



Advocacy – It Doesn't Hurt a Bit

Page 23

*Intrathoracic Pressure Regulation;
Cardiopulmonary Resuscitation
Technique Enhancement*

Page 8

*The Emergency Physician's Role in
Regionalizing Systems of Care*

Page 13

Empire State EPIC



Emergency
Medical
Associates

Align Your Personal and
Professional Goals with
Us in New York



Explore Great Career Positions in **NEW YORK** with **EMA**

CAPITAL REGION

**St. Peter's Hospital,
Albany**

A 487-bed community teaching hospital with 59,500 annual ED visits.

Staff Physician openings.



**MidHudson Regional Hospital
of Westchester Medical Center,
Poughkeepsie**

A 243-bed community hospital with 31,000 annual ED visits.

Staff Physician openings.



NYC BOROUGH

**NewYork-Presbyterian/Queens,
Flushing**

A 535-bed community teaching hospital with 124,000 annual ED visits. **ED & PEM openings available.**

**SUBURBAN ROCKLAND
AND WESTCHESTER COUNTIES**

**Montefiore New Rochelle
Hospital, New Rochelle**

A 476-bed community teaching hospital with 40,000 annual ED visits.

Staff Physician openings.



HUDSON AREA

**Columbia Memorial Hospital,
Hudson**

A 192-bed acute care hospital with 33,000 annual ED visits. **ED & Observation Unit openings available.**

**Westchester Medical Center,
Valhalla**

A 627-bed tertiary care hospital with 46,000 annual ED visits, including a Peds ED.

**HealthAlliance Hospital –
Broadway Campus, Kingston**

A 150-bed community hospital with 47,000 annual ED visits.

STATEN ISLAND

**Richmond University Medical Center,
Staten Island**

A 384-bed teaching hospital with 65,000 annual ED visits. **Staff Physician openings.**

Explore these positions, as well as exciting career opportunities in NJ, NY, PA, NC and AZ.

EMA PHYSICIANS ENJOY:

- Unparalleled support (i.e. associate practitioners and medical scribes) delivers the highest quality practice environment
- Superior Compensation

- Stable, Long-Term Contracts
- Equitable Scheduling
- High Physician Retention Rate



Contact EMA – Recruiting:
(866) 630-8125 | Careers@EMA.net



www.EMA.net/Careers

PRESIDENT'S MESSAGE



Brahim Ardolic, MD FACEP
Chair, Department of Emergency Medicine
Vice President, Department of Research
Staten Island University Hospital

For over two decades, we have known that crowding in Emergency Departments is not a good thing. Over the last two decades however, we have learned many things about crowding. We have learned that crowding is typically not caused by dramatic increases in Emergency Department cases. To the contrary, if I told the average ED doc the time of day, the day of the week, and the month of the year, they would be able to tell you with remarkable accuracy how many new patients they would see each hour during that shift. The ED is painted as very unpredictable. While the individual cases can be very unpredictable, the patterns are far from it. As the old saying goes: I knew you were coming in with chest pain, I just didn't know your name yet.

We now know that for the most part, crowding is caused by boarding. Admitted patients who are awaiting their inpatient bed fluctuate far more than active ED patients. Why is this bad? Boarding has been linked to many things that aren't good for patients, providers or institutions. Among these things are worse outcomes, medical errors, patient misidentification, poor patient satisfaction, poor staff satisfaction, physician burnout, poor educational environments for both EM and Medicine residents and increased time to see a physician. There remains many Emergency Departments in New York where the ED physicians are still managing these patients despite their admitted status. This is occurring while new patients continue to arrive at the same remarkably consistent pace. In a majority of EDs in the state, even if the ED physician is not caring for the admitted patient, the nurses still are. This is again despite new patients continuing to arrive.

New York ACEP has truly been at the vanguard of crowding issues. We first talked

about this topic in 1988 and 1989, when Drs. Henry and Lynn started the first crowding symposiums. At the time, many in the medical community had not yet realized how significant of a patient care issue it really was. This was followed by the New York ACEP policy on crowding in 2002, which contributed to the 2003 letter by the DOH to Hospital CEOs. This led many in the medical community to earnestly look at the issue. For the first time, others started to think what we knew for years: Boarders weren't just "soft admissions" who should have been discharged. Since that time many organizations have finally realized what New

York ACEP first stated nearly 30 years ago: Crowding is a hospital issue, not an ED issue, and boarders are not ED patients, they are hospital patients who may not have a bed, but do have inpatient needs.

Since the first crowding symposium, many of the EDs in the state have more than doubled in volume and have dramatically increased their scope

of practice. The number of boarders has risen dramatically over that time. The number of inpatient beds however, has dropped. Just when most organizations have finally agreed that boarders are a real problem, we are confronted with an ever increasing problem. We cannot continue to board this volume of patients statewide.

This month, at the request of New York ACEP, the Department of Health reissued its letter on crowding. We applaud this decision and thank every member who helped New York ACEP lobby for this. Too many of our patients tomorrow will wait for a stretcher because there is no room. Then they will get their primary assessment performed in a hallway with screens covering them for privacy. Then they will spend a whole night not sleeping because

they will stay in the ED hall waiting overnight for their bed. We need to stand up with our partners in healthcare and say this isn't good enough. Our patients and our providers deserve better.

Many have stated that we are at a crossroads in healthcare. The patient of the future will be treated strictly as an outpatient. We all agree that care is moving more towards the outpatient setting, but that will not help my elderly pneumonia patient who failed outpatient therapy. She will be in my ED Monday, I just don't know her name yet. She and her providers deserve better.

I knew you were coming in with chest pain, I just didn't know your name yet.

WHAT'S INSIDE?

Features

Albany Update | 30
Ask the Experts | 25
Education | 11
EMS | 8
New York State of Mind | 17
Pediatrics | 27
Practice Management | 7
President's Message | 2
Sound Rounds | 3

Insights

Advocacy – It Doesn't Hurt a Bit | 23
The Emergency Physician's Role in Regionalizing Systems of Care | 13

Events

Calendar | 12
Call for Abstracts | 10
ED Director Forum | 24
Medical Student Symposium | 16
New Speaker Forum | 16
2016 LLSA | 26
Scientific Assembly | 14

SOUND ROUNDS



Penelope C. Lema, MD RDMS FACEP
 Director, Emergency Ultrasound Division and
 Fellowship; Assistant Professor, Department of
 Emergency Medicine, University at Buffalo

A Look From Above: Ultrasound Evaluation of the Aortic Arch at the Suprasternal Notch



Guest Author:
Howard Lin, MD
 Emergency Ultrasound Fellow
 Department of Emergency Medicine
 University at Buffalo, Buffalo, NY



Guest Author:
Sumir Shah, DO
 Emergency Medicine Resident
 Department of Emergency Medicine
 University at Buffalo, Buffalo, NY

Case:

A 60-year-old male with history of hypertension and chronic obstructive pulmonary disease (COPD) presents with sharp, tearing chest pain radiating to the back. Traditional bedside transthoracic cardiac ultrasound views are limited due to underlying COPD. In cases where the traditional cardiac point-of-care ultrasound (POCUS) is limited, the aortic arch may be evaluated for pathology from the suprasternal notch. The suprasternal notch view allows for visualization of the aortic arch, the brachiocephalic artery, the left common carotid artery and the left subclavian artery.

Indications:

- Chest pain.
- Back pain.
- Chest x-ray with widened mediastinum.
- Asymmetric blood pressures in upper extremities.
- Clinical suspicion for aortic dissection.

Technique:

- Place the patient in the supine position with neck in extension.
- Use a phased array transducer (5-1 MHz).
- Place the transducer in the suprasternal notch with the marker directed towards the patient's right side (Figure 1a).
- Direct the footprint of the transducer caudally into the thoracic cavity towards the aortic arch.
- Rotate the transducer marker counterclockwise anteriorly until a sagittal view of the aortic arch is obtained (Figure 1b).
- Fan the transducer side-to-side while adjusting the angle of the transducer to optimize the image (Figure 2).
- A sagittal view of the aortic arch allows visualization of the aortic arch, insertion of the brachiocephalic, left common carotid and left subclavian arteries, as well as a cross-section of the right pulmonary artery passing inferior to the aortic arch (Figure 3).
- Measure the aortic arch at the widest diameter during diastole to

evaluate for an aortic aneurysm. Use the leading-edge-to-leading-edge method by measuring from the outer wall to inner wall. A measurement > 40 mm is significant for a thoracic aortic aneurysm.



