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# President's Message

## Who Do We Serve?

**Louise A. Prince**
**MD FACEP**
Associate Professor, Emergency Medicine,
SUNY Upstate Medical University

As I begin my presidency of New York ACEP, I believe this question helps to bring a focus to my leadership role in New York ACEP over the next two years. This very question arose, interestingly, during a wonderful exchange of differing opinions at a recent board of directors meeting. Answering the question allows us as individuals, leaders and organizations to focus our lives, messages and decision making.

In pondering the answer, the phrase "servant leadership" came to mind. This is both an ancient philosophy as well as modern. Rather than accumulating power and wealth, servant leaders share power, put the needs of others first, and help their followers to develop themselves in ways that allow them to perform and contribute as highly as possible to the organization and society. The characteristics of a servant leader include listening, empathy, healing, awareness, persuasion, conceptualization, foresight, stewardship, commitment to the growth of people and building community. These characteristics are the very same characteristics that we as emergency physicians espouse and practice every day. Thus we bring our servant leadership style to our leadership positions including those within New York ACEP. Perhaps a search for individuals who exemplify these characteristics led to the election of an emergency physician, Steven Stack, MD, as the president elect for the American Medical Association (AMA). This is an honor for our specialty and recognizes the contributions that emergency medicine brings to patient care. The true "vocation" of medicine will shine more brightly through servant leaders and espouse followers who are called to the vocation of medicine.

We first and foremost serve our patients. Placing our patients first in our service allows us to make well grounded leadership decisions concerning the delivery of emergency medical care and services, education of our membership, and provides focus for our political lobbying efforts for our patients' access to health care. We should, as a specialty, be proud that we care for any individual who seeks our care 24 hours a day, seven days a week. Continuing to provide our patients with access to excellent emergency medical care is paramount.

In addition, we as a specialty society, serve each other as colleagues in order to ensure that the practice and delivery of emergency medicine is enriched by our efforts to educate, communicate with, advocate for, and support our membership. Emphasizing service rather than power, prestige, or wealth will focus our leadership decision making. It will also make us credible advocates for our patients and our specialty. I am personally proud to say that I believe that the leadership of New York ACEP has done this well over the years and I promise to continue this focus and leadership style during my tenure as president.

We just concluded another amazing Scientific Assembly at The Sagamore. We owe a great debt of thanks to the Education Committee and the staff of New York ACEP who work tirelessly to bring about this meeting yearly. All of our speakers have served the mission of education of emergency physicians and thus improving patient care both here in New York State as well as nationally. I want to thank Drs. Hoffman, Mattu and Mayglothling for their excellent lectures. Dr. Mattu's lecture on leadership examples and principles could not have been timelier.

We also awarded two individuals the *2014 Advancing Emergency Care Award*. Both of these individuals exemplify the qualities of servant leadership. **Dr. Joseph LaMantia** has spent his life and career dedicated to education especially of residents and young physicians. **Dr. Michael Guttenberg** has provided outstanding leadership especially in EMS serving many EMS communities ensuring quality care to our patients. Congratulations to both of you and I thank you for your service to our specialty and our patients.

I want to also thank Dr. Daniel Murphy who has served New York ACEP passionately as president over the last two years but also for many years prior in multiple leadership positions. His legislative knowledge and advocacy was pivotal in our achievements over the last year and most notably in the successful bid for the emergency medicine qualified exemption from the independent dispute resolution process for out-of-network health care services.

I am looking forward to serving as president the next two years. Certainly, we will have many new issues to tackle together. We would expect nothing less living in our great state of New York. Thank you for your daily service to our patients and our specialty. Enjoy the summer and keep well. ⌘

# *A change for the better.*

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*Michael G. Guttenberg, DO FACEP receives award from David C. Lee, MD FACEP*


*Joseph LaMantia, MD FACEP accepts award from Kaushal H. Shah, MD FACEP*


*Faculty members Amal Mattu, MD FAAEM FACEP and Robert S. Hoffman, MD FAACT FACMT FRCP Edin FEAPCCT*


*Faculty Julie A. Mayglothling, MD FCCM FACEP addresses the group.*

# Scientific Assembly Highlights

## Record Attendance

The 2014 Scientific Assembly at the Sagamore Resort featured expert faculty members, Robert S. Hoffman, MD FAACT FACMT FRCP Edin FEAPCCT, Amal Mattu, MD FAAEM FACEP and Julie A. Mayglothling, MD FCCM FACEP who wowed 245 emergency physicians from around the state. Forty-six companies participated through exhibits and support.

## Awards

Each year New York ACEP honors individuals for significant contributions to the advancement of emergency care. New York ACEP members, **Michael G. Guttenberg, DO FACEP,** Director at Forest Hills Hospital and **Joseph LaMantia, MD FACEP,** Program Director, Residency in Emergency Medicine at North Shore University Hospital were presented with the 2014 *Advancing Emergency Care Award*. For more information on these awards, visit http://nyacep.org/about-new-york-acep/awards.

## Research Forum Winners

Monday's program began with the Research Forum featuring oral and poster presentations. Congratulations to the following research presenters that took the annual award in their category (abstracts on page 17):

*Oral Presentation*

- **DIME Study: Comparison of Diltiazem And Metoprolol In The Management of Atrial Fibrillation Or Flutter With Rapid Ventricular Rate in the Emergency Department: A Prospective, Randomized, Double-Blind Trial**,
  Victor Cohen, PharmD - Maimonides Medical Center

*Poster Presentations*

- **The $StO_2$ Non-Invasive Tissue Hypoperfusion Monitor as a Screening Tool for Early Sepsis Detection in the Emergency Department**,
  Jason D'Amore, MD - North Shore University Hospital
- **Does An Expedited EMS Long Spine Board Removal Protocol Decrease The Time Patients Remain Immobilized in the Emergency Department – A Collaborative ED/EMS/ Medical Manufacturers Lean Six Sigma Performance Improvement Initiative**,
  Michael R. Jorolemon, DO EMT-P FACEP, Crouse Hospital
- **Incidence And Predictors of Intracerebral Hemorrhage After Thrombolytic Therapy for Acute Ischemic Stroke,**
  Boris Khodorkovsky, MD - Staten Island University Hospital
- **Assessing Disparities Among Emergency Medicine Residents and Emergency Medicine Attending Physicians in Interpreting and Performing The FAST Exam**,
  Lindsey Behan, MD - New York Methodist Hospital

*continued on page 16*

# Sound Rounds
## Practical Applications for the Emergency Physician


**Penelope C. Lema**
**MD RDMS FACEP**
Director, Emergency Ultrasound Fellowship,
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## Ultrasound Evaluation for Achilles Tendon


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### Indications

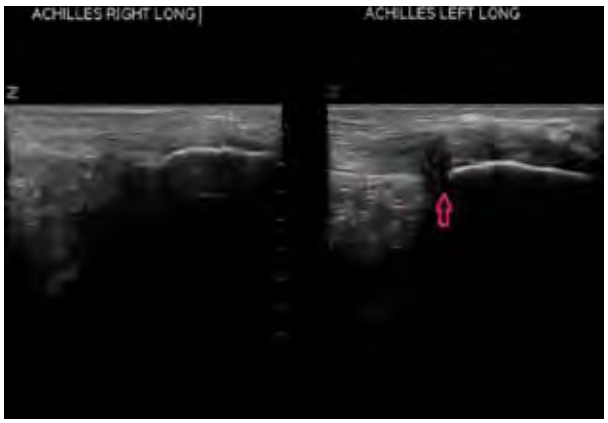
- Ankle or heel pain, swelling.
- Notable disruption of Achilles tendon on exam.
- Inability to plantar flex the foot.
- Pain with plantar flexion.

### Technique

- Position the patient either lying prone, sitting at the edge of the stretcher or kneeling on a chair.
- Scan the asymptomatic side first in two planes to obtain a baseline image.
- Place a high frequency linear transducer gently over the Achilles tendon at the point of maximal tenderness.
- Evaluate in both longitudinal and transverse planes.
- Scan the tendon from its origin in the gastrocnemius muscle proximally to the insertion at the calcaneus distally.

**Figure 1**. *A linear ultrasound transducer placed longitudinally (marker towards the patient's knee) along the Achilles tendon while the patient is kneeling on a chair.*

- Partial tears may not appear as a distinct disruption as Figure 2b. Always compare with the contralateral side and look for secondary signs.

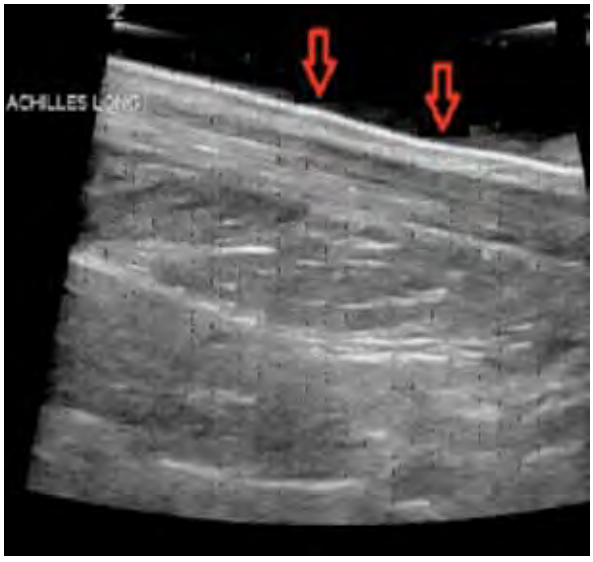



**Figures 2a and 2b:** *Longitudinal images of the Achilles tendon. The transducer is parallel along the length of the tendon.* (left): *Normal right Achilles tendon of the asymptomatic leg.* (right): *Partial rupture of the left Achilles tendon (red arrow).*


**Figure 3.** *Transverse view of the tendon. Partial disruption of the tendon (red arrow) with anechoic fluid superficial to the tear.*

- A water bath may be used to optimize visualization of soft tissue structures. Submerge the foot in water. Scan the entire length of the tendon with the linear probe in two planes. No contact with the skin is required.

