RESUSCITATOR

WAYNE STATE UNIVERSITY
SCHOOL OF MEDICINE
DEPARTMENT OF EMERGENCY MEDICINE

VOLUME 4 ISSUE 1

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SPECIAL POINTS OF INTEREST:

- **DRH/SG Combined Grand Rounds, April 12th, Scott Hall Green Auditorium, Guest Speaker Wallace Carter, MD**
- **SAEM Annual Meeting, May 9-12/2012, Chicago Illinois**
- **Sinai Grace Resident Graduation, June 14, 2012 at the Detroit Yacht Club**
- **Detroit Receiving Resident Graduation, June 15, 2012 at Ford Field**

VIEW FROM THE INTERIM CHAIR

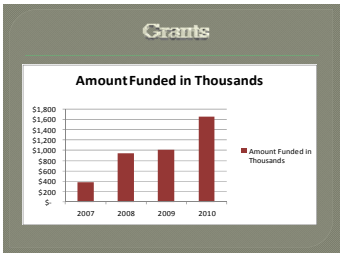
It is an honor to be named the interim-chair of the WSU-SOM Department of Emergency Medicine and although the circumstances behind my ascension were less than ideal, I am humbled to be here. Having just completed the five year department review provides an opportunity to reflect upon the previous five years. The five year review, which was noted by the current and former deans to be one of the best reviews they had ever read, resulted in Dr. Suzanne White being recommended for re-appointed as chair for another five year term. The review revealed the many advances we have made as a department under Dr. White's guidance.

Table 1 notes the growth of the department since 2006, with a 66% increase in core faculty, an 83% increase in voluntary faculty and a 150% increase in (primarily research) staff.

2011		
2006:		ED Visits
21	Core Faculty	236,531
90	Voluntary Faculty	
Clinical Revenue $14.9 M		
9	Staff	
2011:		ED Visits
35	Core Faculty	376,169
165	Voluntary Faculty	
Clinical Revenue $20.8 M		
23	Staff	

Tables 2 & 3 reveals that the budget increased by 58% and

2011		
2006:		
$ 3,484,127	Budget	
$ 381,129	Grants	
2011		
$ 5,499,689	Budget	
$ 1,651,282	Grants	



the grant funding increased by 333%.

Table 4 below notes that manuscripts have increased while other publications have remained relatively stable.

Publications

Type of Publication	2006	2007	2008	2009	2010
Peer Reviewed Journals	19	22	63	27	44
Books, Chapters and Reviews	5	17	26	29	26
Published Abstracts, Letters to the Editor, Articles in Non-Refereed Journals	34	13	45	91	57

Other important changes implemented during the last five years include Suzanne instilling Dr. Robert Sherwin as the Research Director at SGH and assisting in the recruitment of two Ultrasound Physicians—Leonard Bunting at DRH and Mark Favot at SGH. Suzanne was able to negotiate support for two tenure line faculty positions from CVRI (Cardio Vascular Research Institute) and DcATS (Department of Clinical and Translational Sciences), and was also able to leverage SOM support for a portion of a grants manager, biostatistician and a database manager.

Further, the stature of the Department of Emergency Medicine within the medical school could not be greater. EM boasts the highest ranked

Brian J. O'Neil, M.D.
Interim Chair

4th year clerkship by far and EM has had impressive success in the annual NRMP match of WSU students into EM (11% out of a class of 317). The Director of the WSU Simulation Lab is housed in EM—Trifun Dimitrijevski, M.D. Kudos to all of you as we are all involved in this endeavor.

The Residency Training Program has integrated Ultrasound into the daily practice of emergency medicine as well as having established formal procedural training, an ED Critical Care rotation and a Palliative Care elective. The Department has also sponsored three nationally recognized courses on Critical Care in the Emergency Department, as well as hosting the Society for Academic Emergency Medicine Regional Assembly in 2007.

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RED SHOE DIARIES

"Teach your children well, their father's hell did slowly go by..."

A great number of you who read this newsletter not only have children, but have children in the age range where career plans are being considered and discussed. If not children, many of you have nieces, nephews, family friends, or even your barber's kid (true story) who want advice about careers in the medical field. What do you say? Do you tell them that being a physician is the most honorable, noble, and worthwhile profession that exists? Do you tell them that the medical field is good, but it would be better to be a pharmacist, a nurse or a P.A.? Or, do you tell them to avoid a career in medicine at all costs because everything is changing for the worse and it is all going down the tubes?

In year one of medical school at Wayne State, we had a course that ran through the entire academic year. It was called FCHC and stood for Family and Community Health Curriculum. (I think.) It was sort of a grab bag of subjects which included ethics—where one of my lab-mates constantly reminded me that because I was Catholic I was destined for Hell—statistics, and community health topics. (If I'm going to Hell, I at least want to do something really exciting to get there!) As part of the community health curriculum, the medical school brought in 'real' private-practice physicians who worked in the community setting to tell us what their life was like and to show us the light at the end of tunnel. As a backdrop, this was 1985-1986 and HMOs and PPOs were just coming on the scene and everyone was pretty confused as to what it all meant and how it would affect the practice of medicine—all except this group of doctors that is! To a man (and woman) these physicians told us that medicine as a career was over. They advised us to leave medical school as quickly as possible and look for another line of work because managed care was the death of the current practice of medicine and that what was left wouldn't be worth doing. As one can imagine, this was pretty distressing to a bunch of sleep-deprived, stressed medical students who were looking for any (valid?) excuse to bail on medical school and instead study marine biology in the Caribbean. (It was also quite distressing to the Dean!) The school quickly pulled these lecturers and managed to find some physicians who weren't quite so pessimistic. (I think Prozac was also being marketed at this time.)

