

# NCEMSF NEWS

## Inside this issue:

President's Message	1
Transfusion Therapy and Blood Substitutes	2
Professor Squirrel	3
The Benefits of Membership	3
Regional Roundup	4-6
Why EMTs Are So Rich	7
The Four Year Challenge	7
Alumni	8
Civic Duty	9

***"The key to success is through a multi-pronged approach: collaboration, service, and public relations"***

## Message from the President

Dr. George J. Koenig, Jr., NCEMSF President

Welcome to the 16<sup>th</sup> annual NCEMSF Conference! This weekend over 800 collegiate EMS providers will have the opportunity to attend over 60 lectures, learn new skills, meet new friends, and will return to their campuses energized to make a difference. The dedication towards making a difference is what makes our organization special.

Last weekend, I had the opportunity to attend the National Conferences of Campus Emergency Responders (NCCER) in Oshawa, Ontario. The NCCER is the Canadian equivalent to our conference. Similar to our conference, the weekend is dedicated towards promoting exchange of ideas and increasing education. The weekend was buzzing with enthusiasm and excitement as the attendees prepared for the annual skills competition, a major focus of the weekend.

I learned that while there are some differences between the Canadian model and the US model for providing prehospital emergency care, there are many similarities. Perhaps, the most informative part of the weekend was my attendance at the Director's roundtable. This session provided a forum for the leadership of the response groups to discuss challenges that they faced. As they went around the room, I was intrigued by the similarity of the challenges that our campus based response groups face in providing emergency care. Topics such as personnel staffing, protocol implementation, AED's, communications, 24/7 scheduling, and funding sources were discussed.

After this session, along with Jeffrey Bilyk, our NCEMSF Canadian Regional Coordinator, we presented a seminar on the different models of prehospital care on US college and university campuses. We found ourselves in an audience of disbelief that it was possible to achieve what our members have achieved. The concept of a first response vehicle was out of the question as well as trying to expand their scope of practice above first aid. Until recently, the overwhelming majority of Canadian response

groups responded on foot. Our message was two fold. We explained that it is possible to achieve anything with appropriate planning. And we discussed the importance of collaboration in regards to organizational growth. Collaboration provides organizational stability and affords a foundation for the future.

It is paramount that we embrace both of these principles. Every college and university in this country is experiencing financial hardship. Many colleges and universities are slashing budgets as they try to decrease deficits due to shrinking endowments. Projects have been placed on hold, and hiring freezes enacted. Administrators are looking everywhere to cut costs. This will place many of our annual budgets at risk in the coming year. It is important to realize that we are not immune from budget cuts. We need to be vigilant and develop an action plan to ensure a sustainable future.

The key to success is through a multi-pronged approach: collaboration, service, and public relations. Collaboration, now more than ever, is essential. Collaboration, among departments such as public safety, health services, student life, and athletics, helps to distribute the risk of your budget being eliminated when cuts are being made. In addition to financial support, collaboration enables you to develop a network of supporters in case you need to justify your existence and funding to campus administrators. The second priority is to ensure that we deliver excellent service. We need to critically evaluate the service that we provide and seek ways to improve. It is vital that we exceed the expectations of the people that call us for help now as well as those who will call us for help in the future. Lastly, we need to improve our public relations efforts. Your organization needs to become a "household" name. There is no reason why there should be a single person, staff or students, on your campus that does not know who you are and the value of the service that you provide.

*(Continued on page 8 - PRESIDENT)*

## Transfusion Therapy and Blood Substitutes

Michael T. Hilton, NCEMSF National Coordinator

Blood transfusion is effective, relatively safe, and quite useful in modern medicine. However, there are several factors that limit its use. Blood substitutes are being developed and tested to bypass these limits and adverse effects. To understand blood substitutes, it's important to know basic uses of transfusions and their complications.

Different components of blood can be transfused. Whole blood is rarely used. Packed red blood cells (PRBCs) are transfused for anemia, whether due to hemorrhage from trauma and surgery, to primary anemia or secondary to other medical disease. Platelets are transfused for low platelet counts (which can lead to bleeding) due to massive intravenous fluid or PRBC therapy (greater than 10 units of PRBCs), heparin use, primary thrombocytopenia ("low platelets") or secondary to other medical disease. Specific coagulation factors can be transfused for a low concentration of coagulation factors (leads to bleeding) that can be due to hemophilia, warfarin or heparin. Plasma, the liquid component of blood can be transfused as "fresh frozen plasma" and it contains all of the coagulation factors. It is used to replenish all of the factors at once after hemorrhage or after a massive PRBC transfusion. Cryoprecipitate is a precipitate that forms after the thawing of frozen plasma and it contains three clotting factors and is rich in fibrinogen. It is used for hypofibrinogenemia (low fibrin, which can lead to bleeding) and von Willebrand Disease.