**Figure 4.** *Water bath used to image the Achilles tendon in longitudinal view.*





**Figures 5a and 5b:** *Ultrasound images of normal Achilles tendons obtained using a water bath.* (left): *Longitudinal view of a normal tendon (red arrows).* (right): *Transverse view of a normal tendon.*

## Tips

- Copious ultrasound gel and gentle pressure will yield optimal images.
- A patient lying prone or kneeling on a chair may provide more access to the tendon and allows for Thompson testing.
- Ultrasound imaging simultaneously performed with the Thompson maneuver provides a dynamic view of the tendon.
- A water bath may yield more detailed images.

## Pitfalls and Limitations

- Failure to scan through the entire length of the Achilles tendon can lead to false negative results.
- Failure to visualize a distinct discontinuity of the Achilles tendon may not "rule out" partial tendon injury or rupture. Assess for secondary signs (Table 1). Always compare with the asymptomatic contralateral side.

| Table 1. Secondary signs of a tendon rupture |
|---|
| Fluid above or below the tendon |
| Swelling of the tendon in size compared to the contralateral asymptomatic side |
| Inflammation of the surrounding tissue |

*continued on page 8*

## Ultrasound Evaluation for Achilles Tendon

*continued from page 7*

- Be aware of *anisotropy*. This artifact occurs when the ultrasound probe is not completely perpendicular to the tendon. This may appear as a false positive rupture when the tendon curves away from the probe (due to beam obliquity), such as the insertion of the Achilles into the calcaneus. Scanning throughout this area in two planes will often resolve this artifact.

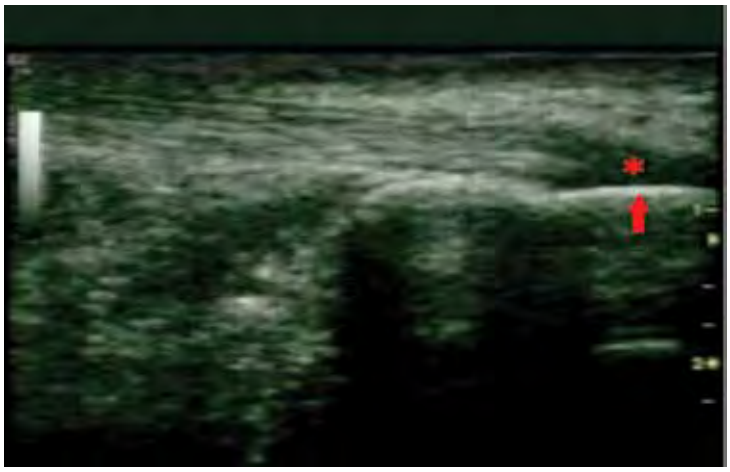


**Figure 6.** *Longitudinal view of a normal Achilles tendon. Due to anisotropy, the tendon appears hypoechoic (red asterisk) at the insertion into the calcaneus (red arrow).*

- Correlate ultrasound images with clinical presentation and a thorough physical exam. If clinically concerned, even with a negative image, consider splinting and orthopedic follow up. ⌘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# Toxicology

## Evidence-Based Toxicology


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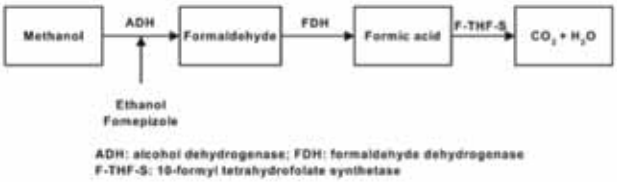
**Question: How does formic acid cause visual changes?**

Methanol is a very potent toxic alcohol that can have many acute and long-lasting clinical effects. Although methanol on its own is relatively benign, its metabolism forms significant toxins. As is depicted in the diagram below, methanol is converted to formaldehyde by alcohol dehydrogenase. Formaldehyde is then metabolized to formic acid by aldehyde dehydrogenase. Finally, formic acid is broken down into carbon dioxide and water by a variant of tetrahydrofolate synthetase.[1]




Methanol ingestion has long been known to cause visual changes in people who are untreated after their ingestion. It is believed that formic acid is the metabolite of methanol that is responsible for causing these visual changes.[2] Visual disturbances generally occur at least six hours after ingestion of methanol due to the slow metabolism of methanol to formic acid. The presentation of visual changes is delayed longer in patients who have co-ingested ethanol.[3]

The exact role of formic acid in causing visual changes has been debated. Previously, it was believed that formic acid contributed to an acidosis that was implicated in causing neurological damage that included the eye. Studies have shown that a patient's degree of acidosis at presentation to the hospital is correlated with their ultimate visual outcome – patients presenting with more severe acidosis generally have poorer vision after their exposure resolves.[4] Today it is known, however, that acidosis is only a surrogate marker. Formic acid is the metabolite responsible for visual changes in methanol ingestions.

Formic acid binds and inhibits cytochrome oxidase within retinal and optic nerve cells. This inhibition prevents the normal function of the mitochondrial electron transport chain and stops the formation of ATP. Without ATP the Na-K ATPase within the retina and optic nerve stops functioning and action potentials cannot be propagated properly. Ultimately, there is damage to the myelin sheath and edema within axons that contributes to visual changes. This type of damage is known as histotoxic hypoxia.[1]

The retina may be more susceptible to this damage than other parts of the nervous system. There is copious blood flow to the eye via choriocapillaries and this readily delivers formic acid to the retina.[1] Eells showed that in rats exposed to methanol the concentration of formic acid in the blood, vitreous humor and retina were similar and significantly higher than concentrations in other parts of the central nervous system (table below).[2] It is known that the optic nerve fibers contain relatively low concentrations of mitochondria and low amounts of excess cytochrome oxidase. This, when combined with the high delivery of formic acid to the eye, makes the eye especially vulnerable to damage by formic acid.[1]

TABLE 1

**Regional distribution of formate in the eye and the central nervous system of methanol-intoxicated rats**

Methanol (4 g/kg, i.p.) was administered to rats at zero time and supplemental injections (2 g/kg) were given 18 and 42 hr after the initial dose. Rats were exposed to a mixture of $N_2O:O_2$ (1:1) for 4 hr prior to methanol administration and exposure to the gas mixture was continued throughout the experiment. Fluid and tissue formate concentrations were determined 66 hr after the initial dose of methanol. Shown are the mean values ± S.E.M. of fluid and tissue formate concentrations measured in six rats.

| Tissue | Formate |
|---|---|
| | μmol/ml or μmol/g |
| Blood | 13.5 ± 1.3 |
| Vitreous humor | 17.7 ± 2.8 |
| Retina | 16.8 ± 1.4 |
| Optic nerve | 2.5 ± 0.5* |
| Cortex | 6.9 ± 1.6* |
| Striatum | 6.1 ± 1.8* |
| Hippocampus | 6.2 ± 1.8* |
| Hypothalamus | 6.2 ± 1.9* |
| Cerebellum | 6.8 ± 1.7* |
| Pons/medulla | 5.2 ± 1.7* |

* Indicates a significant difference from blood formate concentrations ($P < .05$).

The ingestion of methanol is not as common as in the past, but it does still occur sporadically due to ingestions of automotive products (i.e. windshield washer fluid), industrial cooking supplies (i.e. Sterno) or in illicitly-produced liquor. The sensitivity of the visual system to damage by formic acid means that treatment must be initiated as quickly as possible to minimize the formation of formic acid and its resultant visual damage.

### References


1. Barceloux DG, Bond GR, Krenzelok EP, et al.. American academy of clinical toxicology practice guidelines on the treatment of methanol poisoning. Clin Tox. 2002;40(4):415-446.

2. Eells JT. Methanol-induced visual toxicity in the rat. J Pharm Exp Ther. 1991;257(1):56-63.

3. Sanaei-Zadeh, H, Zamani N, and Shadnia S. Outcomes of visual disturbances after methanol poisoning. Clin Tox. 2011;49(2):102-107.

4. Desai T, Sudhalkar A, Vyas U, et al.. Methanol poisoning: predictors of visual outcomes. JAMA Ophthal.2013; 131(3):358-364. ⌘

# Ethics

## How Should We Accommodate Foreign-language Speaking Patients?

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In May 2013, Upstate University Hospital changed its policy on "Interpreter Services for Patients with Limited English Proficiency (LEP) or Hearing/Visual or Speech Impairments" for both its downtown and community campuses. No longer would it provide live interpreter services unless specifically requested or if a dire emergency arose. Instead, health care providers were strongly encouraged to utilize telephone translation services and video where limitedly available with a goal of 90% compliance.

The advantage of this policy is that the hospital was able to save approximately $1 million in contracts with live interpreter services over the course of the year. This perspective, however, may be shortsighted for more than just the budget of the local non-profit interpreter service. Clinical errors resulting from inadequate interpreter services can lead to greater costs due to higher patient return rates, more emergency department visits, wrongful injury or death-law suits (Lee et al. 2005). Thus, it may be more cost effective to provide live interpreter services than to rely upon inadequate telephone and video translators.

Anecdotally, the fallout from this policy has been palpable. Within a month of this policy effective date, I took care of a Somali woman who had a precipitous delivery at our non-obstetrical hospital campus. I was instructed by the nursing supervisor to use a Vocera communication device, which I wear around my neck during shifts in the Emergency Department (ED), to contact a telephone-based translator when this patient presented with active labor. The device kept picking up the woman's laboring vocal expressions rendering the communication impossible. Another emergency medicine attending physician supervised the delivery, while I examined the newborn. After confirming good health of the neonate, I handed the young woman her beautiful baby boy with a smile, but no English or Somali words were exchanged between the health care team and her and her husband because of the language barrier. It was a surreal experience, both gratifying for its successes and frustrating for its failures!