Figures 1a and 1b: Transducer placed at the suprasternal notch with the transducer marker (blue dot) towards the patient's right (1a). Rotate the transducer marker counterclockwise anteriorly (1b).

- Assess for the presence of an intimal flap to evaluate for an aortic dissection. Color Doppler flow and spectral Doppler can help differentiate between the true and false lumen (Figures 4a, 4b, 5a, and 5b).
- Once aortic pathology is visualized, rotate the transducer 90 degrees to obtain a transverse view of the aorta.
- Online video demonstration of the suprasternal notch view by Kinnaman: <https://www.youtube.com/watch?v=jZWV8JrZhiw>



Figure 2

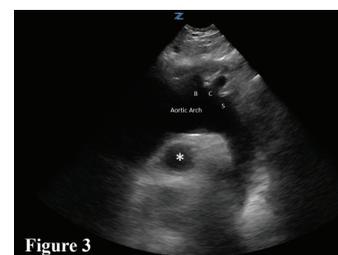


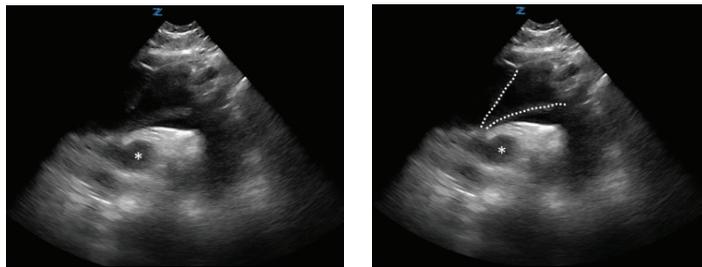
Figure 3

Figure 2: Fan the transducer side-to-side.
Figure 3: Ultrasound image of the aortic arch (sagittal) at the insertion of the brachiocephalic artery (B), left common carotid artery (C), left subclavian artery (S), and a cross-section of the right pulmonary artery (asterisk).

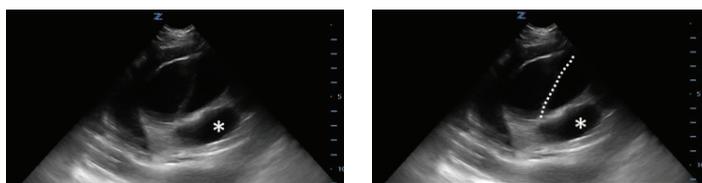
SOUND ROUNDS

Tips:

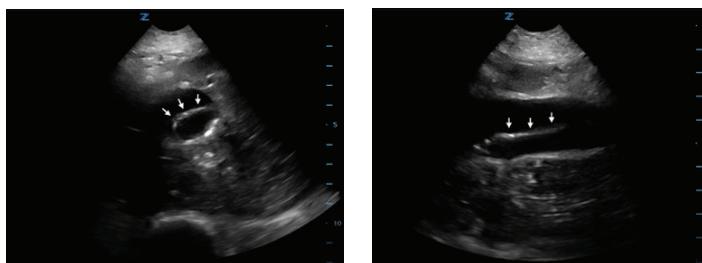
- A rolled towel placed under the neck of the patient may allow for better neck extension and positioning.
- Ensure that copious ultrasound gel is used to provide adequate contact with the transducer, given the recessed anatomy of the suprasternal notch.
- Wait between breaths, or have the patient hold his or her breath in expiration, for optimal image acquisition.
- Color Doppler can be used to help differentiate between the ascending and descending aorta.
- Understanding the trajectory of the aorta and how it travels posteriorly as it descends will help guide rotation of the transducer when trying to visualize the cross-section of the aortic arch.
- Ultrasound evaluation of the abdominal aorta will help assess the degree of aortic pathology (Figures 6a and 6b).



Figures 4a and 4b: Sagittal view of the aortic arch demonstrating aortic dissection with two intimal flaps (dotted white line). A cross-section of the right pulmonary artery (asterisk) is seen.



Figures 5a and 5b: Oblique view of the aortic arch demonstrating both an aortic aneurysm and an aortic dissection with intimal flap (dotted white line). A cross-section of the right pulmonary artery (asterisk) is seen.



Figures 6a and 6b: Transverse and sagittal views of a proximal abdominal aortic dissection with intimal flap (white arrows).

Pitfalls and Limitations:

- Operator experience.
- Patients with decreased cervical range of motion or with shorter necks may not be able to fully extend their neck, limiting the ability to angle the transducer enough to visualize the aortic arch.
- Patients with suspected traumatic aortic injury in cervical collars will have obstructive access to the suprasternal notch.
- Additional imaging such as CT angiogram may be needed to evaluate the full extent of aortic pathology, especially, if the abdominal aorta is not clearly visualized.
- The left brachiocephalic vein can be mistaken for an aortic dissection in certain views (Figure 7). Spectral Doppler can help differentiate between a vein, arterial branch and a true dissection.

References

1. Hussein, A., Hilal, D., Hamoui, O., Hussein, H., Abouzahr, L., Kabbani, S., & Chammas, E. (2009). Value of aortic arch analysis during routine trans-thoracic echocardiography in adults. *Eur J Echocardiogr*, 10(5), 625-629. doi:10.1093/ejehocardi/jep014
2. Kinnaman, K. A., Kimberly, H. H., Pivetta, E., Platz, E., Chudgar, A., Adduci, A., . . . Rempell, J. S. (2016). Evaluation of the Aortic Arch from the Suprasternal Notch View Using Focused Cardiac Ultrasound. *J Emerg Med*, 50(4), 643-650 e641. doi:10.1016/j.jemermed.2015.12.002
3. Rosenberg, H., & Al-Rajhi, K. (2012). ED ultrasound diagnosis of a type B aortic dissection using the suprasternal view. *Am J Emerg Med*, 30(9), 2084 e2081-2085. doi:10.1016/j.ajem.2011.11.012

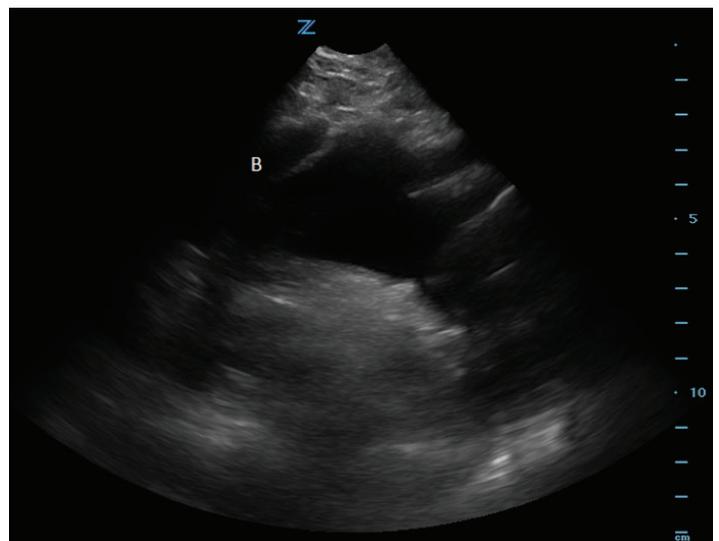


Figure 7: Sagittal view of the aortic arch where the left brachiocephalic vein (B) mimics the flap of an aortic dissection.

Special thanks to John DeAngelis, MD, Brian Monaco, MD, David Miles, DO and Nicholas Camposeo, DO for assistance with acquiring the ultrasound images.

SOUND ROUNDS

Be a Part of New York ACEP's Newsletter

The EPIC is published quarterly with publication dates in February, May, August and November. Insertion orders must be received by the 15th of the month preceding publication date. Advertisers who wish to run their ads in multiple issues of the EPIC may indicate that on the first insertion order.

Display Advertising	Full Color	B/W
Outside Back Cover (7" x 7.5")	\$1,300	Reserved 2017
Inside Front Cover (7" x 9.5")	\$1,200	Reserved 2017
Inside Back Cover (7" x 9.5")	\$1,100	n/a
Full Page (7" x 9.5")	\$1,000	\$800
Half Page (7" x 4.75" or 3.5" x 9.5")	\$600	\$400
Quarter Pages (3.5" x 4.75")	\$400	\$300
One – Eighth Page (3.5" x 2.375" or 2.375" x 3.5")	\$300	\$200

Classified Advertising

Sixty words or less, \$100 per issue; \$1 for each additional word. Minimum line charge is \$100.