In 2012, a new set of unknowns loom on the not-so-distant horizon. Many wonder what changes "Obama-Care" will bring and what form it will even take depending upon how the Supreme Court rules and how the political winds blow through Congress and the White House. Struggles over managed care still rage more than 25 years after they were enacted. And now...a new beast has emerged...the Accountable Care Organization. (I am not yet predicting whether this be a good beastie or an evil beastie. I will address that issue in a future editorial.) Hospital systems will be allocated a fixed amount of dollars to provide all of the health care for a certain number of patients. This is a true paradigm shift. No longer will a health care system profit from doing more tests. Instead, they are to do 'just what is necessary', and have better and measurable outcomes. This will affect every facet of medical care—both in-patient and out-patient. (The DMC begins their Pioneer Accountable Care Organization with 13,000 Medicare patients this year.)

Predictably, the skirmish lines are already forming, with some practitioners predicting that medicine will be no longer worth practicing and that no one in their right mind should enter medical school. "Find a new career!" "The sky is falling!" Others have heard those claims before.

To return to my opening paragraph, what do we tell our children, nieces, nephews or barber? Should they forget about medicine as a career? Would it be better to forego medical school and instead choose a related field like nursing, pharmacy or becoming a P.A.? Or should they stay away from health care completely? Obviously that is a complicated, personal decision, but I don't believe that 'fear of the unknown' that each existing generation seems to possess should be the deal breaker. Instead of acting as the older, wiser teachers for our youth, many fall into the trap of sounding off as Chicken Little and letting our fears overpower our reason and judgment—and this irrational fear can be felt by the generation behind us. *"And you, of the tender years can't know the fears that your elders grew by..."* We know in our heart of hearts that medicine is a great and rewarding career, but we can't be afraid of change. We also can't be afraid of rolling up our sleeves and doing the hard work that is necessary to ensure that these changes are the right ones—for ourselves, for the next generation, and most importantly, for our patients.

Philip A. Lewalski, M.D.
Assistant Professor
Editor-in-Chief

We know in our heart of hearts that medicine is a great and rewarding career, but we can't be afraid of change.

So, maybe we should look to the young, up-coming generation of doctors and other health care providers for some perspective. Just as the world did not end for my generation, our future physicians will adapt and be able to navigate through the new maze that is health care. And just maybe, they can leave the system better than they found it.

"Teach your parents well, their children's hell will slowly go by..."

(Thanks to Crosby, Stills, Nash and Young)

Philip A. Lewalski, M.D.
Editor-in-Chief

TEACHING PHILOSOPHY AND STRATEGIES

St. John Hospital – Main Campus

Department of Emergency Medicine

The Emergency Medicine Residency Training Program at St. John Hospital – Main Campus began in 1996 with six positions under the insightful direction of Don Benson, D.O. For 12 years, Dr. Benson, a graduate of the EM training program at Detroit Receiving Hospital, focused the program on intense clinical training – pushing the residents to see as many patients and do as many procedures as possible. The early SJH EM residents all had venous cutdowns under their belts! When residents faltered on their examinations, Dr. Benson gave them "more direct clinical education on weekend nights."

With this educational philosophy as a back drop, I took the Program Directorship in 2008, after 10 years as the Associate Program Director. The program has grown to 12 positions per year and has graduated a total of 137 residents – the graduates of St. John are now scattered across the country and even overseas. The ripple effect of our program is great!

My teaching philosophy is similar. The most important job I have as a Program Director is to provide the residents with a rich clinical experience that pushes them mentally and physically each and every shift. We do just that. With our volumes exploding, our residents are exposed to a disaster-like load on a routine basis – with the expectation that patients do not wait. We have the luxury at St. John of having the most diverse patient population in the city in addition to seeing the highest ED volume at a single site in the state. In conjunction with that rich clinical experience, we have augmented the didactic piece with strong written and oral board preparation, simulation and virtual cases sent to resident iPhones each week. Margarita Pena, M.D. has devoted much time to updating the monthly written examinations. Marson Ma, M.D. has developed his "Stars" teaching facts with high yield on the in-service and board examinations. All of these efforts have produced superior clinicians and test-takers.

As a faculty, we are proud of our graduates and current residents. They are leaders and solid clinicians – with a strong foundation in proper documentation and patient satisfaction. Our clinical setting, "suburban by day, urban by night," prepares our residents for any clinical setting they may choose in the future. We invite you to visit our state-of-the-art Emergency Department with 72 private beds, independent pediatric ED zone and four resuscitation suites at any time. We would be honored and ready to treat you or your loved ones if the need should arise.

Patricia Petrella Nouhan, M.D.
Residency Program Director

Patricia Petrella Nouhan, M.D.
Clinical Associate Professor

"...the graduates of St. John are now scattered across the country and even overseas. The ripple effect of our program is great! "

VENTILATOR

A Broken Soul

Many people think that Emergency Physicians only treat emergencies such as gunshots, stabbings, heart attacks, and strokes. Well, that's not always the case. For people who are hurting not from a gaping wound but rather mental anguish, who have no other place to turn; the Emergency Department is their haven. Everyday we meet people who are running on empty, who are just about to lose it and throw in the towel. It is our job to help them see another round.