Days later, I also took care of a Burmese girl having uncontrolled seizures. Her family spoke a dialect of Karin. I contacted the Language Line, but no interpreter was available who spoke the dialect. In the past, refugee communities often provided a live interpreter for any patients presenting to the ED, particularly useful for rarely spoken languages. In this case, I was unable to determine which medications the girl had been taking for seizures or what environmental or infectious exposures she might have had. This directly resulted in ordering more diagnostic tests because of inadequate history. This served to add costs to her care that could have been prevented with a live interpreter.

Motivated to bridge the language barrier gap at our hospital, I presented these two cases to the Director of Interpreter Services at our hospital. To her credit, she said that both of these situations should have merited a live interpreter under the exception due to dire emergency. She told me that she would personally ensure the ability of attending physicians such as myself to request live interpreters for patients with dire emergencies.

Hoping to persuade her in the legally compliant direction, I invited a deaf law professor to witness her statements. He had prosecuted against several health care institutions in the 1990s for failing to provide appropriate interpreter services for patients with hearing, speech, or visual impairments under the American with Disabilities Act (ADA). His expertise on accommodations for the deaf population is worth exploring, as the standard of care for providing live interpreters for American Sign Language is also threatened by alternative translator services, specifically video-based.

While the quality of live sign interpreters has been questioned in situations such as the fraudulent practices at Nelson Mandela's funeral, in-person certified health care translators are much appreciated by the deaf population. The National Association of the Deaf (NAD) issued a policy statement on the use of video remote interpreting (VRI) in hospitals in April 2008. "It is the position of the NAD that the use of on-site interpreters should always be paramount, and when VRI is used in the absence of any available on-site interpreter, it must be used properly in terms of policy, procedure and technology. Failure to conform to these standards is not only a failure to ensure effective communication under federal law but also creates unnecessary risks to the medical welfare and health care of deaf individuals."

Anecdotally, a family friend of mine who is deaf presented to a non-SUNY major academic medical center emergency department complaining of chest pain. He was not provided an interpreter and became agitated resulting in chemical sedation and physical restraints. This should never have happened and should never happen again, but I am sure that it will if the trend away from automatically offering live interpreter services continues to profligate.

Let us get back to negotiation with hospital administration. The Director of Interpreter Services reassured me that the nurses and nursing supervisors would be reeducated about the ability of attending physicians to request live interpreters for patients with dire emergencies. I have since not had any difficulty obtaining live interpreters when needed, but a sense of

inadequate service to patients remains, in part because I have had repeated interaction with this particular hospital administrator that implies the trend away from live interpreter services toward telephone and video translators will continue. A neighboring community hospital has also recently switched to exclusive video translation services for LEP and deaf patients. There is no denying the momentum within the health care industry to spend money on technology in the spirit of cutting costs. Witness the federal government-incentivized campaign for electronic health records.

Where do underlying ethical principles found in hospital mission statements guide us? Upstate University Hospital maintains a "Patients first" mentality. One study in a pediatric emergency department showed greater satisfaction of LEP patients with professional interpreters live than with interpreting services by telephone or ad hoc interpreters (García et al., 2005).

Utilizing live interpreters also preserves valuable time of health care providers. Fagan et al. (2003) compared the duration of consultations of different strategies in an outpatient department: telephone interpreters (36.3 min. mean provider time; 93.6 min. clinic time); ad hoc interpreter organized by the patient (34.4 min mean provider time; 92.8 min. clinic time); live professional interpreter (26.8 min. mean provider time; 91.0 min. clinic time); and control English-speaking patients (28.0 min. mean provider time; 82.4 min. clinic time). Live interpreters required the least amount of time even compared to no interpreters.

Most reasonable people agree that professional interpreters are best practice. Bischoff et al. (1999) emphasized the risks of using ad hoc interpreters and the need to use professional interpreters and called for "coordination at national level, policy development and training, in order to ensure adequate communication and quality care for migrants" (p. 248). The question remains whether or not these professional interpreters should be virtual or actual. My answer is that live interpreters provide the most timely, cost-effective, and highest quality of care.

Crossman et al. (2010) provides the alternative perspective in a telephone translator industry-sponsored study. Visits by LEP families to a busy, urban pediatric emergency department were randomized to live interpreters, telephone interpreters or bilingual physicians. The in-person interpreter actually scored worse on quality and satisfaction than either the telephone or bilingual physicians. The authors pointed out though several ways that live interpreters would seem to be advantageous over telephone interpreters that they did not study. Live interpreters could help LEP patients find their way if they had to visit multiple departments within a hospital. Live interpreters could provide continuity for patients, feedback to providers after interpretation, and explanations of particular cultural relevance. The authors admitted that a major limitation of their study was that their in-person translator was Peruvian, and the majority of their LEP patient families were Mexican. If the telephone translator service were mostly Mexican, this may have contributed to confounding bias of cultural translation. And, of course, the funding by CyraCom International, which provides telephone translation, raises skepticism of the results.

Locatis et al. (2009) used NIH funding to study the differences among the three methods in one medical center's pediatric and post-partum clinics. His study found that patients preferred in-person to video and telephone translators and video over telephone. Contrary to Fagan et al., the in-person interviews took significantly more time.

If best practices are controversial, then what is to be done? Short of performing a large-scale independently funded comparison study, the popular standard of care of providing live interpreters should be supported. Perhaps, academic foreign language departments could be tapped for graduate and upper-level undergraduate students. Training programs emphasizing medical terminology and patients' health information privacy are widely available. Students and faculty alike would find the experience mutually beneficial. And patients would suffer less in the darkness of being lost in translation.

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| | |
|---|---|
| 8:00 am | Registration |
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| 8:30 am | **Part I – Imaging in Emergency Care**, Kaushal H. Shah, MD FACEP |
| 9:45 am | Break |
| 10:00 am | **Part II – Resuscitation,** Todd L. Slesinger, MD FACEP FCCM FCCP |
| 11:15 am | **Part III – Update in Clinical Emergency Medicine**, Eric Legome, MD FACEP |
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# The Emerging Role of Interfacility Transportation

**David S. Kugler**
**MD MPH FACEP**
Attending Physician,
North Shore University Hospital
at Plainview

**David Lobel**
**MD FACEP**
Director, Emergency Medical Services,
Maimonides Medical Center

It's 3:00 am and you are solo in a community ER, when a victim from a motor vehicle crash gets brought in by a well meaning citizen. You quickly assess and stabilize the patient and determine he is too ill to remain in your facility. He needs acute trauma care for multiple organ system injury. How do you get this person to a higher level of care?

The cold of the winter is here, flu season is in full swing, and your hospital is bursting at the seams with very sick patients. But your hospital, located next to a river for its scenic views is now in the path of an impending flood in 36 hours. When your hospital was built 120 years ago, the infrastructure was all put in the basement. Now you are expected to lose all critical systems, how will you safely evacuate your critically ill patients?

A 500-pound patient arrives by ambulance complaining of abdominal pain. Your cat scan table is only able to handle up to 350 pounds. How will you be able to get this person to a cat scan?

These examples are a few of the many situations that we encounter in the trenches daily as emergency physicians. But interfacility transport (ITF) is more broadly defined as the transportation of a sick or injured person from one medical facility to another. This is usually done to provide a medical service or specialty not available at the sending hospital. So, in addition to the emergency situations described above, we also see ITF units used to transport patients between skilled nursing facilities and hospitals, to bring patients to and from specialized treatment or diagnostic facilities, and even to transport from urgent care centers and stand alone emergency departments. Sometimes we see ITF services requested by patients or their families to facilitate care by their own physician or a preferred facility. Recently, we have even seen emergency medical services used to facilitate mass evacuations and repatriations of hospitals and skilled nursing facilities around natural and man-made disasters.

In the current health care environment, hospitals and health systems are consolidating and closing down unprofitable or underused services. But patients and families are still presenting to those facilities for the care that was once provided (http://www.newsday.com/news/health/glen-cove-hospital-to-become-ambulatory-care-facility-1.5792071). These patients often require urgent transfer to facilities that are prepared to care for the medical condition, or type of patient. Prehospital health care providers may also deliver patients to non-specialized facilities for many reasons. Some examples include instability of the patient, lack of experience of provider, distance to specialty center and thus leaving coverage area without an ambulance for hours.

Clearly the different situations allow for some of these transports to be performed in a scheduled planned fashion, while others require a more urgent or even emergent response. Many of us have addressed and planned for mass transport as part of our emergency preparedness activities.

While we often focus our attention on ground transportation, ITF services include ground ambulance and air transport (Helicopter EMS (HEMS) or airplane), depending on the distance and terrain between the facilities.

The broad use of ITF services has made for a booming business for proprietary transport services. For Emergency Medical Services physicians, it has thrown out the challenge for us to prepare our crews with the knowledge, equipment and guidance they need to perform all these transports safely and with optimal patient care. In addition, as emergency physicians, we are the link between our colleagues who utilize these services and the prehospital providers. We can help our colleagues to better utilize these services, as well as to understand the strengths and limitations of the system. Unlike in the emergency response system, ITF patients often have had some degree of stabilization, and frequently have specialty or advanced critical care initiated with the expectation that these interventions will be maintained throughout the transport.

The first part of initiating transport involves a dispatch system, or in the 911 system, a Public Service Access Point (PSAP). Whether in emergency or ITF services, Emergency Medical Dispatchers are trained individuals who specialize in providing the right level of service with the right level of training and equipment to the right location at the right time with the right level of priority. By speaking directly with these trained dispatchers, the physicians caring for the patient can make sure that the crew arrives with the correct preparation and equipment for the task at hand, and that the transport will be appropriately prioritized.

Most prehospital providers are trained to the level of Emergency Medical Technician or Paramedic. But, the ITF ambulances often have paramedics trained up to a higher level of care. This higher level can be the CMS "specialty care," or critical care trained medic (not the New York State AEMT-CC you may be familiar with) who has completed a university sanctioned course taught by physicians, nurses and respiratory therapists who specialize in critical care. Many tertiary care centers have specialty service retrieval crews that incorporate physicians, nurses or respiratory therapists to provide care in transport.