LEADERSHIP OPPORTUNITY: TeamHealth is looking for an experienced Medical Director to lead our team at Kenmore Mercy Hospital in Kenmore, New York.

Perks of this opportunity:

- 34, 000 Annual volume facility
- 28 hours of Physician coverage/day
- 31 hours of APC coverage/day
- 24 hour Critical Care Team & 24 Hour Intensivist Program
- Resources to be an exceptional leader with a balanced clinical workload
- Excellent Administration Support
- Independent Contractor Model
- Sign on & relocation incentives
- Administrative Stipend

Qualifications:

- Strong communication and leadership skills
- BC in Emergency Medicine

Contact: Anne Brewer, Physician Recruiter, at anne_brewer@teamhealth.com or (865) 985-7177.

TEAMHealth

New York ACEP 2016-17 Board of Directors

President

Brahim Ardolic, MD FACEP
Staten Island University Hospital
718.226.9158

President-elect

Jeremy T. Cushman, MD MS FACEP
University of Rochester Medical Center
585.463.2900

Secretary-Treasurer

Keith E. Grams, MD FACEP
Rochester Regional Health
585.922.4638

Immediate Past President

Louise A. Prince, MD FACEP
SUNY Upstate Medical University
315.464.4363

Executive Director

JoAnne Tarantelli
New York ACEP
585.872.2417

2016-17 Directors

Nicole Berwald, MD FACEP
Staten Island University Hospital
718.226.8620

Sydney E. DeAngelis, MD FACEP
Brookhaven Memorial Hospital
Medical Center
631.654.7236

Frank L. Dimase, MD FACEP
St. Peter's Hospital
518.5251331

Mathew Foley, MD FACEP
SUNY Downstate Medical Center
718.270.8296

Justin M. Fuehrer, DO
Long Island Jewish Medical Center
resident representative

Stuart G. Kessler, MD FACEP
Elmhurst Hospital Center
718.334.3050

Penelope C. Lema, MD RDMS FACEP
University of Buffalo
716.859.1499

Laura D. Melville, MD
New York Methodist Hospital
718.780.5040

William F. Paolo, Jr., MD FACEP
SUNY Upstate Medical University
315.464.4363

Jeffrey S. Rabrich, DO FACEP
Mount Sinai St. Luke's-Roosevelt
Hospital Center
212.523.5827

Christopher C. Raio, MD MBA FACEP
Good Samaritan Hospital Center
631.376.3819

 **New York**
AMERICAN COLLEGE OF
EMERGENCY PHYSICIANS



**CLINICAL
EDUCATION
INITIATIVE**

NEW YORK STATE DEPARTMENT
OF HEALTH AIDS INSTITUTE

3 WAYS WE CAN HELP!

1



HIV GUIDELINES ONLINE

WWW.HIVGUIDELINES.ORG

Access HIV clinical guidelines for adult and pediatric care, mental health and substance use, pre-exposure prophylaxis and more!

2



CEI LINE

1.866.637.2342

Access to a specialist to discuss case-based HIV, HCV, STD, PEP or PrEP patient care.

3



FREE CE ONLINE and other educational resources

WWW.CEITRAINING.ORG

Earn CE credit at your leisure and stay abreast of HIV, HCV, STD, PEP and PrEP clinical updates.

PRACTICE MANAGEMENT



Moises Moreno, DO
Emergency Ultrasound Fellow
Good Samaritan Hospital Medical Center
Progressive Emergency Physicians



Christopher C. Raio, MD MBA FACEP
Chairman, Department of Emergency Medicine
Good Samaritan Hospital Medical Center
Progressive Emergency Physicians

Ultrasound Certification for Emergency Physicians: The Plot Thickens

In 1999, the American Medical Association (AMA) stated that ultrasonography is within the scope of practice of appropriately trained physicians and that each specialty should determine its appropriate use and training (Resolution 802, policy H-230.960). The American Board of Emergency Medicine lists point-of-care ultrasound as a “skill integral to the practice of Emergency Medicine”. The Emergency Medicine (EM) milestones project outlines resident competencies and also includes focused goal-directed ultrasound. Ultrasound is a core competency that must be integrated into the EM residency curriculum

***Another “merit badge”
that could ultimately
hinder the use of
ultrasound in clinical
practice and negatively
impact patient care.***

and residency training is designed to allow for the safe and effective use of ultrasound in daily clinical practice. In addition, in June 2014 ACEP approved a policy clearly opposing the use of any non-emergency medicine external certification processes to validate competency in the use of emergency ultrasound. The ACEP Clinical Ultrasound Accreditation Program (CUAP) launched last year promotes the goals of “quality, patient safety, communication, responsibility, and clarity regarding the use of clinical ultrasound”. Finally, the ACEP Emergency Ultrasound Guidelines revised and approved in June 2016 clearly

delineate training and proficiency pathways for emergency physicians.

Despite these advances, third party certification entities continue to advertise themselves as tools hospitals or departments can utilize to “verify” emergency physician proficiency with ultrasound. The most familiar is the Registered Diagnostic Medical Sonographer (RDMS) certification program, awarded by the American Registry for Diagnostic Medical Sonography (ARDMS). There have been numerous opinion pieces and letters to the editor in various publications regarding the superfluous nature of such a certification, as well as its inadequacies in proving competency in clinical, goal-directed, bedside ultrasound. The RDMS certification was designed for ultrasound technicians, is not clinically focused, and does not correlate with emergency physician use or expertise.

In response, ARDMS has since spun off a sister organization in June 2016: The Alliance for Physician Certification and Advancement (APCA). Their goal is “enabling physicians to secure certification in various types of medical imaging, offering outstanding customer care and simple maintenance of existing credentials”. This program was launched despite guidance from ACEP that such a program was not necessary, would not be supported, and should not be pursued. This is another attempt at external certification of a core requirement in emergency medicine training. Another “merit badge” that could ultimately hinder the use of ultrasound in clinical practice and negatively impact patient care. Our very training is our certification. It is true that training programs are not yet uniform, and that educational opportunities sometimes vary from program to program. However, these gaps are narrowing year over year. Emergency physicians must continue to address these issues and continue to provide access to appropriate training and continuing education to assure quality care and patient safety. Fortunately, the emergency ultrasound community is comprised of talented, energetic, expert leaders who have traditionally risen to this task and will continue to do so in order to move the specialty forward. We must be careful that we do not allow this third party certification to become a new standard necessary to prove competency for clinical use, credentialing, reimbursement or otherwise.



Carl S. Goodman, DO FACEP

Board Certified EMS

EMS Director

USACS of Suffolk | Brookhaven Memorial Hospital Medical Center

Intrathoracic Pressure Regulation; Cardiopulmonary Resuscitation Technique Enhancement

Standard Cardiopulmonary Resuscitation (S-CPR) alone is insufficient at best to result in favorable outcome for cardiac arrest. Currently, innovations and technology allow for monitoring of compression quality, means to improve S-CPR, provide mechanical compressions and augment hemodynamics through intrathoracic pressure regulation (IPR). Intrathoracic pressure regulation combines the use of an Impedance Threshold Device (ITD) and Active Compression Decompression (ACD) combined is the ResQCPR System.

Chest compressions were first reported in 1971 by Freidrich Maass and later as closed-chest cardiac massage described by Kouwenhoven, Jude and Knickerbocker in 1958^{1,2} James Alam and Peter Safir, credited as having been the first to formally study mouth to mouth breathing, was combined later with chest compressions, as we know it today.³ Studies demonstrate cardiac output is suboptimal and blood flow to the heart and brain is markedly decreased during S-CPR.^{4,5} Although first described in literature by Keith Lurie in JAMA 1990 as the Plumbers Helper, the index case was indeed resuscitated by the use of a household plunger.

A colleague of Dr. Lurie discovered that by occluding the top of an endotracheal tube the intrathoracic pressure decreases. Physiologically this enhances blood flow return to the heart. By enhancing cardiac blood return, cardiac output is augmented. This is facilitated by the ITD. The ITD, a device that can be used either with a face mask, supraglottic, extraglottic or attached to an endotracheal tube, limits inflow of air into the chest during the

recoil phase of CPR. Standard CPR alone generated systolic blood pressure of 43mmHg and diastolic of 15mmHg. Through the addition of the ITD, enhanced vacuum is created in the chest raising the systolic blood pressure to 85 and diastolic to 20.^{8,9}



Figure 1. ResQCPR Systems Instruction for use.