A couple days ago a man in his 20's presented to the ED, escorted by his mother. I glanced at his chart. The chief complaint read, "I'm vomiting." No big deal, I thought, this could wait – since I am caring for five other patients who are much sicker than this young man with a few episodes of vomiting. About 30 minutes later, the nurse approaches me and asks if I spoke with the patient in room 13? "No, not yet," I answer. "Could you please," says the nurse. When a nurse tells me to go see a patient, I do it. It's rare that this happens, but when it does, there is usually something wrong with the patient. So, I finish up a few things and walk over to bed 13.

As I approach the room, I see a young man with light brown hair down to his shoulders, sitting in bed, tears rolling down his cheeks, hyperventilating and vomiting clear to yellowish emesis. His mom is at his side, holding up his hair. He is rocking back and forth on the stretcher. I introduce myself to mom and she replies, "Hi, I'm Pauline, Steven's mother, I'm a nurse." OK, I say to myself what's going on, this young guy, who looks miserable and is here with his mom, a nurse. My first thought is that this guy has meningitis, an infection of the brain that causes young people to look very ill. I'm waiting for her to tell me about his high fevers and stiff neck, classic for meningitis. "Steven's brother died a few months ago and he's never been the same," is the first thing she tells me. "His uncle died two days later," she continues. "And his father, a cop, died in '911,' Steven was also in the building before it collapsed." How do I handle this? I am at a loss for words. What can I do to help this

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"We the emergency medicine residents of Sinai-Grace Hospital, stand committed to upholding the core principles of emergency medicine."

TRIP SAT

…Dude did you feel that picture… was sooo, like jagged. Dude? Keenan… Oh, I don't feel so good, tummy not right….Oh this is bad…..BLEEGHHHH …. Oh much better, now I'm hungry and if you are hungry then you need bacon…ok, next step pants….where are my pants… The bacon algorithm clearly states I need pants before I make bacon and I reallllllly want bacon. Hey a note.

Matt,

Sorry had to go, family emergency, you were mostly sober anyway. Could you write an article for Lew for me?

Thank
K
***PS.** The bacon is in the fridge*
***PPS.** Last night you said something about running your pants up the flagpole and see who salutes. Seemed mostly harmless, so that's where you will find them.*
***PPPS.** Yes, you really need them before you cook bacon- you remember the last time.*
***PPPPS**. A better question is what flagpole-good luck.*

Ok, let's follow the bacon theme and fatty goodness to the "Gift of Glob" as it has been coined in some of the toxicology literature, or more correctly, intravenous lipid emulsion (ile) therapy. There have been a number of articles in the anesthesia, emergency medicine and toxicology literature regarding the use of this drug as antidotal therapy for various ingestions/intoxications. So let's take this venue that I was given to pontificate and talk about one of my favorite new-ish antidotes.

"Why would I do that?" you may be asking yourself, "and is there anything really behind this or is it just smoke and mirrors, and bull?" That brings me to standard of care and what is the standard of care. And when the evidence is thin, that in turn leads to expert opinion……Uh oh, that would be me and my colleagues in crime.

Ok, let's try again, this time with a little more seriousness and intellectual rigor. Like many advances in science, this one was also an accident. Dr. Weinberger is an English anesthesiologist who was interested in studying bupivicaine toxicity, particularly—what are the molecular mechanisms of the inhibition of myocardial contraction. They were having some difficulty with their rat model and were getting inconsistent results. The thinking went that the cardiac myocytes didn't have the free fatty acids they normally like for energy. The solution was obvious, give the myocytes free fatty acids they need to work and the assay will produce consistent results. Then Dr. Weinberger received a phone call from his lab tech that went something like this, "Boss, I changed the substrate bath for the rat myocytes and now I can't even make them arrest with bupivicaine." Not really what he was looking for, but interesting none-the-less. That interesting little factoid sat in the anesthesia literature for about eight years until Dr. Litz was called to a ropivacaine-induced cardiac arrest in a pre-op holding area. Well, things were going poorly and the code team was getting near the end of the road and Dr. Litz had an epiphany. There was the article a few years ago about an antidote for local anesthetic toxicity and at this point—why not. Well, it worked, and that led to a flurry of case reports in the anesthesiology literature. And then? We had a successful human antidote.

That is cute and all, but it always comes down to 'why'. The basic scientists took three years to get the experiments done and get the paper out. The study looked at rat dialysis fluids and compared drug concentrations with and without treatment with Intralipid. This showed increased drug concentrations in the dialysate fluid. While you would think that an increased concentration in the fluid consistent with a decreased volume of distribution should actually increase drug toxicity as more would be available to act on the particular receptors, this is not correct. It turns out that the lipid microsomes will actually sequester the drug in their interior space, thereby limiting the interaction with the particular receptors. Now, many of the drugs that we use clinically are large volume of distribution (Vd) molecules *(I know pharmacology hurts—but only for a little while—then it will be all better)* and the duration of action of these drugs is frequently limited by redistribution—movement from a target organ, frequently heart or brain, into the fat/muscle/tissue. That sounds great. But is it safe? For the most part the answer is yes. With chronic parenteral feedings, there are reports of fatty liver, pancreatitis and even a couple of cases of lipid embolism. While this sounds bad, it has not been reported in relation to the treatment of overdose. There are also cases of 'oops,' mistakes with orders of magnitude dosing errors and the only real problems are transiently elevated serum triglycerides

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Matthew Hedge, M.D.
Associate Director, CHM Regional Poison Control Center

So let's take this venue that I was given to pontificate and talk about one of my favorite new-ish antidotes.