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## The Emerging Role of Interfacility Transportation

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While with special training, and with close medical oversight, paramedics may utilize advanced IFT protocols. The use of advanced providers allows the paramedic team to assist in care by attending to those areas specific to the transport environment. Specialized transport protocols should be designed with the specialists that will be receiving the transported patients, and reviewed regularly to maintain a practice that is up to date and evidence based.

### What is the difference between 911 calls and Interfacility call?

Emergency field providers or 911 responders generally the initial stabilization and ABC care, which may also include pain control, nausea management, splinting, and brief medical management). Above all this transport is one way – the patient is delivered from the field to a receiving hospital capable of providing advanced care, whereas, the IFT patients are usually in hospital or other health care facilities with a known diagnosis, being transferred for a higher level of care, continuity of care, or even discharge. EMTALA laws specify that IFT patients are required to be stabilized to the extent possible at the sending facility prior to transfer. When transferred between Article 28 facilities (for example a hospital), they often have a diagnosis and initial treatment of emergency condition by sending physicians. The patients being transported may be on multiple medicated drips, ventilators that have invasive cardiovascular monitoring lines, balloon pump, ICP bolts, or other modalities not utilized by field medics, but requiring advanced training to operate and maintain. It is not unusual for these transports to be round trip, such as for a patient requiring MRI or radiation therapy at an outside facility.

Similarities of the emergency 911 transport and the IFT include what types of transport modalities are used. Each service primarily uses the ambulance. But, there are special helicopters outfitted as ambulances (HEMS), airplanes and boats are also used for the emergent transport of patients in remote areas, or to bring the critically ill patient from one facility or country to another. The providers are the same folks who do the emergency 911 work, EMTs and Paramedics.

In New York State, the essence of all out of hospital care is based on the certified provider following protocols and policies set forth by their agency medical director and the state Department of Health Bureau of EMS, including the State Emergency Medical Advisory Committee (SEMAC) and the State Emergency Medical Services Council (SEMSCO). The IFT protocols built on these protocols may even go outside the currently designated scope of practice as described by the Federal EMS Scope of Practice document. The expanded practice is strictly designated by each agency medical director and must be done in concert with the medical/surgical specialty consultants.

In extenuating circumstances, any and all services may be called upon to perform IFT transports, such as in the evacuation of a healthcare facility in a disaster. This may occur in disasters such as mass evacuations for flooding like Hurricanes Sandy or Katrina. As physicians, medical directors and emergency preparedness experts, we must have active participation in the process of transport, education and quality to make these transports safe.

### Definitions

New York State Public Health Law Article 30-B Section 3062: "Interfacility transfer" means emergency ambulance transport from, to, or between general hospitals or other health care facilities, conducted in accordance with article thirty of this chapter (http://www.health.ny.gov/professionals/ems/art30.htm).

EMS Authority of California defines interfacility transport: "Transport capable type of service provider that responds to requests for ambulance transportation service from health care facilities via 7-digit numbers. Services can be provided at *(all levels of provider Basic, Advanced, Critical Care).* Interfacility transports also include transports that originate at a health care facility and end at a patient's home" (http://www.emsa.ca.gov/Media/Default/Word/DefinitionsfromEMSAGuideline141111910_dec_2010.doc).

Centers for Medicare and Medicaid Services (CMS) defines the interfacility transport ambulance as follows: **"**Specialty care transport (SCT) is the interfacility transportation of a critically injured or ill beneficiary by a ground ambulance vehicle, including the provision of medically necessary supplies and services, at a level of service beyond the scope of the EMT-Paramedic. SCT is necessary when a beneficiary's condition requires ongoing care that must be furnished by one or more health professionals in an appropriate specialty area, for example, emergency or critical care nursing, emergency medicine, respiratory care, cardiovascular care, or a paramedic with additional training" (https://www.cms.gov/Regulations-and-Guidance/Guidance/Transmittals/downloads/R130BP.pdf).

How does federal law impact interfacility transport, and why are knowing the legal definitions important? Understanding the CMS requirements for ambulance transport will help guide which patients are eligible for ambulance transport over those that may just qualify for ambulette. Additionally, the transfer of any patient from an New York State Article 28 facility (hospital or hospital affiliated Emergency Department) is governed by the Emergency Medical Treatment and Active Labor Act (EMTALA-1986).

EMTALA, under section 1867 of the Social Security Act, requires hospitals that participate in Medicare and that offer emergency services, to provide a medical screening exam (MSE) when a person presents to that facility and makes a request for treatment (this includes active labor). The hospital is then required to stabilize the patient within its capabilities. If the patient requests, or if necessary, an appropriate transfer to a different hospital should be made (p509, Ch 45 Federal EMS Programs, *Emergency Medical Services: Clinical Practice and Systems Oversight, Medical Oversight of EMS; Bass, R R, Brice J H, Delbridge, T R, Gunderson, MR 2009).* Interfacility transports between hospitals fall under this law. ⌘

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# Ask the Experts

**Nicole Berwald**
**MD FACEP**
Associate Chair, Department of Emergency Medicine,
Staten Island University Hospital

Dr. John McCabe, the current Chief Executive Officer at Upstate University Hospital and Senior Vice President for Hospital Affairs has worn many hats during his career. He served as a president of the American College of Emergency Physicians (ACEP) and American Board of Emergency Medicine (ABEM), as well as the Immediate Past Chair of the Board of Directors of the American Board of Medical Specialties (ABMS). Dr. McCabe was generous to sit with me and share his perspective on how to develop a leadership track.

When I asked Dr. McCabe if he would have predicted his career path he responded, “No.” So how do you get there? How do you get elected to the board of ABEM and ACEP, let alone the president of ACEP and the CEO of a major medical center? Here’s what he had to say.

### On mentoring

"Take advantage of your mentors. You don’t always know where you will find them. Some mentors are for a lifetime, for your career path and others will suit a situation or a project."

For Dr. McCabe his relationship with his first chair during residency resulted in a true mentor-mentee relationship. He encouraged Dr. McCabe to join EMRA, where he took early opportunities and ended up on the EMRA Board of Directors. Though it was clear that Dr. McCabe appreciates the value of this relationship he was also quick to note that you have to take opportunities that come your way, and no one can do that for you. Seizing the opportunity will allow you to meet people and develop your skill set.

### On getting involved, staying involved

"Show up. Be serious at what you do. When you sign up for something go all the way with it and get recognized for what you do. This often leads to more opportunity; and take the next opportunity."

More advice from Dr. McCabe: "Show up at the table, let people notice you, and network. Appreciate that this can take time. Go to state and national conferences and introduce yourself to the leaders. You will be surprised how happy they will be to give you some face time."

"Start small. Often there is a position or projects within your department, hospital and local organizations. Doing work on this level will prepare you to get involved on the larger scale." Dr. McCabe suggests taking a job no one else wants to do, and do a good job with it. Get your foot in the door and impress people.

In our discussion on how to continue on a leadership path Dr. McCabe remarked that it can be difficult to know which offers to accept. His advice is to get involved in activities and opportunities that you feel sincere about, that you can be passionate about. Your authenticity will show through in the product of your work.

### On developing leadership skills

"Within our state and national organizations there are many resources. Join committees and task forces and find the depth of the projects. You will pick up many valuable skills along the way while contributing and growing your network and building your CV."

Though a formal education such as obtaining a MBA is beneficial, Dr. McCabe developed his skills through on-the-job training, picking up skills along the way.

Dr. McCabe remarks that ACEP helped him with this. One example he shared was the ACEP Finance Committee, which helped him learn the business of medicine.

Take most opportunities but think about saying no so that you can be serious about your work. In choosing projects consider double dipping. For example, choose a QI project, research and clinical project that reflect the same body of work.

Dr. McCabe wants us to appreciate that one’s path may not be clear, but if you take it as it comes, be yourself, responsive and responsible, you will set yourself on the right track. A good job gets noticed and promotes you to the next job.

### On obstacles

I asked Dr. McCabe what he thought some of the obstacles might be for today’s grad who wants to get involved in state and national organizations? "You can get there. Find something that excites you."

Dr. McCabe’s encouraging words were followed by further guidance: "It is often clear when people simply take a job to get to the next point, without being sincere about the project. Sincerity is also transparent and your interest will shine through and support your success." Dr. McCabe has found that not having an exact career path opened him up to several career-defining opportunities.

Dr. McCabe was clear that no one can do it alone. Find your mentors, ask for help and learn from your colleagues. If you want it, you can get there.

On behalf of New York ACEP and the Professional Development Committee, I would like to thank Dr. McCabe for his time and advice. ⌘

**John B. McCabe, MD FACEP**
Senior Vice President for Hospital Affairs,
Chief Executive Officer, SUNY Upstate University Hospital

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*continued from page 5*


*Prince*


*Ardolic*


*Cushman*


*Lema*


*Newman*


*Raio*


*Slesinger*


*Ghai*

## Leadership Elected

New York ACEP is proud to announce the following individuals who assumed office for the 2014-15 program year:

President: Louise A. Prince, MD FACEP from SUNY Upstate Medical University; President-elect: Brahim Ardolic, MD FACEP from Staten Island University Hospital and Secretary-Treasurer: Jeremy T. Cushman, MD MS FACEP from the University of Rochester.

Congratulations are extended to board members elected to serve second terms: Penelope C. Lema, MD RDMS FACEP from the University of Buffalo and David H. Newman, MD FACEP from Icahn School of Medicine at Mount Sinai.

Newly elected directors include, Christopher C. Raio, MD MBA FACEP and Todd L. Slesinger, MD FACEP FCCM FCCP both from North Shore University Hospital.

Anchal Ghai, MD from Staten Island University Hospital was appointed resident representative to the Board of Directors by President Louise A. Prince, MD FACEP. ⌘

# Outstanding Research: Oral and Poster
## Awarded During the 2014 Research Forum

Congratulations to Victor Cohen, PharmD who received the annual award in the oral presentation category.