Most transfusion reactions are due to the immune system of either the recipient or the donor. The immune system's antibodies recognize markers on cells, called antigens, which signify that something is native to the body ("self") or is foreign ("non-self"). Self antigens are ignored but foreign antigens cause the antibodies to activate immune system's effector cells (white blood cells called T cells) and lead to other changes in the body including fever. The most common side effect of a blood transfusion, accounting for 75% of adverse effects, is the febrile reaction. This is simply the recipient's antibodies reacting to antigens on donor white blood cells and is characterized by fever, chills, urticaria and headache. Major antigens (A or B – the basis of the ABO blood groups) on

RBCs are matched to prevent the more severe hemolytic reaction, in which the recipient's antibodies recognize a foreign A or B antigen on the donor RBCs and the immune system destroys the donor RBCs. This can lead to dangerous hypotension and hemorrhage. Matching involves ensuring that the recipient receives RBCs with the same major antigens as his/her own. Other hemolytic reactions can occur to the many minor antigens present on RBCs and these are not as severe. Immune system signaling proteins ("complement" proteins) from the donor blood can over-activate the recipient's immune system leading to transfusion associated lung injury (TRALI) manifested by the acute respiratory distress syndrome (ARDS) that requires intensive care and ventilator management. One can also have an allergic reaction to proteins contained in the donor blood.

The risk of infection from a transfusion, quite high even fifteen years ago, has decreased significantly but is still present. One in one million units transmit hepatitis B. One in three million units transmit hepatitis C. One in four million transmit HIV. The low rates of disease transmission are due to better screening of the donor population and screening of the donated blood. Other risks only seen with massive transfusions include hypothermia, potassium abnormalities (causing arrhythmias), and bleeding (from citrate, the anticoagulant used to prevent stored blood from clotting).<sup>1</sup>

There are a number of logistical factors that limit the use of transfusions, especially in military trauma and out-of-hospital situations. First, blood components have shelf lives. For PRBCs, this is 42 days. Second, there is a shortage of donors both because of few volunteers and because the screening requirements to keep donated blood safe reduces the number of volunteers whose blood can be used. These two factors combined mean that blood banks are nowhere near capacity. It also means that stored blood is diverted to the hospital where the blood will be used before it expires. Blood products sitting on an ambulance waiting for a trauma patient qualifying for its use would be wasting a very limited resource. Second, as previously mentioned, blood needs to be matched with the recipient and this

cannot happen in the field. Although there is the universal donor blood type O that contains no antigens, this is a rare commodity and is used as a last resort even in the emergency department trauma bay. Finally, blood products need to be constantly refrigerated at specific temperature ranges (for PRBCs, this is 2-6 degrees C) creating another challenge in the field.

There are potential benefits to transfusing PRBCs in the field both in military and rural or extended transport-time civilian applications. Massive fluid therapy in trauma patients maintains blood pressure. Pressure allows blood, carrying oxygen in RBCs, to flow through the blood vessels. However, massive fluid therapy dilutes clotting factors (leading to more bleeding) and, more importantly, dilutes RBCs (decreasing the oxygen carrying capacity of blood) lowering the delivery of oxygen to the body's tissues. On a prolonged transport, replenishing the patient's lost RBCs with PRBCs might be useful to increase the oxygen capacity of the patient's blood and may decrease organ injury and have survival benefit.

Synthetic or semi-synthetic substances are being developed and tested that would replicate the oxygen carrying function of RBCs without the adverse effects and logistical problems of blood transfusions. Blood substitutes have potential uses in the field, in the emergency department and elsewhere in the hospital. There are two main types of substitutes. The first is based upon the hemoglobin molecule that is contained in RBCs and is actually what carries oxygen in RBCs. These are called hemoglobin-based oxygen carriers (HBOCs). Adverse effects associated with HBOCs in initial animal studies included a too-strong attachment to oxygen (a "high affinity" for oxygen) so oxygen was not released to the body, kidney damage (hemoglobin is "nephrotoxic"), rapid clearance ("elimination") from the body, and allergic reactions. Further modification of the hemoglobin molecule has resulted in HBOCs with less adverse effects.<sup>2</sup> In subsequent clinical trials, other side effects have been noted: "vasoconstriction and decreased blood flow to the vital organs, heart attack, stroke, systemic inflammation, organ damage, and even death." This injury is

*(Continued on page 6 - TRANSFUSION)*

## Professor Squirrel

Serious Campus EMS Advice from a Nut

Dear Readers:

Welcome to the 16<sup>th</sup> annual NCEMSF conference! In packing for the conference I was rooting through my old stash of nuts in my tree and reviewing some of my old records. In 1994 JEMS put out a request to get information from campus-based EMS services and only 24 services replied. Student EMS providers on campuses were already ahead of the industry; using Al Gore's relatively new invention back then known as the "Internet," campus EMS providers had already started to find each other. Representatives of 55 campus-based EMS organizations came to the very first NCEMSF conference held at Georgetown University in April 1994 just across the Potomac River, not far from where we are today. I remember that conference and the relatively small track of speakers, the first competition – the moving code races (one group broke a glass door on Georgetown's campus), and the first social event.