Figure 2. Summary of Safety and Effectiveness Data FDA March 6, 2015

The clinical benefit of the ITD came in to question and in 2015 the American Heart Association downgraded the recommendation for the use of an ITD during CPR to III.¹⁰ This led to removal of the ITD from emergency medical service protocols in many systems. Its use in hospitals did not achieve the same initial level of acceptance partly due to its cost and unproven value.¹¹ Subsequently reanalysis of data by separate authors demonstrated that when high quality CPR was performed, the addition of the ITD improved not only return of spontaneous circulation but neurological recovery as well.^{12,13} Return of spontaneous circulation and improved neurological function is further enhanced by the use of ACD.¹⁴

Active Compression Decompression improves blood flow return to the heart by enhancing the negative intrathoracic pressure by augmenting recoil through active lift on the chest hyper expanding it on the up stroke of chest compressions. Studies by Pirralo and Plaisance earlier demonstrated a systolic blood pressure of 108 and diastolic of 56 when CPR was performed with ITD + ACD.^{8,9} The ResQTrial evaluated ACD+ITD versus S-CPR. Forty-six emergency medical services agencies participated in the trial. The primary endpoint was survival to hospital discharge with good neurological function (modified Rankin scale ≤ 3). 813 were assigned to S-CPR group, control and 840 were assigned to the intervention group and included in the final analysis. Forty-seven (6%) of 813 controls who survived to hospital discharge had a favorable neurological outcome compared with 75 (9%) of 840 patients in the interven-

EMS

tion group.¹⁴

The currently available device also assists rescuers with optimal CPR through the use of:

- an audible metronome to guide compression rate
- a visual display of force applied during compression and decompression
- timing light for ventilations at a rate of 10 per minute

Indications for the use of ITD +ACD include non-traumatic cardiopulmonary arrest. Contraindications; none known. Warning and precautions; chest must be of sufficient size to accommodate the device. It should not be used within 6 months of a recent sternotomy. Improper use can cause serious internal injury and potential adverse events are similar to standard CPR. Case reports have indicated patients requiring intra arrest sedation due to the presence of purposeful movement including grasping toward the endotracheal tube and eye opening.¹⁵ In addition, the suction cup of the ACD may leave an area of ecchymosis at chest contact points. The use of the ACD and ITD should be discontinued if a patient has ROSC. The use in hospital setting has not been studied. However, the physiological benefit theoretically is unchanged, although outcome benefit may be variable compared to the out of hospital population. Its effectiveness and safety has not been studied in patients under 18 years of age or pregnant women.

Personal experience thus far has been limited to simulated resuscitation. The didactic portion of the education takes approximately 45 minutes and students are encouraged to first complete the free online educational module at www.americanme.com. Practical skills are

an additional 30-45 minutes. Because of the required lift force, physical exertion is more demanding than S-CPR and more frequent rotation of operators may be necessary than during standard compressions.

There is little evidence to support many of the current modalities to improve CPR benefit outcome and neurological function. With current survival from out of hospital cardiac arrest at 12% nationally.¹⁷ Intrathoracic pressure regulation should be strongly considered as an adjunct to CPR in the out of hospital setting and studies are needed to establish benefit for the in hospital setting.

Disclosure: Dr. Goodman attended a workshop hosted by Zoll Medical Corporation in June of 2016 and is currently evaluating practical application with Port Jefferson Emergency Medical Services, Mount Sinai, NY.

References

1. www.cpr.heart.org
2. Committee on CPR of the Division of Medical Sciences, National Academy of Sciences-National Research Council, Cardiopulmonary resuscitation, JAMA 1966;198:372-379 and 138-145.
3. Safar P. History of cardiopulmonary-cerebral resuscitation, in Kay W and Bircher N, Cardiopulmonary Resuscitation, Churchill Livingstone, 1989, New York, pg 1-53.
4. Duggal et al. J Appl Physiol 1993;74(1):147-152.
5. Andreaka et al. Curr Opin Crit Care. 2006;12(3):198-203.
6. Lurie et. al. CPR: The P Stands for Plumbers Helper. JAMA. 1990; 264(13):1661-1661.
7. Personal communication, Keith Lurie. June 2016.
8. Pirrallo et al. Resuscitation 2005.
9. Plaisance et al. Circulation 2000.
10. American Heart Association. Web-based Integrated Guidelines for Cardiopulmonary Resuscitation and Emergency Cardiovascular Care – Part 6: Alternative Techniques and Ancillary Devices for Cardiopulmonary Resuscitation. ECCguidelines.heart.org
11. Aufderheide TP, Nichol G, Rea TD, Brown SP, et. al. Resuscitation Outcomes Consortium (ROC) Investigators. A trial of an impedance threshold device in out-of-hospital cardiac arrest. N Engl J Med. 2011;365:798-806.
12. Yannopoulos D, Aufderheide TP, Abella B S, et. al. Quality of CPR: An Important Effect Modifier in Cardiac Arrest Clinical Outcomes and Intervention Effectiveness Trials. Resuscitation 94(2015) 106-113.
13. Sugiyama A, Duval S, Nakamura Y, et. al. Impedance Threshold Device Combined with High Quality Cardiopulmonary Resuscitation Improves Survival with Favorable Neurological Function After Witnessed Out-of-Hospital Cardiac Arrest. Circulation Journal. www.j-circ.or.jp. Sept. 9, 2016.
14. Aufderheide TP, Frascone RK, Wayne MA, et. al. Standard Cardiopulmonary Resuscitation Versus Active Compression-Decompression Cardiopulmonary Resuscitation with Augmentation of Negative Intrathoracic Pressure for Out-of-Hospital Cardiac Arrest: A Randomized Trial. The Lancet. 2011;377:301-311.
15. Personal communication Michael Herbert & Michael McLaury. August 2016.
16. ResQCPR Instructions for Use. Zoll. 2016.
17. Heart Disease and Stroke Statistics. 2016 Out-of-Hospital Cardiac Arrest Survivor Rate. American Heart Association. www.cpr.heart.org. 2016.



Find us on:
facebook®



Follow us on Twitter
@NYACEP

Announcing New York ACEP 2017 Research Forum Call for Abstracts



The New York American College of Emergency Physicians is now accepting abstracts for review for oral and poster presentation at the 2017 Scientific Assembly, July 11-13, at the Sagamore Resort on Lake George in Bolton Landing, New York.

The **Research Forum**, including both oral and poster presentations, will be held Tuesday, July 11 at 12:30 pm. This forum is designed to feature and foster resident and faculty research. Topics may address the broad range of emergency medicine practice and educational development. Preference will be given to work completed at the time of submission. **Authors and institutions should not be identified in any way on the page containing the abstract.**

Abstract submissions must be in electronic format (Microsoft Word) and must include the following subsections, Title, Objectives, Methods (include design, setting, type of participants), Results and Conclusion. The abstract should be written in complete sentences using grammatically correct English. Spell out all abbreviations on first usage. Abstracts are limited to 3,000 characters (excluding spaces). Accepted abstracts will be published as received; no copy editing will be done. Send abstracts by e-mail to nyacep@nyacep.org. Use abstract title in subject line.

Illustrations are discouraged; however, if critical, one (1) small table may be included. Figures, tables and photos must be black and white with a resolution of at least 300 dpi. Note: tables, figures and illustrations will be considerably reduced when published causing loss of detail. Please consider this when determining whether to include these.

Including the following information on the submission form for each abstract:

1. Title of the abstract;
2. Author(s) and affiliations;
3. IRB approval or exemption;
4. Contact person's mailing address, phone/fax numbers and e-mail address;
5. Information regarding previous presentations or publication;
6. Potential conflicts by author;
7. If accepted, indicate who will present the abstract July 11, 2017 and their role in the project; and
8. State preference for oral or poster presentation (or no preference).
9. Identification of resident if s/he will likely be first or second author on manuscript.

Although we are interested in original work, consideration will be given to abstracts presented at other conferences (SAEM, ACEP).