### DIME Study: Comparison of Diltiazem and Metoprolol in the Management of Atrial Fibrillation or Flutter with Rapid Ventricular Rate in the Emergency Department: A Prospective, Randomized, Double-Blind Trial

*Christian Fromm, MD FACEP; Salvador J Suau, MD FACEP; Victor Cohen, PharmD; Antonios Likourezos, MA MPH; Samantha Jellinek-Cohen, PharmD; Jonathan Rose, MD FACEP; John Marshall, MD FACEP - Maimonides Medical Center*

**OBJECTIVES**: Symptomatic relief and ventricular rate control are generally the primary therapeutic objectives in the Emergency Department (ED) management of acute atrial fibrillation and flutter (AFF). Both beta-blocking agents and calcium channel blockers are commonly used to treat AFF in the ED. To date, only one prospective, randomized trial has compared the effectiveness of a calcium channel blocker (diltiazem) with a beta-blocker (metoprolol) for rate control of AFF in the ED. In order to test this finding, we conducted a prospective comparison of metoprolol and diltiazem for the management of patients presenting to the ED with AFF with rapid ventricular rate.

**METHODS:** After written informed consent was obtained, a convenience sample of adult patients age 18 or older presenting with a supraventricular tachydysrhythmia were randomly assigned, in a 1:1 ratio, to receive diltiazem or metoprolol. The primary efficacy outcome measure was heart rate less than 100 beats per minute within 30 minutes of drug administration

. The study team, including several ED pharmacists, emergency physicians and experienced research volunteers monitored each subject's systolic and diastolic blood pressures and heart rates at time zero, 5, 10, 15, 20, 25 and 30 minutes after drug administration to assess if the patient achieved the desired endpoint. The primary safety outcome measures were heart rate less than 60 beats per minute and systolic blood pressure less than 90 mmHg.

**RESULTS:** The final sample size was 52 patients; 24 were randomized to the diltiazem group and 28 were randomized to the metoprolol group. There were no statistically significant differences with regard to gender, age, adenosine administration, baseline SBP, baseline DBP, and baseline HR (P=.895, .396, .786, .828, .212, .231 respectively). In the first 5 minutes, 50.0% of the diltiazem group and 10.7% of the metoprolol group reached the target HR<100bpm (P<.005). By 30 minutes, 95.8% of the diltiazem group and 46.4% of the metoprolol group reached the target HR<100bpm (P<.0001). The mean decrease in heart rate for the diltiazem group was more rapid and substantial than that of the metoprolol group. The mean heart rate for the metoprolol group did not reach the target of less than 100bpm at any time over the 30 minute study period. From a safety perspective, there was no difference between the groups with respect to hypotension (SBP <90) and bradycardia (HR <60). There were five metoprolol patients and one diltiazem patient with hypotension (P=.199). Bradycardia occurred in one diltizem patient only and did not occur in the group that received metoprolol (P=.462).

**CONCLUSION**: Diltiazem was more effective than metoprolol in achieving rate control in ED patients with AFF at all time points within 30 minutes and did so with no increased incidence of adverse effects.

Congratulations to the following research presentations that took the annual award in the poster category.

### The $StO_2$ Non-Invasive Tissue Hypoperfusion Monitor as a Screening Tool for Early Sepsis Detection in the Emergency Department

*Zachary Kopelman, BA; James Zhou, BA; Alexandra Dattilo, BA; Eric Boccio, BA; Sandra Schneider, MD; Mary Frances Ward, RN MS ANP; John D'Angelo, MD; Jason D'Amore, MD - North Shore University Hospital*

**BACKGROUND**: Early recognition of patients with sepsis induced tissue hypoperfusion (SITH) remains a significant clinical challenge. Non-invasive tissue oxygenation saturation ($StO_2$) monitors have been developed to provide rapid, low-cost, and non-invasive bedside assessments of tissue oxygen extraction; they have not been well validated as an initial screening tool for sepsis in the ED.

**OBJECTIVES**: To assess the efficacy of initial bedside $StO_2$ readings in the early identification of patients with SITH and to compare $StO_2$ readings with lactate levels.

**METHODS**: IRB approved, prospective, observational pilot study of a convenience sample of ED patients presenting with a sepsis continuum diagnosis.

**SETTING**: Urban tertiary care center with 90k visits/yr.

**INCLUSION CRITERIA**: Suspicion of new infection plus 2 SIRS criteria.

**EXCLUSION CRITERIA**: <18 or no suspicion of infection.

**STUDY PROCEDURES**: Demographics, co-morbidities, clinical data, treatment, disposition, and mortality were collected. A portable In-Spectra 'Spot Check' $StO_2$ monitor was used to take a $StO_2$ reading at the thenar eminence; a second reading was taken three hours later. All investigators were trained with the device to record data with a high degree of accuracy and reliability. Abnormal $StO_2$ was defined as <80% or >91%. The study was observational and there were no clinical interventions. Descriptive statistics were employed and Sensitivity/Specificity, Likelihood ratios, and NPV/PPV were calculated with 95% confidence intervals (in parenthesis) where appropriate.

**RESULTS**: 144 patients were enrolled into the study. Mean age 61 (range 19-99). 89 were admitted to the hospital, 7 to ICU (100% with $StO_2$<76%). 5 mortalities (100% with $StO_2$<72%). 78.1% (25/32) of patients with an ED lactate >2.3 had an abnormal $StO_2$. 91.6% (11/12) for lactate >3, and 100% (6/6) for Lactate >4. For any initial SITH (MAP<65 or Lactate >3): Sensitivity: 94.44% (72.63.5-99.07), Specificity: 64.79% (52.54-75.76), +LR: 2.68 (1.92-3.75), -LR: 0.09 (0.01-0.58), PPV: 40.48% (25.64-56.72) NPV: 97.87% (88.66-99.64). Disease prevalence in the SITH population was 20.22% and the overall accuracy of $StO_2$ was 72%.

**CONCLUSIONS**: StO2 may be a useful, rapid, low-cost, and non-invasive bedside screening tool for SITH in the ED, particularly for severely ill patients. Further studies are needed to determine StO2's ability to predict mortality and assess response to therapy.

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### Does an Expedited EMS Long Spine Board Removal Protocol Decrease the Time Patients Remain Immobilized in the Emergency Department – A Collaborative ED/EMS/ Medical Manufacturers Lean Six Sigma Performance Improvement Initiative

*Michael R. Jorolemon, DO EMT-P FACEP; Michael Allain, RN CNS; Erwin Learned, BS; Scott Palmer*; Colleen Price**; Duane Pierce**; Jeffrey Romanick, EMT-P; Tara Box, RN BSN CNOR - Crouse Hospital; *Welch Allyn, Inc.; **Cortland Fire Department*

**BACKGROUND:** Pre-hospital Emergency Medical Service (EMS) providers in New York State are mandated to follow the New York State Basic Emergency Medical Technician (EMT) protocol regarding spinal immobilization. Being placed on an EMS long spine board is not a benign process. Immobilization increases a patient's pain, anxiety, and risk for aspiration. It can also lead to the development of skin break down and other untoward events. The longer a patient spends being immobilized on a long spine board, the greater their chances of complications as a direct result of the immobilization.

**OBJECTIVE:** To determine if the implementation of an ED RN (registered nurse) / EMS, expedited EMS long spine board removal protocol can decrease the time a patient spends on a long spine board in the Emergency Department.

**METHODS:** As part of an EMS / Hospital / National Medical Manufacturer Collaborative Lean Six Sigma Greenbelt program, an improvement opportunity was identified to allow ED Registered Nurses (RNs) to initiate a designed protocol to assess and remove patients from EMS long spine boards. The team included members from EMS agencies, the Hospital, and a leading local National Medical Manufacturer. The team and work then was transitioned into the hospital's Emergency Department Operations structure for implementation. The protocol was developed, reviewed and approved by the physician team. The hospital ED RN's were trained on the protocol. Their skills were assessed with a teach back and hands on, practical competency evaluation. Once the ED RN's competency with the protocol and proper spinal immobilization techniques and safe movement of immobilized patient was reached, the ED RN could then enlist the help of other ED staff members and the EMS providers to initiate the expedited EMS long spine board removal protocol. A time study was conducted from June 2013 till September 2013, to determine the baseline time a patient remains on an EMS long spine board. Once the protocol was initiated, a repeat time study for the Month of March 2014 was conducted to determine if the impact of the expedited EMS long board removal protocol on the time patients spend being immobilized on a long board.

**RESULTS:** Patients that arrived via EMS pre-implementation of the RN / EMS expedited EMS long spine board removal protocol spent an average of 62 minutes on the EMS long spine board. Once the protocol was implemented, patients spent an average of only 13 minutes on the long spine board. That is a decrease of 49 minutes and represents and improvement of over 79.0% from the baseline.

**CONCLUSION:** The implementation of an improvement protocol as part of a large scale EMS / Hospital/ Medical Manufacturer collaborative Lean Six Sigma Greenbelt Project has successfully decreased the time patients spend immobilized on an EMS long spine board by 79.0%. The nursing / EMS protocol is a win for EMS providers, the ED nursing staff and most importantly the patients. It has strengthened the collaboration between the EMS providers / ED Staff and the ED Nursing Staff / ED Provider Staff. Further investigation to decrease the time a patient spends on an EMS long board are in progress to decrease the time a patients spends being immobilized on a long spine board even lower.

### Incidence and Predictors of Intracerebral Hemorrhage After Thrombolytic Therapy for Acute Ischemic Stroke

*Boris Khodorkovsky, MD; Amy Buxton, PA*; Joanne Comber, PA*; David Cookish, PA*; Kristen San Filippo, PA*; Tara Igneri, MS PA - Staten Island University Hospital; *Wagner College*

**OBJECTIVES:** Acute Ischemic Stroke (AIS) is a leading cause of disability, and the fourth leading cause of death in the United States. Alteplase (Tissue Plasminogen Activator) was FDA approved in 1996 for the treatment of AIS. Patients who receive Alteplase are at a higher risk of having intracerebral hemorrhage (ICH). The purpose of our study was to determine the incidence of ICH after thrombolytic therapy at a stroke center compliant with currently endorsed guidelines for the administration of Alteplase. A secondary objective was to identify predictors of ICH after Alteplase administration for AIS. We hypothesized that AIS patients with severe National Institutes of Health Stroke Scale (NIHSS) (≥ 17) treated with Alteplase would have a higher incidence of ICH.