Since then NCEMSF has grown remarkably to the event you are participating in this weekend. I have often wondered what has become of some of the campus EMS providers that attended that first conference (several of them are here this weekend and continue to be active in NCEMSF long after they graduated), and those that have been involved in NCEMSF since. If you check the presenters' biographies in the conference program you are likely to find a number of leaders in the EMS industry presenting this weekend who were involved as campus EMS providers when they were in school. I hear from former campus EMS providers all the time. Some are physicians now who have completed their residencies and are now teaching the next generation of students. Some are public health professionals, educators, engineers, attorneys, and business leaders. Some have made careers of EMS. When you are wheeling your patients into the emergency room

you might be surprised that some of the physicians, PAs, nurses and others there were campus EMS providers in their past.

Where will you be 16 years from now? Will you be back at the 32<sup>nd</sup> annual NCEMSF conference presenting and sharing your experience and knowledge with future campus EMS providers? Will you help support your campus EMS group as alumni? I personally know of several people who were at that first conference in 1994 who are now mentoring campus EMS providers in various ways. Stay in touch with your school and stay in touch with NCEMSF. Consider a life membership in NCEMSF. And don't forget to take care of the campus squirrels!

See you around the conference!

Professor Squirrel



Professor Squirrel has been hanging out on campus begging for food from students and keeping an eye on campus EMS for many years. Send your questions to the Professor at [professor@ncemsf.org](mailto:professor@ncemsf.org). The Professor will answer the best ones in the NCEMSF newsletter. Your name and school will be kept confidential. Visit his nutty e-Shop at [www.cafepress.com/ncemsf](http://www.cafepress.com/ncemsf) and get your own Professor Squirrel and NCEMSF apparel and souvenirs. You can also purchase textbooks and other EMS reference materials at highly discounted prices through the official NCEMSF Store. NCEMSF apparel is available at the NCEMSF Store as well. Visit the NCEMSF Store and help support the Foundation by clicking the "Store" link on the NCEMSF Web site.

## The Benefits of Membership

Karolina Schabbes, NCEMSF Membership Coordinator

Do you wonder what benefits your NCEMSF membership provides? In addition to making a continued commitment to the advancement of existing collegiate emergency medical services and the development of new response groups, your membership provides financial support to promote Collegiate EMS Week, help support our annual conference, produce publications including *NCEMSF News*, honor outstanding collegiate EMS organizations and personnel through our awards program, and advocate for collegiate EMS throughout the country.

Your membership in NCEMSF also entitles you to a host of member discounts. These offers and discounts are detailed on our Web site and are available only to members of NCEMSF. Skyscape is the leading provider of medical references for PDAs

(handhelds), carrying hundreds of different titles across multiple specialties that are all cross-linked with each other. Skyscape, in collaboration with NCEMSF, offers you a 20% discount on the purchase of these references. Savelives.com / Common Cents EMS Supply, offers a 10% discount to NCEMSF members on many of its great products. Emergency Training Associates / The NCEMSF Store, offers up to a 26% discount for EMS texts and NCEMSF apparel. Purchases through the NCEMSF store also support the Foundation. *JEMS* offers discount subscription to members. *Emergency Medical Services Magazine* is available to personal NCEMSF members free of charge. Newly introduced for us in 2009 is AllMed's VAP program that allows institutional members to save on hundreds of commonly-used EMS supplies.

Your NCEMSF membership adds to the collective strength of hundreds of members throughout the nation - those participating in and advocating for collegiate EMS. If you weren't already a personal member of NCEMSF before this conference, your conference fees included membership for the rest of this academic year. Renewing your NCEMSF membership in June for the 2009-2010 academic year shows your continuing commitment to collegiate EMS. Don't let your enthusiasm for collegiate EMS diminish just because your college graduation is imminent. NCEMSF offers life memberships which keep you in touch with the world of collegiate EMS. More information about our membership categories and rates can be found online at [www.ncemsf.org/membership](http://www.ncemsf.org/membership).



## Regional Roundup

News from Around the NCEMSF Regions

### **From the National Coordinator**

Welcome to the 16<sup>th</sup> annual NCEMSF Conference! I hope you find the conference educational and enjoyable and that you are able to take advantage of the networking opportunities. The Regional Coordinator (RC) network exists to facilitate communication between NCEMSF and its greater than 250 constituents. It is through the Regional Coordinators that NCEMSF is best able to accomplish its mission of advocating and supporting campus based EMS. The Regional Coordinators are equipped to assist each squad with the day-to-day issues it faces and to help publicize squad achievements. There are few issues that the NCEMSF leadership has not seen before and for which it is not equipped to offer advice and guidance. If you are a CBEMS leader and have not met your Regional Coordinator, please find me (Michael Hilton, NCEMSF National Coordinator) during the conference, and I will gladly connect you with your regional coordinator.

Two Regional Coordinator positions are currently available: North Central, and Northern New England. Please see me during the conference to apply, or visit: [www.ncemsf.org/about/leadership.ems](http://www.ncemsf.org/about/leadership.ems).

### **Canada**

*University of Windsor Emergency Response Team (UWERT)* has revamped the team's website, providing information in a much clearer format - check it out at [www.uwert.org](http://www.uwert.org). Windsor has also totally overhauled its training program for both new recruits and existing members. All members, not just supervisors, will also now be certified at the Emergency First Responder (EFR) level.