Oral presentations will be allocated 10 minutes followed by 5 minutes of Q&A. Twenty-four poster presentations will be allocated 5 minutes followed by 3 minutes of Q&A. Other poster submissions will be selected for display. All presenters (oral or poster) are expected to have had a significant role in the execution and report preparation of the project being presented.

About the Process: There will be a blind review of all abstracts. Notification letters will be sent April 24, 2017. We regret we cannot give notification information by telephone.

deadline
April 3, 2017
11:59 pm Eastern

Coming Soon



**2017 Scientific
Assembly**



**at the
Sagamore
Resort**



EDUCATION



Guest Author:
Pinaki Mukherji, MD FAAEM FACEP
Residency Program Director, Emergency Medicine
Long Island Jewish Medical Center, Northwell Health
Assistant Professor, Hofstra Northwell School of Medicine



Kaushal H. Shah, MD FACEP
Residency Director Emergency Medicine
Icahn School of Medicine at Mt. Sinai

In-situ Simulation in the Emergency Department: Benefits, Challenges, and Getting Started

What is deliberate practice? Is it merely repetition over time, or the “10,000 hours towards expertise”? How does it inform our teaching and the practice we expect from our trainees?

Training in multiple disciplines has evolved over time, with more effective techniques supplanting the old, and seeing the achievements of high performers surpass those who have come before. This is evident in the constant march of improved Olympic trial times as well as improved sepsis outcomes. A training regimen that pays attention to the components of deliberate practice may allow for more rapid and directed progression of skills. Deliberate or purposeful practice are terms coined by Anders Ericsson, a psychologist who studies the development of expertise. After making studies of expert performance in multiple fields, he noted similarities in the most successful training regimens that cut across many different disciplines.¹ He makes the case that improved performance comes not just from repetition but from focused repetition on the correct actions.² Unlike ‘naive’ practice which involves doing the same thing over and over expecting improvement, this model of deliberate practice involves making mental representations of the task, breaking down complex tasks into chunks, getting feedback on which chunks need improvement to focus on and setting specific outcome goals as metrics of success.

Deliberate practice requires repetition, but with focus and feedback. The “10,000 hour rule,” popularized by Malcolm Gladwell as the amount of practice time that bestows expertise,³ comes from the average time that highly ranked violin students practiced by the time they were twenty. These were students, not world class experts, half of whom had practiced far less than this “magic number.” Ericsson explains that some students in his studies who practiced purposefully achieved great gains in a shorter time, while it is possible to practice “naively” indefinitely without progress. Teaching with the principles of deliberate practice in mind can improve skill acquisition.⁴

Procedural training, for example, has come far from the days of “see one, do one, teach one.”⁵ While there are patient safety and ethical rationales for this evolution,⁶ it has likely also benefited trainees in how quickly they develop expertise. Current approaches to procedural teaching fit into a deliberate practice framework. Best practices in teaching a procedure⁷ such as central venous access, for example, might involve pre-work (assess level of previous experience, ask trainee to describe),

review of a text or online resource (share mental model between trainee and teacher, set expectations), performing the procedure with direct observation (assessment and immediate corrective actions, often referred to as “guided practice”), and then a debrief.

The elements of procedural teaching which fit into a deliberate practice model are clear. There is a mental representation of the skill, which is reinforced just prior to the procedure by reading a text review, viewing a video, or verbalizing the process. This might vary according to the perceived experience of the performer. The skill can be broken down into multiple steps, or microskills, such as the online review by Dr. Scott Weingart on Central Line Placement.⁸ The observer can provide feedback on the elements of the procedure which were the perceived weakest links. Then the trainee focuses on improving that particular microskill during preparation and in subsequent attempts. The process repeats itself and there are well defined goals: procedure performed, patient safety and outcomes.

Some areas of Emergency Medicine practice are becoming more and more procedure-like, including our approaches to trauma or sepsis. Once recognized (which is sometimes no small feat in and of itself), there is a shared mental representation and a checklist of steps to achieve, with metrics for best practice. Progression of trainees working to improve their trauma or sepsis care could thus be put into a deliberate practice framework. Simulation training is also an excellent modality to apply deliberate practice, particularly for skillsets that are required of emergency medicine physicians but are rarely put into clinical practice.⁹ Where the clinical bedside setting may result in trial-and-error learning, SIM provides opportunity for planned repetition, variation, and direct observation.¹⁰ Our most evidence based feedback instrument, R2C2, (so called for relationship building, exploring reactions, understanding content, and coaching)¹¹, also incorporates some elements of purposeful practice, including a learner-set goal which is outcome based.

Studies of deliberate or purposeful practice in medicine have been mainly among procedures and surgical skills, and imaging and radiological diagnosis.¹² But medical educators may wish to incorporate deliberate practice more broadly. Applying it to improving performance in history taking, speed and efficiency, or even effective documentation may be possible. What are the key microskills of taking a history? How often are we providing observation and directed feedback for our learners at the

EDUCATION

bedside? Deliberate practice may inform our current training regimens in far more than procedural expertise.

References

- Ericsson, KA, Pool, R (2016). Peak: Secrets from the new science of expertise.
- Ericsson, KA. Deliberate practice and the acquisition and maintenance of expert performance in medicine and related domains. *Acad. Med.* 2004; 79: S70-81.
- Gladwell, M. (2008) *Outliers: The Story of Success*. New York: Little, Brown and Co.
- Ericsson, KA. Deliberate practice and acquisition of expert performance: A general overview. *Acad Emerg Med.* 2008; 15: 988-994.
- Vozenilek, J, Huff, JS, Reznick, M, Gordon, JA. See one, do one, teach one: advanced technology in medical education. *Acad. Emerg. Med.* 2004; 11:1149-1154.
- Rodriguez-Pas, JM, Kennedy, M, Salas, E, et. al. Beyond “see one, do one, teach one”: toward a different training paradigm. *Qual. Saf. Health Care.* 2009; 18:63-8.
- Torres, M, Moayed, S. (2009). Teaching Procedures: beyond “see one, do one, teach one” In RL Rogers (Ed.), *Practical Teaching in Emergency Medicine*. (pp. 48-59) Hoboken, NJ: Wiley- Blackwell.
- Weingart, S. (2015, Sep. 12). Central Line Microskills (Deliberate Practice) [Blog post]. Retrieved from <http://emcrit.org/wee/central-line-micro-skills-deliberate-practice/>
- Issenberg SB, Megaghie WC. Features and uses of high-fidelity medical simulations that lead to effective learning: a BEME systematic review.
- Causier, J, Barach, P, Williams, AM. Expertise in medicine: using the expert performance approach to improve simulation training. *Medical Education.* 2014; 48: 115-123.
- Sargeant J, Armson H, Driessen E, et al. Evidence-informed facilitated feedback: the R2C2 feedback model. *MedEdPORTAL Publications.* 2016;12:10387.
- McGaghie, WC, Issenberg, SB, Cohen, ER, Barsuk, JH, and Wayne, DB. Medical education featuring mastery learning with deliberate practice can lead to better health for individuals and populations. *Acad Med.* 2011; 86(11): e8-9.

Calendar

March 2017

- 1 Emergency Medicine Resident Committee Conference Call, 2:00 pm
- 7 Lobby Day 9:00 am - 1:30 pm - Albany, New York
- 7 Board of Directors Meeting - 1:30 pm - 4:30 pm - Albany, New York
- 8 Education Committee Conference Call, 2:45 pm
- 8 Professional Development Conference Call, 3:30 pm
- 9 Practice Management Conference Call, 1:00 pm
- 12-15 ACEP Legislative Advocacy Conference and Leadership Summit, Washington DC
- 15 Government Affairs Conference Call, 11:00 am
- 15 Research Committee Conference Call, 3:00 pm
- 16 EMS Committee Conference Call, 2:30 pm
- 17 2016 LLSA Course, Syracuse New York, 8:30 am - 1:00 pm

April 2017

- 5 Emergency Medicine Resident Committee Conference Call, 2:00 pm
- 5 Medical Student Symposium and Residency Fair, Mount Sinai Beth Israel Medical Center, 6 pm -9:30 pm
- 12 Education Committee Conference Call, 2:45 pm
- 12 Professional Development Conference Call, 3:30 pm
- 13 Practice Management Conference Call, 1:00 pm
- 19 Government Affairs Conference Call, 11:00 am
- 19 Research Committee Conference Call, 3:00 pm
- 20 EMS Committee Conference Call, 2:30 pm