**METHODS**: This was a retrospective chart review of patients with AIS treated with Alteplase in an urban, academic emergency department (ED) between July 2006 and October 2013. Patients were included if they were ≥ 18 years of age, NIHSS ≥ 1, diagnosed as AIS and treated with Alteplase in the ED. Patients were excluded if they were transferred to an outside facility for further therapy, treated with Alteplase while on the inpatient unit, or initial NIHSS was missing. Patient's baseline demographics, past medical history, current medications, initial NIHSS in the ED, and final disposition were recorded.

**RESULTS**: During the study period, 230 patients who received Alteplase were identified. 57 patients were excluded: 28 were transferred to another institution, 18 had a stroke while on the inpatient unit, and 11 had missing initial NIHSS. There was a slight female predominance in our population (54% vs. 46%). Of the remaining 173 patients included in the analysis, mean age was 71 (SD 14.7). NIHSS ranged from 1 to 36: 69 patients with mild NIHSS (1-7), 62 with moderate NIHSS (8-16) and 42 with severe NIHSS (17-42). Mean ED arrival to Alteplase given time was 80.5 minutes (SD 45.1). Mean symptoms onset to Alteplase given time was 148 minutes (SD 49.9). ICH was diagnosed in 27 patients (15.7%) during their hospitalization, with mortality at discharge at 40.7% (11 patients). NIHSS was the most significant factor for predicting ICH ($p < 0.001$). When NIHSS <17 was compared with NIHSS ≥ 17, patients with severe scores were more likely to have ICH as compared to lower scores (60 % vs. 2%) at p value < 0.001. Other variables that correlated with increased rate of ICH were age ($p = 0.004$) and history of atrial fibrillation ($p = 0.003$).

**CONCLUSIONS**: Our results demonstrate that the rate of ICH after thrombolytic therapy for AIS in one academic center was 15.7%. This rate is higher than cited in literature. Patients with severe NIHSS had significantly increased risk of ICH. In this subset of patients, clinicians should disclose the risks associated with ICH, including the possibility of high incidence of mortality. We recommend caution when treating the elderly and patients with atrial fibrillation. A larger, multicenter study is required to validate these findings.

### Assessing Disparities Among Emergency Medicine Residents and Emergency Medicine Attending Physicians in Interpreting and Performing the FAST Exam

*Michael Felicetta, DO; Gerardo Chiricolo, MD - New York Methodist Hospital*

**BACKGROUND:** Point of Care Ultrasound (POCUS) is recognized as one of the 23 elements of physician competency in emergency medicine (EM) resident training by the ACGME/ABEM Milestone project. As all residents are directly supervised by attending physicians, it is critical that procedural skills of the attending physicians are superior to that of the residents they train. Despite the increasing importance of POCUS in the practice of EM, the competency of academic EM attending physicians in performing POCUS remains highly variable.

**OBJECTIVES:** To assess for disparity in competency amongst resident and attending physicians in performing the focused assessment for sonography in trauma (FAST) exam.

**METHODS:** All available EM residents and attendings not fellowship trained in EUS were included in this observational cross sectional study. Everyone participated in a proctored 15 question written exam followed by a practical exam on the performance of a basic FAST exam on a healthy live model under direct observation. The practical exam was scored on a scale of 1 -5 where a score of 1 represented physicians who did not attempt the exam due to lack of competency, and a 5 representing demonstration of advanced image acquisition and knowledge.

**RESULTS:** We recruited a total of 25 residents and 18 attending physicians for this study. The mean quiz score for the resident group was 69% (range of 33-93%). The mean scores per PGY level were 65%, 77% and 74% for PGY 1, 2 and 3 residents respectively. In comparison the mean quiz score for attending physicians was 57% (range of 33-80%), t-test, 2-tail p= 0.01. The mean practical score for the resident group was 3.4 (range of 2-5). The mean scores per PGY level were 2.8, 3.3 and 4 for PGY 1, 2 and 3 residents respectively. In comparison the mean practical score for attending physicians was 2.5 (range of 1-4), t-test, 2-tail p= 0.01.

**CONCLUSION:** This study identified a significant disparity in emergency ultrasound competency between resident and attending physicians in our academic institution. Given the recognition of point of care ultrasound as an element of physician competency in emergency medicine training, this is a concerning finding and suggests that academic EM attending physicians require further training and oversight in emergency ultrasound. ⌘

## Calendar

### September

**3** Emergency Medicine Resident Committee Conference Call, 6:00 pm
**10** Resident Research Conference, Icahn School of Medicine Mount Sinai, 8:30 am-1:30 pm
**10** Education Committee Conference Call, 1:30 pm
**10** Professional Development Committee Conference Call, 3:00 pm
**11** Practice Management Conference Call, 3:00 pm
**17** Government Affairs Committee Conference Call, 11:00 am
**17** Research Committee Conference Call, 3:00 pm
**18** EMS Committee Conference Call, 2:30 pm
**29** 2014 LLSA Review, Icahn School of Medicine at Mount Sinai, 8:00 am-1:00 pm

### October

**1** Emergency Medicine Resident Committee Conference Call, 6:00 pm
**6-7** Strategic Planning Meeting, Mohonk Mountain House Monday: Noon-6:30 pm; Tuesday: 8:00 am-Noon
**7** Board of Directors Meeting, Mohonk Mountain House, 1:30-5:30 pm
**8** Education Committee Conference Call, 1:30 pm
**8** Professional Development Committee Conference Call, 3:00 pm
**9** Practice Management Conference Call, 3:00 pm
**15** Government Affairs Committee Conference Call, 11:00 am
**15** Research Committee Conference Call, 3:00 pm
**16** EMS Committee Conference Call, 2:30 pm
**22** Emergency Medicine Resident Committee Conference Call, 6:00 pm
**25-26** ACEP Council Meeting, Hilton Chicago Hotel, Chicago, IL, 8:00 am-5:30 pm
**27** New York ACEP Reception, Hilton Chicago Hotel, Chicago, IL, 6:00-7:00 pm
**27-30** ACEP Scientific Assembly (ACEP14), McCormack Place, Chicago, IL

### November

**5** Emergency Medicine Resident Career Day & Job Fair, New York Academy of Medicine, 7:30 am-1:30 pm
**12** Education Committee Conference Call, 1:30 pm
**12** Professional Development Committee Conference Call, 3:00 pm
**13** Practice Management Conference Call, 3:00 pm
**19** Government Affairs Committee Conference Call, 11:00 am
**19** Research Committee Conference Call, 3:00 pm
**20** EMS Committee Conference Call, 2:30 pm

# Leadership and Advocacy Award Recipients Travel to Washington, DC

*From left to right: Dr. Shahram Ahari, Dr. Justin Popso, Dr. Penelope Lema, Congressman Paul Tonko, Dr. Katrina Kardos Dr. Jennifer Pugh and Dr. Divya Balasubramanian*

**Shahram Ahari, MD**
**University of Rochester**

When I expressed to a colleague my excitement about going to the ACEP Leadership Conference in DC to talk to politicians about emergency medicine, she rolled her eyes and sighed "What a waste of time." I didn't have to ask what she meant. This attitude is all too common among doctors and behind it is an implication that we sully the nobility of medicine when we descend into politics. However, with the relatively short time spent advocating for better policies, I couldn't help but consider how we might influence the practice of emergency medicine on a national level, affecting patients before, during and after their visit to the emergency department (ED). That thought and the prospect of enjoying Washington, DC in the company of my colleagues from around the country kept my enthusiasm easily buoyed.

The conference started off Sunday in a large auditorium with throngs of ED docs from everywhere. As the new guy, I didn't know many people but was welcomed with the overwhelming friendliness for which our specialty is known. The day's speakers regaled us with an insider's perspective of the political landscape followed by a review of some ED hot-topic issues. We heard how emergency medicine (EM) is perceived in policy circles and by politicians. We were taught the meaning of safe harbors and the political battles being fought to allow us to practice more 'patient minded' (as opposed to 'defensive') medicine. We discovered our common problems and shared solutions with colleagues. And, perhaps most importantly, we learned how we collectively run the risk of being misrepresented and undervalued if we fail to develop a public voice.

On the second day, we heard from our government leaders. They spoke to us of their viewpoint and in doing so we learned of their goals, their challenges and opportunities we had to share goals. Having our elected leaders present and answerable to audience questions made the experience very real and in sharp contrast to the passive experience of simply watching politicians on TV. Reinvigorated with the prospect of speaking with a member of Congress and their staff again on the next day, my new friends and I attended presentations on public communication and reviewed the nuances of the ACEP's advocated policies. By evening, with our work done, we capped off day two with a comedy show by The Capitol Steps and dinner in Georgetown. Who says you can't have fun while working?

On the third day, we split up into small teams based on voting districts and went to the Hill. Each visit to a politician's office was preceded by a quick group huddle where we decided our approach. Sure, we knew our policies and why they were so great, but with only 10-20 minutes of face-time with our representatives, we needed to consider what specific points would pique their interests. But once we entered an office, all bets were off. We often met with either a member of Congress or their aide, and sometimes it would be both. On occasion, their passion and interest rivaled ours and the elevated discourse would range from true-life examples of how policy affects lives, to an earnest discussion about how they could help us help our patients.