TRIP SAT (CONTINUED FROM PAGE 4)

(granted, massively elevated to the point that the lab equipment can't function because the lipid concentration is too high) and some fatty changes in the liver that resolve over a few weeks. On the surface this looks like a thing of beauty and I'm out of the toxicology game, "just give Intralipid, it will take care of everything."

Unfortunately, like every great panacea that has come along, it is never really as good as it initially looks (in human relations this is referred to as beer goggles but that is another topic altogether). While it has been used for a number of different overdoses, it has not been the great universal antidote that we have been looking for since Mithridates VI. Who? Some Asian ruler from way too long ago that ingested increasing doses of toxins because he thought someone would use poison to assassinate him. The concoction was reported to contain in excess of thirty different ingredients/poisons. It may have worked—he tried to poison himself and survived—or so the story goes. *Focus. I will focus. This time I mean it.*

There are a number of different overdoses that Intralipid has been applied to, and as with most case reports, the positive ones are the ones that are published, although there are some reported failures of this antidotal therapy. In animal models it has shown survival benefit with beta blockers, calcium channel blockers (CCB), local anesthetics and beta blockers, CCBs and TCAs, leading us to 'what do I do with a patient'. Human case reports have reported improved cardiac function and improvement in CNS function with the use of Intralipid in ingestions of buproprion, lamotragine, verapamil, atenolol, sertraline, quetiapine and local anesthetics. There are a few more abstracts that are floating out there as case reports that have been successful and there are even successes and failures at this hospital system that haven't made it to case reports yet.

That's nice but Dr. Hedge do you actually have a plan? Looking bad for the home team, premorbid with a CNS or CV intoxication in addition to standard therapy, I would use lipid rescue if it was a large Vd drug or as "heroic" measures. CNS depressants are an area that I think* may be a beneficial therapy. Recognize that "I think" as this is the opinion of myself and a couple of others with no real evidence to back our choice. I believe that it has potential as antidotal therapy in sedative intoxication (particularly neuroleptics may benefit in terms of preventing intubations or improving cardiovascular parameters), but that remains to be seen. So, how much do I give? Well there are a couple of different answers. The guidelines put out by the Association of Anesthetists of Great Britain and Ireland state for local anesthetic toxicity you should give a bolus of 1.5 ml/kg of a 20% lipid emulsion up to 3 times, followed by an infusion of the 20% lipid emulsion at a rate of 0.25-0.5 ml/kg/min for 60 minutes. Dr. Weinberg, who started this all, has advocated for 1.5 ml/kg of 20% lipid emulsion as a bolus and to be repeated for asystole followed by a continuous infusion of 0.25 ml/kg/min for 60 minutes of the 20% lipid emulsion.

So, there is the short course on the "Gift of Glob" now off to make bacon. Some days you have to ask yourself… do ya feel lucky……mmmmmmm bacon.

Matthew Hedge, M.D.
Assistant Professor
Associate Director CHM Regional Poison Control Center

Children's Hospital of Michigan Regional Poison Control Center Hotline Office
Susan Smolinske, M.D.
Rick Dorsch
Mark Bambrick
Phillip Price

"Unfortunately, like every great panacea that has come along, it is never really as good as it initially looks …"

VIEW FROM THE INTERIM CHAIR (CONTINUED FROM PAGE 1)

Suzanne White was instrumental in the support of a Palliative Care Fellowship, which received ACGME accreditation in 2008. Since then, they have trained nine fellows, published numerous publications, have been awarded nine grants and have an active resident elective and a pre-med student course.

So, as Dr. White's tenure is analyzed, one has to be impressed. Although certainly one person cannot assume full credit for all of these successes (as our Department embodies the collaborative ideal), she was either instrumental in developing or supporting these entities. Therefore, I think we all owe her a debt of gratitude and I look forward to the challenge of continuing her vision and leadership as the Interim Chair.

[**Editor's note:** Dr. Brian O'Neil assumed the responsibilities of Interim Chair on February 1st, succeeding Dr. Suzanne White, who remains an integral part of our department as well as Chief Medical Officer of the DMC.]

Brian J. O'Neil, M.D.
Interim Chair

ED OBSERVATION UNIT OPENS AT HARPER

On September 12th 2011, the Department of Emergency Medicine began its foray into Observational Medicine. The Clinical Decision Unit (CDU) opened at Harper University Hospital on 5 Brush South with a 17 bed unit featuring private rooms and full telemetry capability.

There is increasing pressure being applied to hospital systems by the government and other third party payers to lower health care costs and as a result, observation units are rapidly growing in attention and popularity. With the addition this year of the DMC's Pioneer Accountable Care Organization, the need to provide measurably high quality care—quickly and efficiently—will exponentially grow. *[See Red Shoe Diary]* From 2003 to 2007, the percentage of U.S. hospitals with an ED based observation unit grew from 19% to 36%. During the same period, the number of Medicare-billed "non ED based" observation stays lasting greater than 48 hours more than doubled while the "ED based" units continued to discharge the vast majority of patients in less than 24 hours. Studies have also shown that by having the ED Observation Units in a dedicated area of the hospital (not mixed in with general admissions), the length of stay was shortened. These patients are seen sooner and more often by the doctors, have fewer (presumably unnecessary) tests performed and have shorter stays. Research has also shown that for patients with asthma and chest pain, ED Observation patients have greater satisfaction and improved quality of care. Many other studies looking at diagnoses such as (but not limited to) CHF, TIAs and a variety of infections, ED Observation Units have equal or superior quality indicators, but are able to discharge the patients significantly faster.