May 2017

- 3 Emergency Medicine Resident Committee Conference Call, 2:00 pm
- 10 Board of Directors Meeting - 1:30 pm - 5:30 pm - New York, New York
- 10 Education Committee Conference Call, 2:45 pm
- 10 Professional Development Conference Call, 3:30 pm
- 11 ED Director Forum, New York Academy of Medicine, 8:00 am - 4:00 pm - New York, New York
- 11 Practice Management Conference Call, 1:00 pm
- 17 Government Affairs Conference Call, 11:00 am
- 17 Research Committee Conference Call, 3:00 pm
- 18 EMS Committee Conference Call, 2:30 pm

June 2017

- 7 Emergency Medicine Resident Committee Conference Call, 2:00 pm
- 8 Practice Management Conference Call, 1:00 pm
- 14 Education Committee Conference Call, 2:45 pm
- 14 Professional Development Conference Call, 3:30 pm
- 15 EMS Committee Conference Call, 2:30 pm
- 21 Government Affairs Conference Call, 11:00 am
- 21 Research Committee Conference Call, 3:00 pm



Jeremy T. Cushman, MD MS EMT-P FACEP
Associate Professor and Chief
Division of Prehospital Medicine
University of Rochester

The Emergency Physician's Role in Regionalizing Systems of Care

As we are all aware, hospitals and systems are merging, acquiring, and aligning. What this means for patient care is yet to be seen, but more and more emergency physicians are playing key and active roles in these systems of care. An area that continues to receive significant attention at the regional and national level is developing systems of care for stroke and STEMI patients, and this is a prime opportunity for emergency physicians to directly influence processes that will no doubt impact our practice patterns for better, or worse.

Regardless of whether we agree with all of the science that backs published guidelines, the standard for STEMI management is percutaneous coronary intervention (PCI) within 90 minutes of first medical contact (FMC). Although fortunately most areas of our state have the ability to perform prehospital 12 lead EKGs, depending on geographic and population heterogeneity in the use of the 911 system as the point of FMC, on average only two thirds of STEMI patients present via EMS. As we know, patients present to non-PCI centers all the time, and for the STEMI patient, the goal is fibrinolytics within 30 minutes of arrival, with secondary transfer to a PCI center with a door-in-door-out (DIDO) time of less than 30 minutes.

No doubt, that is a lot of moving parts, and there are some Emergency Departments (EDs) that do it incredibly well. But inherently there are those processes that are internal to our departments that we have direct control over, and those that are less within our control that are essential to building a system of care – regardless of whether its STEMI, stroke,

or even trauma – many of these processes are identical. In the case of STEMI, we can control performing EKGs within 10 minutes of triage, establishing thrombolytic checklists, making lytics available in the ED without having to get them from pharmacy, and physician and nursing staff being comfortable with administering the drug. But there are others that require discussion, cooperation, and collaboration with outside parties – such as your receiving PCI center(s) and the interfacility transport service you will use to transfer your patient. Will you use a ground unit or an air unit, and how will you decide? Are they able to continue the lytic infusion and/or any additional medications that may be running? How long will it take them to arrive to your facility to achieve your goal of less than 30 minutes DIDO? Do you have a pre-plan to call the transport service at the time of diagnosis, even before the specialty center has accepted to help reduce your DIDO? Although it may be argued whether minutes in these circumstances make a clinical difference, they are measurable and therefore become important “quality” measures that we are often held to.

The challenges surrounding stroke care are even more complicated as we do not have a simple diagnostic test (EKG) to determine the presence or absence of the disease process (STEMI) requiring a common intervention (tPA or PCI). Although the Cincinnati Prehospital Stroke Severity Score is used throughout New York to aid prehospital personnel in identifying acute strokes, its sensitivity and specificity is only moderate. Further, in our burgeoning cerebrovascular thrombectomy

era, the ability for EMS providers to identify middle cerebral artery strokes that may benefit by interventional therapy and route those patients to centers capable of such interventions remains elusive as there are no validated clinical assessment tools with high enough sensitivity and specificity for widespread use. This may result in ineffective prehospital triage of patients to the appropriate facility which means that rapid ED evaluation and subsequent transfer may be even more important – as the quality metrics for stroke are just as narrow: Last Known Well (LKW) to thrombolytic administration within 3.5 hours and a DIDO of less than 30 minutes for secondary transfer of patients eligible for thrombectomy, and thrombectomy patient's goal of LKW to device of 4.5 hours. Does your ED have systems in place to achieve these goals? Fortunately, many are the same as STEMI management from a process perspective, which may aid in standardization and process redundancy.

If that were not enough, the next challenge is how do we facilitate the system of care to achieve the target metrics for the population we serve, regardless of the hospital they go to. That is, for the patient with an acute STEMI or stroke but their geography prohibits their FMC to PCI within 90 minutes or LKW to stroke center within 3.5 hours, are there ways we support our system to initially transport to a facility that can begin thrombolysis with subsequent transfer (when necessary) to the specialty facility while minimizing DIDO and total out of hospital time (the so-called “drip and ship” model)? I certainly

believe there are (else I would not be writing this article!) but essential to this conversation is the perspective of the emergency physician.

As you may be aware, in some areas of our state these systems of care are well developed and facilitated through initiatives such as the American Heart Association Mission Lifeline Program for STEMI and ongoing dis-

cussions and meetings with the American Heart Association | American Stroke Association and the New York State Department of Health Coverdell program for stroke. Your leadership as an emergency physician in these conversations is absolutely essential to assure that the systems of care within which we operate are crafted with our clinical expertise as well as our

strong understanding of geography and referral patterns as it relates to access to specialty care. Emergency physicians must be at the center of efforts to regionalize systems of care, so I urge you to both refine the process in which you have control over, and take an active part in collaborating with others to influence those you do not.

Empire State EPIC

EMERGENCY PHYSICIANS' INTERIM COMMUNIQUE
of the New York American College of Emergency Physicians

EMPIRE STATE EPIC is the newsletter of the New York American College of Emergency Physicians (New York ACEP). The opinions expressed in this newsletter are not necessarily those of New York ACEP. New York ACEP makes a good faith effort to ascertain that contributors are experts in their field. Readers are advised that the statements and opinions expressed by the author are those of the author and New York ACEP is not responsible for, and expressly disclaims all liability for, damages of any kind arising out of use of, reference to, reliance on, or performance based on information or statements contained in this newsletter.

NEWS STAFF

JoAnne Tarantelli, Executive Director
New York American College of Emergency Physicians
1130 Crosspointe Lane, Suite 10B
Webster, NY 14580-2986

p (585) 872-2417

f (585) 872-2419

www.nyacep.org



Scientific Assembly
July 11-13, 2017

Sagamore Resort
on Lake George

Register online at
www.nyacep.org



Call for Board and Councillor Nominations

Board Nominations

Active members of New York ACEP who meet the criteria and are interested in serving on the Board of Directors are encouraged to submit their nominations to the 2017 Nominating Committee for consideration as the Committee develops the slate of candidates.

Four directors will be elected by the membership through a proxy ballot distributed at least 30 days prior to the annual membership meeting. The annual membership meeting will be held Wednesday, July 12, 2017 at the Sagamore Resort on Lake George.

Board Members With Terms Ending in 2017

Penelope C. Lema, MD FACEP
Keith Grams, MD FACEP*
Christopher C. Raio, MD MBA FACEP*

**These board members are eligible for reelection to a second, three-year term.*

Interested candidates should review the Criteria for New York ACEP Board Nomination, Board Member Duties & Responsibilities, and send a completed nomination form along with a copy of their CV to New York ACEP by **March 31, 2017**. Self nomination and nominations of colleagues are accepted. To request the policies and nomination form, contact New York ACEP at (585) 872-2417 or by email at nyacep@nyacep.org.

Successful nominees will be notified after May 10, 2017. Board candidates are required to submit background information on their professional career, a photograph and answer questions posed to all board candidates. Candidates will have approximately two weeks to submit material.

Councillor Nominations

Active members of New York ACEP interested in serving as a New York ACEP Councillor are encouraged to submit their nomination(s) to the 2017 Nominating Committee for consideration as the committee develops the slate of candidates.