*Ryerson University Student Emergency Response Team (RyeSERT)*, together with the Toronto Police Service Emergency Task Force and Toronto EMS Tactical Paramedics, participated in a training exercise practicing for an active shooter/hostage situation on the campus. RyeSERT has also assisted University of Toronto - St. George Campus and St. Francis University to setup new CBEMS programs on their campuses. RyeSERT also continues the push for 24/7 service.

*University of Ontario Institute of Technology Campus Emergency Response Team (UOIT CERT)* hosted NCCER 2009 – National Conference of Campus Emergency Responders. This conference is similar in design and format to the NCEMSF conference and is held on a Canadian campus annually and took place last weekend.

*University of Guelph First Response Team (FRT)* participated in an active shooter training program with its local police services tactical teams.

### **Massachusetts**

*Northeastern EMS Interest Group* has been officially recognized by its university as a student group, a first step to becoming a full student EMS program. After a successful recruitment drive at the end of last semester, the group is looking to promote itself through campaigning and CPR classes, and hopes to eventually work alongside campus police as a quick response service.

*Tufts EMS* has recently been classified as a Class V ambulance.

*Hampshire College EMS* reports that while its numbers are down, it is making up for it in dedication, with all of their EMTs active and involved. The organization has been working on community outreach programs as well.

### **Midwest**

Efforts are underway to start a campus EMS squad at *University of Toledo*. The administration has been very supportive of the idea, with the issues of attaining medical direction and funding being discussed currently. The plan is to have UT-EMS operating by the Fall. The co-founders intend on attending this year's NCEMSF conference.

*Case Western Reserve University EMS (CaseEMS)* is taking big steps this year despite its recent formation in Fall 2004. This year CaseEMS has instituted a Ride-Along Observer Program with area fire departments, created a quality improvement committee, and continued to provide more funds and resources for accredited and in-house training. Since last year, CaseEMS has taught its first AED familiarization course to campus faculty and has plans to incorporate full

cert and re-cert CPR courses to university students and affiliated departments. The organization plans to find additional sources of funding, increase member size and training to expand services to 24 hours a day.

*John Carroll University EMS (JCUEMS)* continues to flourish with each passing year since they were founded in 2002. Despite budget cuts, they recently trained over 20 new first responders and are now in the process of training 15 EMT-Basics, for a total of nearly 50 members in the department. JCUEMS has also been reducing its paper use by developing computer-based documentation, is working on a campaign to get more AEDs on campus, and will be holding some CPR training sessions for members of the University community this semester. Recruitment efforts seem to be working better than planned as even potential students of JCU are asking to talk to members about the department before making their college decision.

### **New York**

*Geneseo First Response* put its newest vehicle into service in January. It is a 2008 Jeep Grand Cherokee Laredo. It has been "decked out" with some new equipment, including a remote control-type device used to control the lights and sirens by simply pushing a button or two. This year marks the squad's 35th anniversary of service to its campus.

### **Pennsylvania**

*Muhlenberg College EMS* held a very successful "New Member Training Weekend." It also held four successful fundraisers: The annual "Kiss the Mule," First Aid Kit Sale, Bake Sale, and Halloween "Boo" Grams. MCEMS purchased a new Stryker Pro-Model 6252 Stair Chair using the Dean of Student's "Betterment of the College Fund." MCEMS has also created a monthly newsletter that is sent via campus mail to all members. The newsletter includes upcoming social and training events, birthday wishes, a monthly letter from the Captain, and more. MCEMS held blood borne pathogens, EVOG, Epi-Pen Certification classes on campus. It also held a special training course provided by the Muhlenberg College Counseling Center

(Continued on page 5 - RR)

(Continued from page 4 - RR)

on dealing with emotional/behavioral emergency patients. MCEMS stood-by at the following events: Third Eye Blind Concert, Jefferson Field Day, Through the Red Doors, Relay for Life, home football games, and the Dean's List Ceremony. MCEMS also held numerous social events including Movie/Chinese Food Nights, Annual Thanksgiving Dinner, Dinner with the Health Center Nurses, and a "Farewell to E-Board" at Applebees. It also had a chance to meet up with another Lehigh Valley Collegiate EMS agency, DeSales EMS, at its annual Mock DUI Drill.

DeSales EMS is in the process of planning a spring party to celebrate its successful first year of service. DeSales EMS has received a grant from the Pennsylvania Department of Health for the purchase of a large-scale triage kit worth more than \$300. DeSales has also received funds through the NCEMSF New Group Initiative to send some of its members to the NCEMSF conference.