The development of CDU at Harper involved many people, a great deal of support from hospital administration and involved many months of hard work. The Director of the CDU is Bill Bahu, M.D., who with the help of Drs. Crystal Arthur and Marc-Anthony Velilla worked with the VPMA of Harper, Patricia Uddyback-Wilkerson, M.D., to bring the unit to fruition. It was a very involved and difficult task. The nurses, PCAs, clerks, RTs, social workers and case managers were all specially trained to deliver the high quality—but much more rapid—care that the patients would be receiving. The Department of Cardiology has provided increased diagnostic testing capabilities so that stress tests and stress echocardiograms can be obtained in sufficient numbers seven days a week. The cardiologists have committed to reading these tests on a timely basis. In addition, ordersets for the 13 diagnoses admitted to the CDU needed to be developed and implemented by Information Systems. (The CDU currently accepts 13 diagnoses: Allergic Rx/ angioedema, asthma, cellulitis, chest pain, CHF, COPD, dehydration/vomiting/ diarrhea, DVT hyperglycemia, hypoglycemia and pyelonephritis. Protocols for 19 more diagnoses are under development and should be on-line by the time this issue goes to print.)

So far, the CDU has been a definite success. The number of patients admitted continues to rise each month, with 146 patients in November growing to 188 in December. The average stay in the CDU is 22 hours. (In contrast, the average stay at Harper for "23 hour observation" patients had been close to 48 hours.) Approximately 10% of the patients require transition to a full admission. Interestingly, the expectation nationally is 20%, although our numbers may grow once the 19 new diagnoses are added. In general, the reception by the Harper attending staff has been very positive. Every effort is made to contact the patient's primary care physician and they are welcomed to consult if they desire, but the hospital administration has made it clear that the ultimate care decisions and disposition are ours. Patient flow has been reasonably good, but this will further improve when the CDU moves to the area currently occupied by the Harper-South ED after a major renovation of the Harper ED is completed in 2012. (The facilities on 5 Brush South are very nice—including an office with a stunning view of Comerica Park—but it is about as far away from the emergency department as one can get.)

With the opening of the Clinical Decision Unit at Harper University Hospital in September of 2011, a large, positive step has been made by the Department of Emergency Medicine to provide high quality care to our patients in a rapid and efficient manner.

Philip A. Lewalski, M.D.
Editor-in-Chief

Nabil (Bill) Bahu, M.D.
Director of the Clinical Decision Unit (CDU)

With the addition this year of the DMC's Pioneer Accountable Care Organization, the need to provide measurably high quality care—quickly and efficiently—will exponentially grow.

HAVE YOU BEEN GRACED, TODAY?

Greetings from 6071 West Outer Drive. For those of you less fortunate, that's the address of Sinai Grace Hospital. In September 2011, I enthusiastically assumed the position of Clinical Research Director for the Sinai Grace Department of Emergency Medicine. To be honest, I did not accept this position without some degree of trepidation, but quickly discovered that SGH is a wonderful place to work and is incredibly receptive and supportive of our research efforts. There were pretty big shoes to fill. Sinai Grace has a long tradition of successful research directors that include Drs. O'Neil, Dunne and Zalenski. The standards set by my predecessors were high; and I too have a vision for my new department and have set our goals even loftier.

At the moment, we are actively enrolling in eight clinical trials at Sinai Grace including studies on sepsis, traumatic brain injury, influenza and cardiac arrest. I give Duane Robinson, the Research Coordinator, full credit for our current success and together we will continue to succeed. Duane's responsibilities include patient enrollment, data aggregation, IRB submission, contract negotiations and protocol management. We have two research technicians assisting in patient screening and enrollment that allow research coverage almost 18 hours a day most days in the week.

The overall goal is to increase the research and scholarly activity for the entire department. Our specific objectives currently focus on establishing a functional resident research program, including a committed resident research track. Residents, who in their first year demonstrate academic success in addition to a specific interest and/or avocation for research, will be recruited to the resident research track to begin in their second year. Residents on the research track will work closely with me to develop a focused project to be completed in time for submission for presentation at either SAEM or ACEP in their third year. Additionally, they will dedicate their electives to research and participate as an active member in the research division.

We are excited to welcome several new members to the SGH Research Division including Drs. James Paxton and Mark Favot—both recent graduates from my alma mater, "Fords"—who will be focusing on trauma and ultrasound respectively. Finally, we have recently brought Cheryl Courage on board as our new Research Associate. Cheryl has a Masters in Clinical Psychology with additional doctoral training as well. Cheryl has extensive experience and expertise in grant writing, statistical analysis and methodology. Her skill sets and enthusiasm dovetail with our goals and needs with respect to increasing faculty and research production.