Councillors With Terms Ending in 2018

Samuel F. Bosco, MD FACEP
Jeremy Cushman, MD FACEP
Jason D'Amore, MD FACEP
Michael G. Guttenberg, DO FACEP
Abbas Husain, MD FACEP
Stuart G. Kessler, MD FACEP
Joshua B. Moskovitz, MD MBA MPH FACEP
Nestor B. Nestor, MD FACEP
Salvatore R. Pardo, MD FACEP
Jeffrey Rabrich, DO FACEP
Christopher C. Raio, MD MBA FACEP
James G. Ryan, MD FACEP
Frederick M. Schiavone, MD FACEP
Virgil W. Smaltz, MD MPH FACEP
Peter Viccellio, MD FACEP
resident representative

Councillors With Terms Ending in 2017

Brahim Ardolic, MD FACEP
Jay M. Brenner, MD FACEP
Theodore J. Gaeta, DO MPH FACEP
Sanjey Gupta, MD FACEP
David C. Lee, MD FACEP
Penelope C. Lema, MD FACEP
Daniel G. Murphy, MD MBA FACEP
William F. Paolo Jr, MD FACEP
Gary S. Rudolph, MD FACEP

The Board of Directors will elect 11 councillors at the Thursday, July 13, 2017 Board meeting at the Sagamore Resort. Members interested in representing New York ACEP at the ACEP Annual Council Meeting, (October 27-October 28, 2017 in Washington, DC), should submit a nomination form and their CV to New York ACEP. New York ACEP will be represented by 27 councillors at the 2017 ACEP Council meeting.

Nomination Deadline March 31, 2017

Medical Student Symposium



This informative program will highlight critical issues for medical students considering a career in emergency medicine. Presentations will include insights into the day-to-day lives of emergency medicine residents and attendings and information on choosing a residency program. Ask questions and get answers.

REGISTER TODAY AT WWW.NYACEP.ORG

Registration for medical students is FREE (pre-registration required). Register online at www.nyacep.org or send your name, medical school affiliation and anticipated year of graduation to New York ACEP:

phone (585) 872-2417 fax (585) 872-2419
email nyacep@nyacep.org online www.nyacep.org



New Speaker Forum

If you are considering professional speaking and would like to gain experience, New York ACEP's New Speaker Forum was designed for you. Here, New York ACEP will showcase members who are dynamic lecturers, but may be new to presenting at the state or regional level.

Speakers must be attending physicians, who are New York ACEP members, and have never presented at the national level. This opportunity is open to graduating residents that will be practicing emergency medicine in New York after graduation

The topic for the New Speaker Forum is "Best Practices in Emergency Medicine." The Forum will be held Tuesday, July 11 from 3:30-4:30 pm, at the Sagamore Resort on Lake George. Applicants will be selected to give a 15 minute presentation.

Candidates interested in presenting at New York ACEP's New Speaker Forum need to apply by 11:59 pm March 13, 2017.

Read more at <https://www.nyacep.org/new-speaker-forum>

NEW YORK STATE OF MIND



Compiled By:
Theodore J. Gaeta, DO MPH FACEP
Residency Program Director
New York Methodist Hospital

Enabling Donation After Cardiac Death in the Emergency Department: Overcoming Clinical, Legal, and Ethical Concerns.

Dailey M, Geary SP, Merrill S, Eijkholt M; Department of Emergency Medicine, Albany Medical Center Hospital, Albany, New York; *J Emerg Med.* 2017 Jan 19.

BACKGROUND: In light of the growing gap between candidates for organ donation and the actual number of organs available, we present a unique case of organ donation after cardiac death. We hope to open a discussion regarding organ procurement from eligible donors in the prehospital and emergency department setting.

CASE: This case study, involving an otherwise healthy man who, after suffering an untimely death, was able to successfully donate his organs, highlights the need to develop an infrastructure to make this type of donation a viable and streamlined option for the future.

DISCUSSION: Given the departure from traditional practice in United States transplantation medicine, we bring forth legal and ethical considerations regarding organ donation in the emergency department. We hope that this case discussion inspires action and development in the realm of transplant medicine, with the aim of honoring the wishes of donors and the families of those who wish to donate in a respectful way, while using our medical skills and technologies to afford candidates who are waiting for organs a second chance.

CONCLUSIONS: We believe that this case shows that donation after cardiac death from the emergency department, while resource-intensive is feasible. We recognize that in order for this to become a more attainable goal, additional resources and systems development is required.

Missed Myocardial Infarctions In ED Patients Prospectively Categorized As Low Risk By Established Risk Scores.

Singer AJ, Than MP, Smith S, McCullough P, Barrett TW, Birkhahn R, Reed M(7), Thode HC(8), Arnold WD, Daniels LB, de Filippi C, Headden G, Peacock WF; Department of Emergency Medicine, Stony Brook University, Stony Brook; *Am J Emerg Med.* 2017 Jan 5.

STUDY OBJECTIVES: Few studies have prospectively compared multiple cardiac risk prediction scores. We compared the rate of missed acute myocardial infarction (AMI) in chest pain patients prospectively categorized as low risk by unstructured clinical impression, and by HEART, TIMI, GRACE, and EDACS scores, in combination with two negative contemporary cardiac troponins (cTn) available in the U.S.

METHODS: We enrolled 434 patients with chest pain presenting to one of seven emergency departments (ED). Risk scores were prospectively calculated and included the first two cTn. Low risk was defined for each score as HEART \leq 3, TIMI \leq 0, GRACE \leq 50, and EDACS \leq 15. AMI incidence was calculated for low risk patients and compared across scores using X(2) tests and C statistics.

RESULTS: The patients' median age was 57, 58% were male, 60% white, and 80 (18%) had AMI. The missed AMI rate in low risk patients for each of the scores when combined with 2 cTn were HEART 3.6%, TIMI 0%, GRACE 6.3%, EDACS 0.9%, and unstructured clinical impression 0%. The C-statistic was greatest for the EDACS score, 0.94 (95% CI, 0.92-0.97).

CONCLUSIONS: Using their recommended cutpoints and non high sensitivity cTn, TIMI and unstructured clinical impression were the only scores with no missed cases of AMI. Using lower cutpoints (GRACE \leq 48, TIMI=0, EDACS \leq 11, HEART \leq 2) missed no case of AMI, but classified less patients as low-risk.

Serum Calcium Concentration in Ethylene Glycol Poisoning.

Hodgman M, Marraffa JM, Wojcik S, Grant W; Department of Emergency Medicine, Upstate Medical University, Syracuse; *J Med Toxicol.* 2017 Jan 12.

INTRODUCTION: The diagnosis of ethylene glycol intoxication can be challenging. Definitive testing for ethylene glycol is not readily available and clinical decisions are often based on clinical suspicion and the results of more readily available tests. One of these findings is hypocalcemia, presumable through complexation with the ethylene glycol metabolite oxalate.

METHODS: We performed a retrospective review of all patients admitted to a tertiary care hospital between 2005 and 2013 with laboratory confirmed ethylene glycol intoxication. Serum calcium on presentation was compared to blood gas pH on presentation as well as presentation serum bicarbonate.

RESULTS: We did not find any relationship between calcium and serum pH either by linear regression or when dichotomized by pH \geq or $<$ 7.3. We did observe an inverse relationship between serum calcium and bicarbonate.

CONCLUSIONS: Hypocalcemia is not commonly observed following ethylene glycol poisoning, even in acidotic patients.

The Use of Ultrasound-Measured Optic Nerve Sheath Diameter to Predict Ventero-peritoneal Shunt Failure in Children.

Lin SD, Kahne KR, El Sherif A, Mennitt K, Kessler D, Ward MJ, Platt SL; Division of Emergency Medicine, Department of Medicine, Weill Cornell Medical College, New York; *Pediatr Emerg Care.* 2017 Jan 9.

OBJECTIVE: The goal of this study was to assess the accuracy of ultrasound-measured optic nerve sheath diameter (ONSD) as a

NEW YORK STATE OF MIND

screen for ventriculoperitoneal shunt failure.

METHODS: We prospectively enrolled a convenience sample of children presenting to the ED with suspected shunt failure. The ONSD was measured by ultrasound and compared with computed tomography/magnetic resonance imaging (CT/MRI) and neurosurgical impression. We defined shunt failure on ultrasound as an ONSD greater than 4.0 mm in infants 12 months and younger or greater than 4.5 mm in children older than 12 months. A single emergency radiologist at our institution read all CTs and MRIs for categorical determination of shunt failure. We defined shunt failure based on neurosurgical impression as a decision to admit and perform shunt revision. We report test characteristics and 95% confidence intervals of ONSD as a predictor for shunt failure.

