pass along. I happened to see **Mark Antonacci**, **Brian Delmonaco**, and **Pat Muehlberger** at the Ohio ACEP Board-Review Course in late August. Even the long track constituted some very long and dense days, but we still had some chances to visit, including over beers on my birthday. They are all doing well. As for recent graduates, **Kevin Juozapavicius** and **James Manley** are credentialed and up & running as newly minted attendings in the WPMC ED. **Pablo Medina** let us know that he was holding down the Fort Keesler ED while Hurricane Isaac raged outside.

Know-Nothing

John Wightman, Education Director

Not much news regarding the curriculum. We are done with the Core Clinical Concepts we do for the first 6 weeks of every academic year. We have now launched back into the revolving three-year plan to cover a portion of the “Model of the Clinical Practice of Emergency Medicine” over 42 Fridays from August to June.

The R1 Orientation in July seemed to have gone well. We did not make any substantive changes, except we did expand the overview of bedside ultrasound to two days. See “The Acoustic Window” article in this issue of *The Update*.

Although it will not directly affect the curriculum too much, we have converted from monthly rotations to thirteen 4-week blocks. Therefore, Journal Clubs and year-directed curriculum discussions will not be on consistent days of a given calendar month. R1 YDCs and JCs will generally be on the second Tuesday of each block. R2 and R3 YDCs will generally be on the third and fourth Tuesdays, respectively. Of course, adjustments may need to be made for holidays, so everybody should refer to the conference schedule as needed.

Dayton Dragon's



Special thanks to **Michelle Hosta**
for arranging a night of fun at the Dayton Dragon's game!



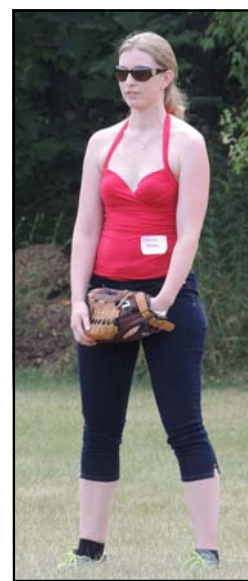
R2 Extrication Course

The R2 Extrication Course was held at the Kettering Fire Department Training Center earlier this year.



Orientation Picnic & Annual Softball Game

Thanks to Dr. Janz and his wife Lisa for hosting the orientation picnic and softball game at their house again this year!



CHAIR BROWN KNOWS

- James Brown, M.D.



When I think of the June/July time frame, the Lion King song *The Circle of Life* starts running through my head. June is generally filled with the outgoing seniors – final RRC meetings, graduation lunch, graduation, saying goodbye. But the new interns begin to arrive, even before the seniors are gone. This year, the welcoming picnic followed the day after graduation, not much time for melancholy or reflection there! July is new intern orientation month, chock full of lectures, labs and sim sessions.

This year's transition was all the more poignant due to the retirement of **Glenn Hamilton** and **Jon Singer**. On June 30th we lost over 60 years of experience! Both of these guys devoted their professional lives to making our alumni the excellent emergency physicians that they are. Replacing them is unthinkable. But we will carry on. We planned a party for Jon; Glenn just did not feel comfortable with any sort of celebration of his career.

As part of the Circle of Life, we welcomed **Ed Fieg** DO back to the faculty. Ed has "PCS to civilian" after a lengthy, distinguished Air Force career and I consider us very fortunate to have him join us. He is assuming the role of Associate Program Director and I hope to persuade him to take over the PD job in the next year or so. Everyone who knows Ed thinks this is one of my most brilliant maneuvers so far.

I am looking forward to reconnecting with some of you at the ACEP dinner, which will (hopefully) produce more fodder for this column the next time around. Dinner will be at

Panzano Restaurant
Paris Room "C"
909 17th Street at Champa
Denver, CO 80202

Class of 2012

Emergency Medicine:

Christina Smith, M.D.

Kettering Medical Center, Kettering, OH

Gene Corson, M.D.

Emergency Medicine of Idaho,
St. Luke's Hospital, Boise, ID

Daniel Giltner, M.D.

Mercy Anderson Hospital, Cincinnati, OH

Linda Hinkelman, M.D.

Kettering Medical Center, Kettering, OH

Michelle Hosta, M.D.

Mercy Anderson Hospital, Cincinnati, OH

Kevin Juozapavicius, D.O.

Wright Patterson Medical Center, Dayton, OH

Cory Long, M.D.

Kettering Medical Center, Kettering, OH

Ben Mack, M.D.

King's Daughters Medical Center, Ashland, KY

James Manley, M.D.

Wright Patterson Medical Center, Dayton, OH

Brooke McCarthy, D.O.

Wright Patterson Medical Center, Dayton, OH

Pablo Medina, M.D.

Keesler AFB, Biloxi, MS

Deborah Ozner, D.O.

Manatee Memorial Hospital and
Lakewood Ranch Medical Center in Bradenton, FL

Jackie Percy, M.D.

Osan Air Base, Republic of Korea

Sports Medicine Fellowship:

Todd Bialowas, M.D.

General Leonard Wood Army Community
Hospital, Fort Leonard Wood, MO

Manish Mannan, M.B.B.S.

St. Francis Hospital, Indianapolis, IN

2012 Graduation