*(Right) Dr. Ahari outside United State Representative Louise Slaughter's office*

At the end of the conference, I felt the satisfying exhaustion of a thorough effort and wondered about the impact we made. In truth, it's unlikely that my contribution inspired some revelation in our national leadership but then again, policy advocacy isn't about an annual 10-minute conversation. It's about a career long conversation; one where we share the benefit of our perspective with those who can influence our work. You may think of it as an ongoing consultation where, for a change, we are on the receiving end. If we are reluctant to answer the need for our expertise by simply dismissing politics and policy as unrelated to our work, then we are no less guilty of behavior which we have all, invariably encountered at some point and, lamented in our own consult requests. Meeting and learning from my colleagues from all corners of the country is just a bonus of doing, what I consider is, a part of the doctor's mission. And just because I won't meet all the patients whom my advocacy is affecting, doesn't make it any less important medicine. ⌘

**Jennifer Pugh, MD**
**University of Buffalo**

This May I had the opportunity to attend the 2014 ACEP Leadership and Advocacy Conference through New York ACEP's Young Physician Award. This was my first time attending this conference. It was a great opportunity to network with fellow New York ACEP members from across the state and to learn how to become more involved in ACEP at the state and national level.

During the conference, I attended workshops to improve my leadership skills and learned how to be an effective advocate for emergency medicine on a larger scale.

ACEP also held advocacy training sessions to update participants on ACEP's current health policy agenda.

The highlight of the conference was ACEP National Lobby Day when we met with members of Congress and staff on Capitol Hill. During our visit, we had the opportunity to educate legislators on three key emergency medicine issues including GME and mental health funding, and EMTALA reform.

### *Graduate Medical Education Funding*

*The Resident Physician Shortage Reduction Act of 2013* has been introduced in the House and Senate to expand the number of Medicare-supported GME positions across the country by 15,000 slots over five years. ACEP wants to ensure emergency medicine is able to compete for the new GME slots.

### *Mental Health Funding*

Emergency departments are seeing an increase in the frequency of patients with psychiatric complaints. Psychiatric patients frequently board in the emergency department for several days while awaiting inpatient beds. The *Helping Families in Mental Health Crisis Act of 2013* focuses on these issues by improving resources for psychiatric care.

### *EMTALA Reform*

*The Health Care Safety Net Enhancement Act of 2013* addresses the crisis in access to emergency care. This Act provides liability protection for EMTALA-related services in the emergency department to emergency physicians and on-call specialists under the Public Health Safety Act. This legislation would help alleviate the shortage of on-call specialists we deal with everyday.

I highly recommend the ACEP Leadership and Advocacy Conference to all young physicians. I left the conference excited to advocate for our specialty as a new faculty member at the University of Buffalo. ⌘

To find out more on how you can apply for a scholarship, go to http://nyacep.org/leadership-and-advocacy

## Brenda Oiyemhonlan
## SUNY Brooklyn

I was compelled to apply for the New York ACEP Young Physician and Resident Award because I wanted to extend my role as an emergency medicine physician beyond the walls of my hospital. My hope was and is, to give a voice to the experiences and difficulties that my patients and their families experience when attempting to access basic health services. As we all know, the system that we operate within, in order to deliver health care services to the public, is ignominious. We function under an increasingly regulated environment which seeks to improve patient safety and quality but does not provide the required resources to be able to effectively address the amount of disease burden that many of our patients, especially the working poor, are disproportionately burdened with. We, as emergency medicine physicians, are not only on the front lines of the health care system but we too, at one time or another, have been personally affected by our dysfunctional system, which makes what we do, that much more meaningful.

The emergency department is a place where any one, at any time, can come, to seek help. Unfortunately, badness doesn't operate only between 8 am and 5 pm where a person with health insurance can schedule an appointment to visit their primary care physician. And even if they could, is a general internist equipped with the skills required to place a central line for hypotension refractory to intravenous fluids due to overwhelming sepsis or place a chest tube or Heimlich valve in a young man with a spontaneous pneumothorax or administer tPa in an elderly person who acutely develops left-sided weakness and slurred speech? These are the type of scenarios that are not esoteric but occur every day, multiple times a day for many of us, and make our specialty unique and the set of skills that we embody, so germane to the health care system. We are not a failure of the primary health care system but rather we augment and provide, a much-needed service to any one, at any time, irrespective of their insurance status, sexual orientation, race/ethnicity or socioeconomic status.

While at LAC, I engaged in an assortment of educational and training sessions geared towards inspiriting emergency medicine physicians to participate in healthcare policy and advocacy. The conference started with a lively journal club co-facilitated by myself, Dr. Hannah LoCascio, one of my chief residents, Dr. Mathew Foley, an attending physician and the current Director of Emergency Services at SUNY Downstate Medical Center and Dr. Aimee K. Moulin, the California ACEP Advocacy Fellowship Director and an Attending Physician at the University of California, Davis. I then went on to participate in several workshops, the highlights being the communications and media training session as well as the talk on how to become an effective leader and change agent within an organization. The conference culminated with a visit to Capitol Hill where I was able to meet with and speak to political leaders from my state. In these touch points, I was able to provide them with specific experiences relevant to upcoming legislation governing how emergency health care services are organized and delivered. This experience was particularly eye opening and frustrating for several reasons. Health care is one of many priorities that a given politician is tasked with managing. Unless there is an overwhelming pressure to act due to an egregious misfortune or blatant inequity, health care can become less of a priority, especially if constituents in a given area, do not participate in the political process by voting. Despite this reality, the overall experience was thought provoking and enlightening.

I would like to send a heart-felt thank you to New York ACEP for selecting me to participate in such a career changing opportunity and to all of my attendings and co-residents in the department of emergency medicine at Kings County Hospital and SUNY Downstate Medical Center for setting the bar high and excepting nothing short of clinical and professional excellence. ⌘

*(Left) Dr. Oiyemhonlan outside Senator Charles Schumer's office*

# The Next Accreditation System of the ACGME: A Focus on Patient Care

**Joel M. Bartfield**
**MD FACEP**
Associate Dean for GME and DIO,
Professor, Emergency Medicine
Albany Medical College

On July 1, 2013, the Accreditation Council for Graduate Medical Education (ACGME) began to phase in a new accreditation system. The "Next Accreditation System (NAS)" focuses on educational outcomes, involvement of residents in patient safety and quality improvement, and innovation in education. In the old system, programs were visited every one to five years in static "accreditation visits." The new system focuses on continuous oversight of educational outcomes and several other domains through electronic reporting. Educational outcomes for residents will be defined by milestones which are developed by each residency review committee. These milestones are competency based and specialty and level of training specific. Resident evaluation will occur semiannually and will be the responsibility of a clinical competency committee which will utilize evaluations of multiple learning activities obtained from multiple sources to determine the progress each resident is making along milestone continuums. Each resident will be evaluated on approximately thirty milestones. The ultimate goal is to have residents graduate from residency with milestone criteria consistent with a level of proficiency allowing them to enter unsupervised practice.

The ACGME will also regularly review the results of house staff and faculty questionnaires, procedure and case logs, board certification examination pass rates, scholarly activities and other metrics. The new system is being rolled out in two phases. Emergency medicine is one of seven phase one programs which entered NAS at the beginning of the 2013-2014 academic years. Other phase one programs include, Internal Medicine, Neurosurgery, Orthopedic Surgery, Pediatrics, Diagnostic Radiology, Urology, as well as all fellowships from these core specialty programs. Beginning July 2014, all remaining training programs will enter the Next Accreditation System paradigm.

In addition to specialty specific educational milestones, NAS will focus on improvement and self-study with a greater emphasis on institutional oversight. Ultimately the goal is to develop National Normative Data to set the standards for programs in graduate medical education.

As part of the NAS, every ten years, programs and institutions will undergo on-site reviews which will be more of a self-study approach, similar to the approach used by the Liaison Committee for Medical Education (LCME) for medical schools. Institutions will also be visited every 18 to 24 months for a review focusing on the Clinical Learning Environment Review (CLER). These so called CLER visits will review six focus areas including:

- Resident involvement in patient safety
- Resident involvement in quality improvement activities
- Transitions in care
- Supervision
- Duty hours oversight and fatigue management & mitigation
- Professionalism

CLER site visitors will meet with the highest levels of institutional leadership as well as physicians and residents. The six focus areas have been further subdivided into 34 pathways with 89 different properties. A great level of detail and specificity is therefore available as the ACGME drills down into these six fundamental focus areas. Institutional reviews will focus not only on the preparedness and participation of residents but also of faculty. The expectation is that faculty will model optimal behavior addressing the six CLER focus areas.

The ultimate goal of the next accreditation system is to promote an environment which not only provides optimal learning for our residents, but optimal care for our patients. As busy emergency physicians, we spend much of our energy focusing on our jobs as practitioners, administrators and educators. I fear that we sometimes forget about our ultimate priority, our patients.

As I cycle off of the Board of Directors for New York American College of Emergency Physicians after 14 years of service, I reflect on the mission of our college:

> *The New York American College of Emergency Physicians exists to support quality emergency medical care and to promote the interest of emergency physicians.*

We provide strong advocacy, valuable education and many other resources for emergency physicians. By doing so, we ultimately enhance our members' ability to focus on our ultimate goal, providing the best care for our patients. We should all take great pride in providing a safety net for emergency department patients in the State of New York. ⌘

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Chair, Department of Emergency Medicine
Michael_kamali@urmc.rochester.edu
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# Education

## Clinical Informatics Subspecialty

**Frederick Thum**
**MD FACEP**
Assistant Professor,
Department of Emergency Medicine
Icahn School of Medicine at Mount Sinai

### New Subspecialty

The latest subspecialty to join the House of Medicine is Clinical Informatics. In October 2013, 456 physicians across all specialties of medicine successfully passed the Clinical Informatics board certification exam. The annual board certification exam will be offered for the second year this October. This subspecialty exam was the culmination of many years of work by informatics leaders and organizations such as the American Medical Informatics Association (AMIA).