In closing, I would like to emphatically thank Drs. White, O'Neil and Welch for this opportunity. I can genuinely say that I am having a lot of fun. Sinai Grace is a fantastic hospital, with a great patient population and an exemplary staff. If you haven't tried it, you are missing out. "Have you been Graced today?"

Robert L. Sherwin, M.D.
Clinical Research Director, SGH

Robert L. Sherwin, M.D.
Assistant Professor

"...but quickly discovered that SGH is a wonderful place to work and is incredibly receptive and supportive of our research efforts."

CONGRATULATIONS

Gloria Rey and Sean Moor are the proud parents of a baby boy, Cohen John Moor, born on November 2nd.

Michelle and Tom Lall are the proud parents of a baby boy, Graham Thomas, born on December 24th.

Colleen and Trifun Dimitrijevski are the proud parents of a baby boy, Jake, born on February 19th.

Jessica and Erik Olsen are the proud parents of a baby boy, Slade Thomas Vitek, born on March 4th.

Kristin and Sarkis Kouyoumjian are the proud parents of a baby girl, Maggie Alice, born on March 7th.

Bernadette and Vince Borla are the proud parents of a baby girl, Estelle Josephine (Stella), born on March 10th.

Sinai Grace Hospital

DRH HYPERBARIC/WOUND CLINIC

Under Pressure to Save Life and Limb!

Detroit Receiving Hospital and the DMC have been fortunate to have a hyperbaric chamber since 1998. The original single patient, or monoplace chamber, however, was best suited for emergency treatments such as carbon monoxide poisoning. Multiple victims were a logistical nightmare and the treatment of wounds was limited to the most dire of cases. In 2006, with the partnership of OxyHeal (a San Diego company using hyperbaric chambers for medical care since 1983), DRH opened its state-of-the-art Hyperbaric/Wound Clinic. The centerpiece is an 18 person multiplace chamber capable of running two dive profiles at one time if necessary to a maximum depth of six atmospheres (165 feet below sea water). The DMC Hyperbaric Oxygen (HBO) Chamber is one of only three in the state (and only two in the Lower Peninsula) capable –and willing—to provide emergency therapy 24 hours a day, seven days a week.

There are several approved indications for hyperbaric therapy as developed by the Undersea and Hyperbaric Medical Society. There is not always a preponderance of scientific data proving the efficacy of hyperbaric therapy in every case; however, it is generally felt to be beneficial in all 14 indications. The indications are: 1. Air or Gas Embolism; 2. Carbon Monoxide Poisoning; 3. Clostridial Myositis and Myonecrosis (Gas Gangrene); 4. Crush Injury, Compartment Syndrome and Other Acute Traumatic Ischemias; 5. Decompression Sickness; 6. Arterial Insufficiencies (including Central Retinal Artery Occlusion); 7. Severe Anemia (e.g. Jehovah's Witnesses); 8. Intracranial Abscess; 9. Necrotizing Soft Tissue Infections; 10. Osteomyelitis (Refractory); 11. Delayed Radiation Injury (Soft Tissue and Bony Necrosis); 12. Compromised Grafts and Flaps; 13. Acute Thermal Burn Injury; 14. Neuro-sensory hearing loss (recently added).

As one can imagine, there are criteria for HBO therapy in each category that help to determine if 'diving' the patient is indicated, for how many sessions and if third party payers will reimburse for the care.

Under the medical direction of Dr. Robert Wilson, the chamber stays busy. The total number of hyperbaric treatments since 2007 averages over 2,000 per year and the total number of wound appointments (with and without HBOT) in 2011 was over 3,800. Of note, since 2006, there have been 292 patients treated emergently for carbon monoxide poisoning and 25 divers treated for decompression sickness—both local divers (quarry and Great Lakes) and vacationers who flew home too soon after diving in the oceans. The wound patients become like a family, spending two hours a day watching movies and chatting in the chamber during the dives.

The effects of HBOT as well as meticulous wound care by highly trained and experienced wound care nurses and technicians under the direction of Theresa Bechtol, R.N. lead to amazing results. Before working in this center, like most ED doctors, I had a pretty pessimistic view of the natural course of most diabetic and decubitus wounds. We usually only see the worst wounds in the most non-compliant patients in the ED. Although the progress can be slow, I have observed tremendous healing in ulcers involving the entire gluteal region as well as the whole leg.

The training to work in the HBO clinic felt a little like being back in chemistry and physics classes—Charles' Law, Boyle's Law, Guy-Lussac's Law. In addition to learning the medical indications for hyperbaric therapy, one also had to learn how to make dive tables so that both the patients and the tenders—there is a trained dive technician in the chamber for every dive—remain safe and not subjected to iatrogenic decompression sickness. It should be noted that several of the ED attendings work in the hyperbaric clinic and that Drs. Robert Sherwin and Anthony Lagina were able to achieve ACEP Board Certification in Hyperbaric Medicine before the practice track closed.

Metropolitan Detroit and most of Michigan and northern Ohio are fortunate to have the Detroit Receiving Hyperbaric/ Wound Clinic available for both the treatment of chronic conditions as well as life and limb threatening emergencies. Even if the evidence for HBO therapy is not always iron-clad for some of the indications, the risks are generally very small and the benefits large. Saving a diabetic's leg or minimizing cognitive impairment after CO poisoning has tremendous financial, social and personal reward for our patients.