Ursinus College SERV became a subset of Campus Safety at Ursinus College receiving an annual budget from the school. This marks the establishment of a close relationship between SERV and the faculty/administration of Ursinus. SERV hosted a First Responder course this past semester giving 18 of its members certifications and educating local community fire fighters. Trappe Ambulance Company, the ambulance company of choice for Ursinus College, donated a stair chair to the SERV organization. SERV also established a close relationship with the Sports Medicine Department of Ursinus College and began to serve and receive compensation as a Training Department Support Organization covering sporting events such as Men's and Women's Rugby Competitions. SERV has also conducted blood pressure screenings at the Ursinus College Wellness Fair. Members of the Executive Board of SERV are working towards their CPR-Instructor certification and have completed their Emergency Vehicle Operations Certification. SERV has created a Community Advisory Board (following the NCEMSF article "What Does Your Future Hold") that will serve to nominate the SERV Chief and set five, ten, fifteen years goals for the organization. SERV updated its EMStat PCR program and is in the process of publishing a monthly statistical

## Regional Coordinator Network

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West	Dan Stepan	west-rc@ncemsf.org

bulletin. SERV was recently praised by select administrative and faculty for its professionalism, administrative efficiency and dedication to its service of the Ursinus College community

Bucknell University SERV has been recognized by the Pennsylvania Department of Health as a Quick Response Service (QRS).

Temple University EMS has received funds through the NCEMSF New Group Initiative to send some of its members to the NCEMSF conference.

Juniata College EMS has been in a rebuilding mode as far as membership goes. Its administration took on the task of returning emergency medical training to the college's campus. After having a difficult time getting enough members together for a first responder course through its regional EMS council, JC EMS was able to bring the American Red Cross Emergency Response course to the Juniata campus. Completing this course allows members to challenge the Pennsylvania First Responder exam. A few faculty are taking the course as well.

Kings College ERT has received funds through the NCEMSF New Group Initiative to send some of its members to the NCEMSF conference.

### Southeast

Bellarmine University in Louisville,

Kentucky is awaiting approval to begin EMS service, and has been making operational arrangements to allow its EMTs to have internships with the local 911 response service. With the recent weather nightmare and the cancelation of classes for a week, the need for EMS on campus has been clear.

Robert Blakey from UNC – Charlotte has been pushing for support of the UNCC - Emergency Response Team since 2005. While the group is still small, it hopes to begin advertising on campus and start providing service next year. Working under the police department and student health, the students hope to be EMT-B certified and respond via a QRV.

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**Do you have news about your squad you'd like to share? Contact your regional coordinator and look for it in the next issue of NCEMSF News.**

**If your squad is celebrating a milestone anniversary this year, please inform a member of the NCEMSF Board so that you may be appropriately acknowledged during our annual awards ceremony Saturday evening.**



## The Four Year Challenge

Andrew S. Mener, NCEMSF Startup Coordinator

One of the great challenges of collegiate EMS is also one of its greatest assets. When students propose to start a new collegiate EMS organization University administrators identify the rapid turnover of volunteers and leaders as a challenge. They express concern that students will not achieve proficient medical and leadership skills in such a short time and that the organization might fail after the current leadership graduates.

Their concerns are not without merit; after all, every four years there is a complete staff turnover. However, the hundreds of successful organizations around the country have proven that this challenge is surmountable. In fact, collegiate EMS organizations are amongst the most innovative EMS organizations in the United States precisely because of this challenge. As each class of seniors graduates, a group of highly motivated and energetic freshman arrive on campus with new ideas. While many receive their initial EMT training on campus, some students arrive with extensive experience from volunteer organizations all throughout the country. The ever-present "it's always been done like that so why change it" mentality that pervades some conventional volunteer organizations is non-existent on the college campus. The new recruits share new training methods and are challenged to implement their

ideas. Furthermore, the four year time limit puts sufficient pressure to assure that the energy and motivation that pervades the freshmen class is sustained throughout the college experience.

A collegiate EMS organization's institutional connection to other university departments also provides opportunities unavailable to many conventional EMS organizations. Many collegiate EMS organizations are able to develop a unique and close relationship with academic departments that facilitate both the medical and the leadership development aspects of collegiate EMS that are essential for sustainability. For example, when I started the University of Pennsylvania's Medical Emergency Response Team (MERT), our team worked with Dr. John Pryor from the University's Trauma Surgery Department to enhance our EMTs medical education. We also worked with the university's Fox Leadership Program to help foster leadership skills amongst our volunteers. Today many Penn MERT volunteers work in Penn's Emergency Department to supplement their medical knowledge. Some students have even partnered with Emergency Department faculty to conduct pre-hospital clinical research projects that will undoubtedly contribute to EMS knowledge far beyond their campus communities.

For those of you attending the 16<sup>th</sup> Annual NCEMSF Conference this year I encourage you to talk with other organizations in attendance about the innovative ways that their volunteers supplement their medical knowledge and enhance their leadership skills within the four short years. You will find that some schools have implemented "training boot camps" where mock scenarios are played out until everyone has perfected their medical skills. Other schools have implemented "Sergeants Programs" where regular volunteers spend several weeks or months working alongside current squad leaders to enhance their leadership skills.

If you are a startup group concerned that your organization's leadership is graduating, contact me so we can work together to craft a succession plan. And if you are an established organization concerned about a potential leadership gap, contact your regional coordinator so he/she can work with you to do the same. The four year time limit is a tremendous challenge, but if you embrace it your organization will undoubtedly experience growth and success.