AMIA recognized the need for formal Clinical Informatics training and certification in 2005. By 2007, AMIA began working on documents outlining the specialty Core Content and Program Training Requirements. These documents were reviewed and revised by many individuals and institutions working tirelessly with AMIA. The revised documents were submitted to the American Board of Medical Specialties (ABMS) and on September 9, 2011 ABMS approved the proposed subspecialty certification. The subspecialty is sponsored by the American Board of Preventive Medicine (ABPM). Until 2018, physicians with primary certification in any of the 24 specialties are eligible to sit for this board examination if they have fulfilled the practice pathway prerequisites. These prerequisites include at least 25% Clinical Informatics time over three years or completion of an ACGME accredited two-year fellowship. This practice pathway to Clinical Informatics certification expires in 2018. After 2018, eligibility for the board certification exam will be determined by successful completion of an ACGME-accredited 24 month Clinical Informatics fellowship.

### Clinical Informatics

Specialists in Clinical Informatics and the larger field of informatics are called informaticians. What is a clinical informatician?

### According to the AMIA Core Content

"Clinical informaticians transform health care by analyzing, designing, implementing, and evaluating information and communication systems that enhance individual and population health outcomes, improve patient care, and strengthen the clinician-patient relationship."

Clinical Informatics at its core is an interdisciplinary field combining knowledge of medical care, health system operations and information technology. The team based work of emergency medicine positions emergency physicians to be uniquely familiar with the nexus of these intersecting domains. Indeed, Clinical Informatics is part of the EM Model.

The 2011 Model of the Clinical Practice of Emergency Medicine lists Clinical Informatics as a subset of systems based practice. The components of Clinical Informatics in this model are limited to:

- Computerized Physician Order Entry
- Clinical Decision Support
- Electronic Health Record
- Health Information Integration

Though the above core competency areas are of great import to the practice of emergency medicine, there is so much more to Clinical Informatics.

Over the past several years, incentivized by programs such as Meaningful Use, many emergency departments have implemented Electronic Health Records (EHRs). An important aspect of Clinical Informatics includes implementation science. If an EHR is implemented poorly, in addition to significant financial costs and potential for negative patient impact, it may be very difficult if not impossible to recover the confidence of the institution in EHRs. As more institutions and groups move beyond implementation of EHRs, other aspects of Clinical Informatics will take on a larger role.

One area of Clinical Informatics involves continuous improvement. To this end, evaluation of EHR implementation, clinical decision support, workflow changes and communication pathways must be integral as systems evolve beyond EHR implementation. This evaluation may be in the form of formal IRB approved research, or an institutional/departmental quality improvement project. One emphasis on this aspect of informatics is the measurement of effect. Measurements may include, for example, turn around time after workflow changes with radiology or mortality rates after rollout of a sepsis clinical decision support system. It is of equal or perhaps greater importance to have a system in place for detecting and correcting unexpected consequences.

Hospitals are required to collect adverse events and, where appropriate, take corrective action. Adverse events or near misses involving EHRs are not always obvious and often fall within the interface between the user and EHR. Thus, informaticians are well positioned to serve on patient safety committees. A separate Health IT safety committee may be able to further dissect adverse events and near misses as well as implement monitoring of errors. An example of this monitoring is continually counting the number of cancelled orders within one minute of being placed, indicating possible wrong patient or wrong medication type errors.

### Future Directions for Informatics Education

Now that Clinical Informatics is a board certified subspecialty, formal training will become the norm. The practice pathway for board certification will close in 2018, after which formal 24 month ACGME accredited fellowship training in Clinical Informatics will become required. One of the challenges with ACGME accredited fellowship training in Clinical Informatics will be funding positions. Previously, informatics fellowships have often been supported by clinical time. With ACGME work hour rules, fellowship programs will need to seek alternative sources of funding.

*continued on page 26*

## Clinical Informatics Subspecialty

*continued from page 25*

For emergency physicians interested in informatics but not yet ready to commit to a fellowship, there are many resources to learn more about the field. The American College of Emergency Physicians (ACEP) has an active EM Informatics Section and the Society for Academic Emergency Medicine (SAEM) has an Academic Informatics interest group. AMIA and ACEP along with Oregon Health and Sciences University have developed an online informatics course tailored to emergency physicians, "10x10". This course offers a good overview of informatics and results in a certificate upon completion.

### About the Author

Frederick Thum, MD FACEP recently completed a two-year fellowship in Clinical Informatics at Mount Sinai. ⌘

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## EM Physician Opportunities

**ALBANY: Albany Memorial Hospital** is located at the edge of the city near desirable residential areas. This 165-bed hospital has a new ED and sees 47,000 emergency patients per year. Enjoy EM resident rotations and a great pathology mix.

**CORTLAND: Cortland Regional Medical Center** is a modern, full-service facility situated in the Finger Lakes Region between Syracuse and Ithaca seeing 35,000 ED patients per year. The region offers a variety of living options including metro, rural and waterside communities.

**LONG ISLAND: Brookhaven Memorial Hospital Medical Center** is in East Patchogue on the southern shore of Long Island in central Suffolk County. This ED sees 73,000 annual visits with a 23% admission rate. This is a high volume, high acuity Area Trauma Center (ATC) with Level II Trauma Center designation. Busy EMS program with on-site medical director serves 28 separate ambulance services. Support services from radiology, laboratory and pharmacy are excellent.

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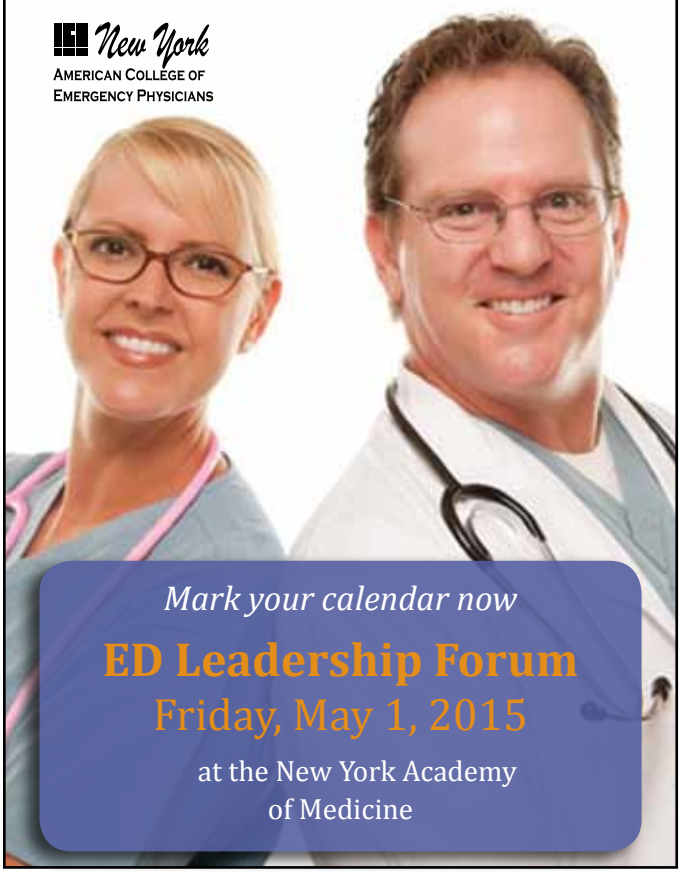

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# Albany Update

*Read entire report at http://nyacep.org/advocacy*

**New York ACEP Legislative & Regulatory Representatives**
Reid, McNally & Savage

The 2014 regular Legislative Session came to an end late in the day Friday, June 20. Governor Cuomo and legislative leaders announced a number of big deals in the final days of the session. These include an agreement on a measure to allow for the limited use of medical marijuana, a package of bills to address the State's opioid/heroin addiction epidemic, changes to existing teacher evaluations and Common Core requirements which the head of the state teacher's union calls a "reset" and an agreement on facility closures under the Office of Mental Health (OMH) and the Office for People with Developmental Disabilities (OPWDD) to set up community services before the facilities close.

While the Governor and state leaders hailed these and other successes including the fourth on-time state budget in a row as the session came to a close, there has been public criticism for leaving significant work undone. This includes failure to approve the package of bills included in the Women's Equality Act, the Dream Act, reform of the state's Brownfield tax credit program which expires next year, campaign finance reform and others.

State legislators have now returned to their districts to focus on the November elections where all 213 legislative seats and Governor Cuomo, Attorney General Schneiderman and State Comptroller DiNapoli are up for election. While there is some speculation that legislators could return to Albany post-election to take up unfinished business, it remains very unclear at this point.

Further complicating the state political landscape is a deal announced earlier brokered by Governor Cuomo, New York City Mayor de Blasio and a number of State unions with the Senate Leader of the Independent Democratic Conference Jeffrey Klein announcing that his five members would align with the mainstream Senate Democrats under the leadership of Senator Andrew Stewart-Cousins in a new coalition to control the upper house post-elections. All eyes in Albany will be on this change and whether it holds after the November elections.

New York ACEP scored a major victory in the 2014-15 State Budget by getting an amendment to the out-of-network health insurance bill to exempt certain emergency services from the burdensome Independent Dispute Resolution (IDRE) process.

In addition, New York ACEP was part of a successful effort to defeat legislation (S7130 Libous/A1056-A Weinstein) to change the current statute of limitations for medical, dental and podiatric malpractice from two and half years to the date of discovery.

Finally, New York ACEP worked hard to convince the Legislature not to pass legislation that would require a three hour Continuing Medical Education (CME) mandate every two years in pain management, palliative care, addiction prevention, and end of life care. ⌘

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8:30-9:00 am
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9:00-9:45 am
**Ultrasound vs. X-Ray in Diagnosing Pneumonia**
James W. Tsung, MD MPH
Icahn School of Medicine at Mount Sinai

9:45-10:45 am
**Ethics of Research in the Pediatric Population**
Shellie Asher, MD FACEP
Albany Medical Center
Muhammad Waseem, MD MS FACEP
Lincoln Medical Center

10:45-11:00 am
Break

11:00-11:45 am
**PECARN Update**
Peter S. Dayan, MD MSc
Morgan Stanley Children's Hospital/
Columbia University College of
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11:45 am-12:30 pm
**Accidental Trauma: Where Are We With Research?**
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