*For information on obtaining a HBO consult for non-emergent conditions, patients can call **Jeff Mosteller** at **(313) 745-8450** during business hours. For emergency therapy of conditions such as CO poisoning, gas emboli, decompression sickness, retinal artery occlusion, etc, health care providers can call (**888) dmc-9dmc** (or the DRH E.D. senior physician at (**313) 996-0701**) 24 hours a day.*

Philip A. Lewalski, MD
Editor-in-Chief

Jeffrey Mosteller
Program Director

Multiple victims were a logistical nightmare and the treatment of wounds was limited to the most dire of cases.

Detroit Receiving Hospital
Hyperbaric Chamber

FREEWAY DANCING

Long, torturous moments, of my skinny eight year old body curled in the deepest groove of our plush green couch. Periods of dread and discomfort of my 11 year old body attempting to melt into the wall rather than be pulled into the elaborate display before me. Hours of sheer teenage boredom combined with the overwhelming fear that I'll be coerced onto that dreaded platform of human expression.

My mother loves to move. I used to get dizzy watching her feet play out complicated patterns in our carpeted living room. My eyes water trying to keep track of her hands, swiftly cutting through the thick air, beckoning me to join her. Lips mouthing words dripping with excess sentimentality, my mother floats among the crowds of fellow performers, glides across the kitchen floor, celebrating her body, celebrating her power to captivate with the simple control she effected on her waist, her hips, her smooth shoulders.

My father used to be my shield. I could hide behind his laughing, clapping, and yet resisting figure, certain he'd never abandon me, abandon his safety zone and saunter onto the dance floor. Unfortunately, growing older, I could no longer depend on his presence to protect me from the obnoxious urgings of others. So, I became an expert, dodging hands extended toward me, deliberately unable to make eye contact, and quickly spewing excuses about my uncomfortable dress, my dangerous heels, my dislike of the music, and my claustrophobia. *I cannot be so close to people*, I say with a crooked smile. *I get too anxious. I don't feel like getting sweat stains on this outfit, it cost me a fortune.*

I wasn't entirely lying. Soon, I just became the quiet, unsocial girl in the community, the one who refuses to dance because she's better than everyone else. The one who refuses to dance because she can't find a worthy partner. The one who refuses to dance because she's too tired from partying last night. The one who refuses to dance because she's too tired from studying all night. I like that one the best – it was closest to the truth.

Eventually, I grew philosophical on the subject. *We have evolved into intellectual beings, can we not derive pleasure from less primitive acts of moving our extremities.* As if not hearing, my mom would give me yet another tape and insist this one may have the right beat. Insist that if I closed the door and stood before a mirror, the music would sweep me away, push my body this way and that, urge my feet to follow the drumbeats, right first and left following. At social gatherings, wedding receptions, and bridal showers, as soon as the music floated through the air, my mom was on her feet, always pulling me to join her.

Eventually, she gave up, focused on my younger sister, a splitting image of her, a mirror reflection of her swinging hips and tossed hair. Only a fellow non-dancer can understand my relief. It took years to make them leave me alone, but finally, no one asked me to dance.

Perhaps it was the sun shining that early morning, perhaps it was the clear, crisp air that filled my lungs with exhilaration, perhaps it was simply the music – Bhangra. A native Indian genre specific to Punjabis, Bhangra succeeded in making me do what no other beat had before. Bhangra moved me.

It began with a little head bobbing, followed by some foot tapping. It started as an attempt to escape morning grogginess. It ended as an art form Reena and I call "Freeway Dancing," copyrighted Fall 2004, on morning rides to school.

My fear and anxiety melts away into the throbbing heat of words I cannot understand. Mimicking Reena's calculated moves, eventually surrendering to my own sporadic gestures, I immersed myself in an unforgettable experience. No one can see me if I am whizzing past them at 80 mph. No one will notice the lack of control of my hips, the poor timing, the clumsy jerks. No one will know the sheer joy I derive from flailing my arms and bouncing my shoulders in pure anonymity, knowing how absolutely hilariously ridiculous we both look, relishing in these sweet precious moments of wild youth.

The sun is just peeking across the horizon. The cars are closely trailing each other, urgent to reach their destinations. Foreign music blasting. The vehicle visibly bouncing. Two girls laughing till tears smear their eyeliner. Yeah, people do notice.

But it's okay now. I am no longer afraid to allow the beat to rush through my veins and fill my heart with a warmth only the word happiness can come close to capturing. The smiles, laughs, and waves from strangers I shall never meet only spice up the experience, masala for memories. Next time it's an early Monday morning, instead of grumbling about your horrid coworkers or rough weekend, turn the volume dial clockwise, put the windows down slightly, apply a bit more pressure on the gas pedal, and freeway dance.

Riham Alwan
4th Year WSU Medical Student

My mother loves to move. I used to get dizzy watching her feet play out complicated patterns in our carpeted living room.

Riham Alwan
WSU SOM Class of 2012
Reprinted from University of Detroit Mercy, 2007

"SUCK THE HEAD, PINCH THE TAIL!"

6th Annual Crawfish Boil Scheduled to Kick Off the Summer Season!

On Saturday, May 19th, the 6th Annual WSU Department of Emergency Medicine Crawfish Boil, hosted by Drs. Bill and Judith Anderson is on the calendar—with returning Master Crawfish Chef and DRH Resident alumnus Dave Daigle.