*(Continued from page 2 - TRANSFUSION)*  
theorized to occur because hemoglobin is a vasopressor (causes constriction of blood vessels)<sup>3</sup> possibly because it binds ("scavenges") free nitric oxide, a major endogenous vasodilator.<sup>4,5</sup> Hemoglobin is also an oxidant and can lead to free radicals that can damage organs.<sup>6</sup> However, a recent phase III clinical trial has shown similar outcomes and rates of adverse effects when comparing field use of polymerized hemoglobin to standard of care therapy (field crystalloid followed by hospital transfusion).<sup>7</sup>

The second group of blood substitutes is the perfluorocarbon based oxygen carriers (PFOCs). These are organic liquids that can dissolve large amounts of gases, such as oxygen (they have "high gas solubility"). By administering PFOCs, one can dissolve a relatively large amount of oxygen in the liquid portion of blood. PFOCs are biologically inert so should have few biological adverse

effects. However, they are not soluble in water. To use them in the body, they must be suspended in an emulsion. One side effect of PFOCs is a flu-like reaction.<sup>8</sup>

Blood substitutes have enormous potential to benefit the care of trauma patients in the field and are engineered to overcome the adverse effects and logistical issues associated with blood products. Whether the benefits outweigh the known and unknown adverse effects of currently developed substitutes remains to be seen and will determine how long until prehospital and medical providers will see blood substitutes in routine practice.

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Note: This represents yet another area of active EMS research with which interested CBEMS providers should look to get involved on their respective

campuses and at their university medical centers.



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## Why EMTs Are So Rich

Yoni Litwok, NCEMSF Northeast Regional Coordinator

"Bear Stearns is on the tape!"

Within hours of the head trader screaming the news, one of Wall Street's renowned investment banks would disappear. On a cold March morning, Bear Stearns had crumbled. Investors had lost confidence in the bank and pulled out all of their money. My employer for my first year after college was gone. For many people who worked for the company, life savings would be wiped out, and they would soon realize that they devoted their lives to something that no longer existed. Most of my coworkers were in a state of shock, and angered to be losing their job. Deep down inside, a part of me felt very relieved.

I was given a second chance, an opportunity to change careers to my passion—the field of medicine. In returning to the path that I believe I was ultimately meant to take, I could pursue a career that would have a positive impact and enrich the lives of others.

Medicine had intrigued me since a very young age. I grew up across the street from my town's first aid squad. For as long as I can remember, when I would hear the sirens in the middle of the night, I would stand up and press my face against the window to watch the flashing lights pass by. I was so curious. *Where was the ambulance going? Who was in danger? How are these people going to save that person?*

This curiosity led me to join the rescue squad at the age of 16. It took only one response for me to fall in love with emergency medicine. For those with similar experiences, they understand the culture of being an EMT at such a young age. Nothing comes between you and responding to calls. Weekends are spent hanging around the rescue building, driving around town listening to the police scanner, and waiting for the pager to go off. You are rewarded each night knowing you are there for those in need, regardless if you have a call or not. Time spent with family and friends is cut short to help strangers. Sleep is lost to rush people to the hospital in the middle of the night. Your life becomes devoted to providing care to others.

In college, I was unsure of what career path I should follow. I loved medicine but

struggled in the sciences. I took a professor's advice and majored in economics, a subject in which I excelled. Throughout school, I was able to fulfill my passion for emergency medicine as an EMT. In looking towards a future career, I took an internship at Bear Stearns after my junior year of college. At the end of that summer, I enthusiastically accepted a full time offer with the company.

It is incredible how much things change when you know you will be making a lot of money. Certain things in life become a little more convenient. You do not have to think twice about your expenses. I was 23 years old, and before I started to work, I received a large signing bonus. My starting salary was strong, and with my holiday bonus, I was making six figures.

To most people, life could not be better under these circumstances. Many people work endlessly to earn half as much. Initially, I thought that such a salary would compensate me for not pursuing my passion; however, I quickly learned that I was wrong.

Something was missing.

I remember waking up on Monday mornings, knowing I had an 80 hour work week ahead of me. I would walk down Madison Avenue at 6 AM and stop to watch a passing ambulance. I tried convincing myself it didn't matter because I was making a lot of money.

The collapse of Bear Stearns put everything back into perspective for me. There was no longer any doubt in my mind that the importance of a career in medicine far outweighs the financial wealth those on Wall Street are so infamous for having. Healthcare providers have the skills to help people in distress, they have the knowledge to care for patients, and most of all they have the intangibles. They take home the feeling of fulfillment and satisfaction, knowing that their job has a direct impact on people's lives.

Furthermore, there are a number of skills that being a pre-hospital emergency medicine provider teaches you better than any other type of job. These are skills that will prepare you for any career.

First of all, you do not panic in stressful

situations. You understand that panic does not change anything, and so you might as well remain calm, remember your training, and work as hard as you can to reach a solution.

Teamwork is the second key skill you develop. As an EMT, I worked with multiple partners as well as paramedics, police officers and firefighters. Almost all emergencies require multiple people working together.

At the same time you also need to communicate with your patient. Healthcare providers have to deal with infants, pediatrics, geriatrics and the general public. They deal with drunks and drug addicts. They have to deal with language barriers, psychiatric patients and unconscious patients. To this entire variety of people, they need to provide the best care possible. Medical professionals have to treat an unconscious patient who overdosed with the same compassion and care as a young child who fell off of his or her bicycle.