Crayfish, crawfish, or crawdads (as my Appalachian mother called them) are freshwater crustaceans ubiquitous to North America. There are 330 species and nine genera known to populate our streams and bodies of water. Crawfish are used in myriad Cajun and Creole dishes such as soups, bisques, étouffées, fried, crawfish pie and crawfish bread (utilizing the tail only).

Perhaps the most famous way to enjoy them is in a traditional Louisiana 'boil' where the whole crawfish is cooked and the claws are eaten as well. Hardcore crayfish gourmands also suck the head in which the high fat content absorbs seasonings and flavor. This has led to the phrase "suck the head, pinch the tail" becoming a rallying cry for crawfish boils. Additionally, chefs include corn, potatoes, mushrooms and other vegetables in the spice-filled water to round out the feast.

Of interest, Louisiana produces 98% of the crawfish consumed in the United States and 90% worldwide. In 2007 alone, greater than 54,000 tons of crawdads were produced in Louisiana—most from aquaculture.

Dave Daigle, DRH class of 2009 will once again be employing the secret Daigle Family concoction of flavorings and spices to cook up a delicious mountain of crawfish at the home of Drs. Berk and Anderson, and they have graciously extended an invitation to any of our resident alumni who read this article. If you haven't attended one of the previous boils, just remember to come hungry and don't wear your 'Sunday Best' as this is a two-handed, 'juice drippin,' 'finger lickin' type of meal!

If you are able to join the fun, please email Bill Berk at wberk@comcast.net so that he can get a head count.

Philip A. Lewalski, M.D.
Editor-in-Chief

VENTILATOR (CONTINUED FROM PAGE 3)

family? Who am I? "I'm very sorry, it sounds like you have been through more than most people can handle," I say. I don't believe that society appreciates the effects of psychological stressors. I often see these stressors cause people to have physical symptoms; probably the cause of Steven's vomiting. "We've been to three different hospitals over the last month, but Steven keeps throwing-up, can't keep any food down. He's been x-ray'd, CT scanned, even had an endoscopy, nobody can figure out a reason why he is vomiting," says Pauline. I push on Steve's belly, it's soft, no areas of tenderness, then listen to his lungs and heart, look in the white's of his eyes for icterus or yellowish discoloring seen in gallbladder disease. Everything appears normal. Steven says, "My hands are so numb, and my mouth is tingling." I watch him breath, too fast, about 30 breaths a minute, double the normal respiratory rate. I tell the nurse to administer fluids and order a milligram of lorazepam, an anti-anxiety medication.

Five-minutes after he receives the medication I walk back over to him, and already I can see a difference. The tears subside. "How is the tingling in your fingers," I ask. "Much better," says Steven. I see calmness in his body; his breathing slows down, the vomiting stops. "I think your symptoms are due to the enormous psychological burden you carry in your mind; its psychological symptoms manifesting as physical symptoms, that is why all of your x-rays and CT scans are normal. There is nothing wrong with your organs," I tell him. Steven sits in bed, staring straight ahead. "I can barely get the energy to go on living, everyday is a struggle," he says. "I can't imagine what you've been through, but I'm sure you are doing your best," I say. Steven replies, "I am trying, but failing."

When things go bad in emergency medicine, it is usually not the patient who tells you. It is usually a vital sign, ECG, or lab result that is dangerously abnormal. Today, my patient is telling me that his health is critical. I call the psychiatrist and relay a brief history. "I'll be right over," says the consult, "Sounds like this guy is sick."

The most critical patients aren't always those who are hypotensive. Sometimes, our most critical patients have a completely normal physical examination with normal vital signs. But if you look deeper, you'll see their illness – a broken spirit. It is our job to start the healing process in these patients. To find these patients the proper care. Steven presented to our Emergency Department broken. After two weeks in the in-patient psychiatry ward, he left with a sense of hope. Putting his shattered life back together, one piece at a time.

Adam J. Rosh, M.D.
Assistant Professor

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"WE ARE COMMITTED TO BEING THE LEADERS.."

KUDOS

Congratulations to the following faculty members and residents:

Robert Zalenski, M.D., has been appointed the Medical Director of Palliative Care Development for the Vanguard Health System which will advance the field in 30 hospitals looking at the full continuum of health.

Sarkis Kouyoumjian, M.D., on receiving the WSU Recent Alumni Award. We are incredibly proud to see this formal recognition of his efforts at such a high level.

Phillip Levy, M.D., has been asked to help develop the program for the 2012 Summit on the Science of Eliminating Health Disparities, "Integrating Science, Practice and Policy: Building a Healthier Society".

Matthew Hedge, M.D., has been selected to receive the 2010 College Teaching Award in the School of Medicine. Your exceptional teaching contributions certainly are worthy of recognition.

Robert Wahl, M.D., has been elected to the American Board of Emergency Medicine Board of Directors. This is a four year term starting July 30, 2012. With this position, he will further expand the WSU presence.

Cynthia Aaron, M.D., has been selected to receive the American College of Toxicology Educator of the Year Award.

Brian O'Neil, M.D., was selected as Decision Editor for *Academic Emergency Medicine*.

Srinivasan Suresh, M.D., CHM Department of Emergency Medicine Medical Director and Chief Medical Information Officer, has been promoted to Clinical Professor.

Brandon Warrick, M.D., has been elected to the Medical Toxicology Fellows-in-Training Association Board of Directors.

Aaron Brody, M.D., was awarded the Best Resident Presentation at the 21st Annual Midwest Regional SAEM Meeting.