Lastly, you learn management skills. You always make due with what you are dealt. Emergency medicine is about applying your available resources in uncertain environments. Whether it is a patient trapped in a vehicle after a car accident, or an obese patient on the fourth floor of a building with no elevator, you sometimes have to improvise to provide the best solutions for your patients. You not only have to manage your patients, but also yourself. You learn time management skills. You have experienced being awake all night and functioning on little sleep. You have experienced having to be at your best when your body is physically exhausted. By having to work at such extremes, a path in any other career will be a piece of cake.

On Wall Street, I witnessed people panic when unexpected news arose, or a trade did not go as well as planned. As an EMT, I witnessed people remain calm during car accidents, cardiac arrests, and other emergencies. One would think it should be the other way around. When I worked at Bear Stearns, I noticed people miss family dinners and outings since they were so committed to their work. As an EMT, I observed people miss family

(Continued on page 8 - RICH)

## Alumni

Daren T. Spinelle, NCEMSF Alumni Coordinator

As collegiate EMS providers graduate and grow in their respective professions a significant challenge emerges. Despite the strong relations developed when one joins an organization as unique as collegiate EMS, geographic distances and time constraints prove a notable challenge that many alumni and their former groups face. However, maintaining contact is paramount. Accessing your alumni's support and wisdom, and sustaining the friendships created is an invaluable resource to your organization and the entire collegiate EMS community.

As the new Alumni Coordinator, I have taken this challenge head on and will be working to assist collegiate EMS groups in the creation and development of Alumni Interest Groups (AIG's) that will help them stay connected with their alumni and foster a stronger and more diverse networking opportunity. Thus far, I have been in contact with fifteen schools with well established alumni organizations and am identifying successful ideas and defining the best practices utilized in establishing and maintaining their connections with their alumni. If your organization has a successful alumni outreach program and I have not already spoken with you about it, please find me at the conference or email me at [alumni@ncemsf.org](mailto:alumni@ncemsf.org).

Our alumni represent a tremendous resource. With a four year turnover in most collegiate EMS organizations, alumni offer historical perspective that may aid an organization in advancing rather than forcing it to head down blind paths previously tried or to reinvent the wheel. Furthermore, alumni are excellent advisors, mentors, and career counselors for current members. As your alumni become successful in their own post collegiate lives, an appreciated and connected alumni base represents a revenue source for special projects as well as an advocate for your group to the university as whole.

Alumni involvement in NCEMSF gives the Foundation greater lobbying power. With greater numbers comes greater strength and credibility as an advocacy organization. Additionally, many of the speakers at NCEMSF conferences are themselves collegiate EMS alumni. Read through the biographies of the speakers in the conference program and see how many once participated in EMS while in college! Many of the speakers reflect on that experience in their talks and comment on how that experience helped them become the community leaders and experts in their chosen field that they are today. Even if they do not talk about their collegiate experience in their seminars, most speakers cite nostalgia for their own collegiate and EMS experiences for their

reason for volunteering to lecture to the current generation of collegiate EMS providers.

To that end, NCEMSF warmly invites all alumni present at the 2009 conference to attend our alumni social Saturday evening immediately following the annual awards ceremony. This is a great opportunity to discuss the added benefits of AIG's, share stories, network with each other and our accomplished speakers, and, of course, get in touch with old friends.

I look forward to seeing you around the conference and welcoming you to the alumni social. If you have any ideas for how to better involve our alumni and keep them connected or if you desire help in forming an alumni interest group for your past members, please contact me to discuss. Lastly, for those graduating this year and about to become our newest alumni, remember to stay connected with your squad and NCEMSF. The conference is not just for current providers, we hope to see you next year as well!



*(Continued from page 7 - RICH)*

dinners and outings to help others in distress. I never understood why people on Wall Street would give up so much valuable time for business. It was never life or death like a medical emergency. On Wall Street, people asked me how I handled all the stress of my job with such calm and ease. I always told my superiors that my EMS experiences

taught me how to remain calm in any situation.

My Wall Street experience taught me that you should always pursue your passion. At times this may seem inconvenient and even impractical. But if you give up, you will regret it your entire life. A Bear Stearns executive once told me, "If you love your job, you won't work a day in

your life." I recently enrolled as a post-baccalaureate student and plan on attending medical school in the next few years. The road ahead of me is long and challenging; however, I know that once I get there, I'm going to have a fantastic career. I'll finally be looking forward to my Monday mornings.



*(Continued from page 1 - PRESIDENT)*

I am constantly amazed at the progress we have made as individuals and as an organization. We continue to accomplish the "unaccomplishable." While the times ahead may be rough, I am certain that with appropriate planning we will continue to prosper. This is not the first time that we face the challenge of proving the merits of campus EMS, nor will it be the last.

I look forward to meeting each of you. Many thanks to Georgetown Emergency Response Medical Service, The George Washington's Emergency Medical Response Group, the Regional Coordinators, the support of our NCEMSF friends, and the Board of Directors for their never-ending dedication and assistance. The network of friends and colleagues that you build today will allow you to strengthen your

organization in the future. If there is anything that I can assist you with, please do not hesitate to ask during the conference or email me at [president@ncemsf.org](mailto:president@ncemsf.org).

Best Wishes,

  
George J. Koenig, Jr. DO

***NCEMSF still wants to hear how you and your campus celebrated EMS Week 2008...***

***Email your stories and photographs to: [emsweek@ncemsf.org](mailto:emsweek@ncemsf.org) and you may be eligible for NCEMSF Honors!***

#### ***About This Publication***

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## **Civic Duty**

Joshua A. Marks, MD, NCEMSF Secretary

Last month the world bore witness to the unique transition of American executive power. People watched with awe and wonderment at the simplicity and peacefulness of the democratic transition. At noon, one party handed over power to the other with Senators and Congressmen from both parties as well as all living past Presidents seated on the same dais. The next American president was sworn into the highest political office in the union. President Barack H. Obama proceeded to charge the nation, indeed the world, with the challenges ahead while providing hope for the future. Regardless of personal political ideology, almost all shared a sense of pride as American citizens as well as deep admiration for the Office of the President, the democratic system, and the country as a whole.

Two days later, I reported for jury duty, my first such opportunity as well as my first true encounter with our judicial system. Perhaps I was merely intoxicated with patriotism; however, I was struck by the immense power of the experience. I contemplated the fact that it is called jury "duty," and wondered whether monetary compensation, which is customary, nominal as it is, for fulfilling this inherent civic duty is even appropriate. It is our responsibility as well as our privilege to be active participants in our democracy. In fact, it is our society's success in actively engaging its citizens that has strengthened America. In President George W. Bush's farewell address to the nation, the former President spoke about the immense honor of re-taking his most favorite title, "Citizen of the United States of America!"

As the judge charged the panel of potential jurors and appealed to each of our inherent sense of justice and responsibility, it sounded quite similar to President Obama's charge in his inaugural address. The judge acknowledged the inconvenience of being called to serve, but dismissed it as just that, an inconvenience, and replaced the notion of an inconvenience with that of being called to fulfill a taller order; to sit as one member of society in judgment of another. The defendant's fate ultimately rests in the hands of his fellow citizens, those who share his same duty to serve. In fact, members of the panel during selection admitted to having been in similar circumstances as the defendant and having to rely on the same system for adjudication. The power of the responsibility, of the duty to society as whole and to each other, is remarkable and truly overwhelming.

As collegiate EMS providers, we have all taken

upon ourselves a similarly immense societal duty. We have trained to be ready to answer the call of our peers when they are in their time of need. We have signed an unwritten contract with our respective collegiate communities to be there and deliver the highest level of compassionate medical care. Most of us have assumed this responsibility voluntarily, selflessly, and largely out of a sense of greater civic duty. There is an implicit trust that exists between our patients and us as providers. They do not select us as they might other professionals. They make a call for help and receive whoever is on duty at that moment. They expect that we will be well trained, that we will respond quickly, that we will act professionally, that we will treat them with respect, and that we will protect their privacy. It is a tremendous task to which we have agreed, yet we have all willingly and ably assumed it.

As the weekend progresses and you attend countless lectures to increase your knowledge base and skill set, I encourage you to reflect on your personal as well as organizational collegiate EMS involvement and realize that Collegiate EMS is just a first step towards becoming civically involved in our society. Talk to the nearly one thousand of your peers who have entered into the same social contract and ponder why and how. While Collegiate EMS is an opportunity to develop medical skills, it also cultivates a feeling of responsibility to others in society (a central theme of the President's inaugural address). As stated in the NCEMSF Mission, Collegiate EMS provides a vehicle for training college students to become the future leaders of society and embody the ideals of volunteerism and civic responsibility. The greater hope is that those that participate will take the lessons of collegiate EMS - of community involvement and responsibility to fellow citizens - beyond the college community and after graduation by continued involvement in EMS or perhaps by volunteering in another capacity. While discussing and sharing your thoughts with your peers, also be certain to take advantage of being in our nation's capital and appreciate the majesty and great history that documents the unique power and civic duty of American citizenry.



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*Have a Facebook account?*

*Join the National Collegiate EMS Foundation Facebook group and continue networking with your fellow collegiate EMS providers after leaving Washington!*

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*Please visit the Membership section of the NCEMSF Web site to update your contact information. In the spring, NCEMSF will be mailing Volume 13, Issue 4 of NCEMSF news that will include a ballot for Executive Officer elections to every member. Newsletters will be addressed based on contact information in the NCEMSF membership database.*

*Note: personal NCEMSF membership follows the academic calendar and will expire on May 31, 2009.*

**Indicate your support of NCEMSF on your organization's home page!**



We have updated the graphic, which may be downloaded from: <http://www.ncemsf.org/logos/>

**Interested in starting a new collegiate EMS organization on your campus?**

Contact the NCEMSF Startup Coordinator at [startup@ncemsf.org](mailto:startup@ncemsf.org) to receive our new **"Guide to Starting a Collegiate EMS Organization"** as well as receive personalized advice throughout the process.

**The 17th Annual Conference will be February 26-28, 2010.**  
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