RESULTS: We enrolled 32 subjects. The sensitivities of ONSD compared with CT/MRI and neurosurgical impression, 60.0% and 75.0%, respectively, were low. However, the negative predictive values of ONSD compared with CT/MRI and neurosurgical impression were 90.0% and 95.0%, respectively.

CONCLUSIONS: Optic nerve sonography may be a useful tool to identify children presenting with suspected ventriculoperitoneal shunt failure who do not require further imaging. This would reduce the use of CT scan and exposure to ionizing radiation in children with suspected shunt malfunction who do not require neurosurgical intervention. Consideration of additional risk factors and a larger sample size may yield stronger results.

Acute Salicylate Poisoning: Risk Factors for Severe Outcome.

Shively RM, Hoffman RS, Manini AF; Mount Sinai Emergency Medicine Residency Program, Icahn School of Medicine at Mount Sinai, New York; Clin Toxicol (Phila). 2017 Jan 9:1-6.

CONTEXT: Salicylate poisoning remains a significant public health threat with more than 20,000 exposures reported annually in the United States.

OBJECTIVE: We aimed to establish early predictors of severe in-hospital outcomes in Emergency Department patients presenting with acute salicylate poisoning.

METHODS: This was a secondary data analysis of adult salicylate overdoses from a prospective cohort study of acute drug overdoses

at two urban university teaching hospitals from 2009 to 2013. Patients were included based on confirmed salicylate ingestion and enrolled consecutively. Demographics, clinical parameters, treatment and disposition were collected from the medical record. Severe outcome was defined as a composite occurrence of acidemia (pH <7.3 or bicarbonate <16 mEq/L), hemodialysis, and/or death.

RESULTS: Out of 1,997 overdoses screened, 48 patients met inclusion/exclusion criteria. Patient characteristics were 43.8% male, median age 32 (range 18-87), mean initial salicylate concentration 28.1 mg/dL (SD 26.6), and 20.8% classified as severe outcome. Univariate analysis indicated that age, respiratory rate, lactate, coma, and the presence of co-ingestions were significantly associated with severe outcome, while initial salicylate concentration alone had no association. However, when adjusted for salicylate concentration, only age (OR 1.13; 95% CI 1.02-1.26) and respiratory rate (OR 1.29; 95% CI 1.02-1.63) were independent predictors. Additionally, lactate showed excellent test characteristics to predict severe outcome, with an optimal cutpoint of 2.25 mmol/L (78% sensitivity, 67% specificity).

CONCLUSIONS: In adult Emergency Department patients with acute salicylate poisoning, independent predictors of severe outcome were older age and increased respiratory rate, as well as initial serum lactate, while initial salicylate concentration alone was not predictive.

The Role of Reduced Heart Rate Volatility in Predicting Disposition From the Emergency Department.

Mandel-Portnoy YE, Loo GT, Gregoriou D, Bansilal S, Richardson LD; Department of Emergency Medicine, Icahn School of Medicine at Mount Sinai, New York; J Emerg Med. 2016 Dec 30.

OBJECTIVE: Heart rate volatility (HRVO) is a physiological parameter that is believed to reflect the sympathetic activity of the autonomic nervous system. We explored the utility of HRVO as a predictive tool for declining physiological states, hypothesizing that patients admitted from the resuscitation area of the ED to a high-dependency unit (HDU) experience low HRVO compared with patients

who did not.

METHODS: We retrospectively reviewed HR data recordings, medical charts and disposition decisions from the ED of patients who were admitted to the five resuscitation beds in our adult ED between 29 April 2014 and 30 May 2015. HRVO was calculated for each 5 min interval; it was measured as the SD of all HRs within that interval. Logistic regression was used to model the odds of admission to a HDU given low HRVO during ED stay.

RESULTS: HR data from 2,051 patients was collected and approximately 7 million HR data points were analysed. 402 patients experienced low HRVO. Patients who experienced low HRVO during their ED stay were twice as likely to be admitted to a HDU from the ED (OR=2.07, 95% CI 1.64 to 2.60; p<0.001).

CONCLUSIONS: Our result provides additional evidence supporting previously published data indicating that autonomic nervous system measures such as HRVO could serve as important and useful clinical tools in the early triage of critically ill patients in the ED.

Access to Care and Depression Among Emergency Department Patients.

Abar B, Hong S, Aaserude E, Holub A, DeRienzo V; Departments of Emergency Medicine, Psychiatry, and Public Health Sciences, University of Rochester Medical Center, Rochester; J Emerg Med. 2016 Dec 19.

BACKGROUND: The prevalence of depression among patients in the emergency department (ED) is significantly higher than in the general population, making the ED a potentially important forum for the identification of depression and intervention. Concomitant to the identification of depression is the issue of patient access to appropriate care.

OBJECTIVE: This study sought to establish prevalence estimates of potential barriers to care among ED patients and relate these barriers with symptoms of depression.

METHODS: Two medical students conducted brief surveys on all ED patients ≥ 18 years on demographics, perceived access to care, and depression.

RESULTS: A total of 636 participants were enrolled. The percentage of participants with mild or greater depression was 42%. The majority of patients reported experiencing

NEW YORK STATE OF MIND

some barriers to care, with the most prominent being difficulty finding transportation, work responsibilities, and the feeling that the doctor is not responsive to their concerns. Higher depression scores were bivariate associated with higher overall barriers to care mean scores ($r = 0.44$; $p < 0.001$), suggesting that greater symptoms of depression are associated with greater difficulties accessing care. Particularly strong associations were observed between symptoms of depression and difficulty finding transportation, the feeling that the doctor is not responsive to patients' concerns, embarrassment about a potential illness, and confusion trying to schedule an appointment.

CONCLUSIONS: Across all barriers analyzed, there was a greater incidence of depression associated with a greater perception of barriers. These barriers may be used as potential targets for intervention to increase access to health care resources.

Comparison of Intravenous Ketorolac at Three Single-Dose Regimens for Treating Acute Pain in the Emergency Department: A Randomized Controlled Trial.

Motov S, Yasavolian M, Likourezos A, Pushkar I, Hossain R, Drapkin J, Cohen V, Filk N, Smith A, Huang F, Rockoff B, Homel P, Fromm C; Department of Emergency Medicine, Maimonides Medical Center, Brooklyn; Ann Emerg Med.

STUDY OBJECTIVE: Nonsteroidal anti-inflammatory drugs are used extensively for the management of acute and chronic pain, with ketorolac tromethamine being one of the most frequently used parenteral analgesics in the emergency department (ED). The drugs may commonly be used at doses above their analgesic ceiling, offering no incremental analgesic advantage while potentially adding risk of harm. We evaluate the analgesic efficacy of 3 doses of intravenous ketorolac in ED patients with acute pain.

METHODS: We conducted a randomized, double-blind trial to assess the analgesic efficacy of 3 doses of intravenous ketorolac (10, 15, and 30 mg) in patients aged 18 to 65 years and presenting to the ED with moderate to severe acute pain, defined by a numeric rating scale score greater than or equal to 5. We excluded patients with peptic ulcer disease, gastrointestinal hemorrhage, renal or

hepatic insufficiency, allergies to nonsteroidal anti-inflammatory drugs, pregnancy or breastfeeding, systolic blood pressure less than 90 or greater than 180 mm Hg, and pulse rate less than 50 or greater than 150 beats/min. Primary outcome was pain reduction at 30 minutes. We recorded pain scores at baseline and up to 120 minutes. Intravenous morphine 0.1 mg/kg was administered as a rescue analgesic if subjects still desired additional pain medication at 30 minutes after the study drug was administered. Data analyses included mixed-model regression and ANOVA.

RESULTS: We enrolled 240 subjects (80 in each dose group). At 30 minutes, substantial pain reduction was demonstrated without any differences between the groups (95% confidence intervals 4.5 to 5.7 for the 10-mg group, 4.5 to 5.6 for the 15-mg group, and 4.2 to 5.4 for the 30-mg group). The mean numeric rating scale pain scores at baseline were 7.7, 7.5, and 7.8 and improved to 5.1, 5.0, and 4.8, respectively, at 30 minutes. Rates of rescue analgesia were similar, and there were no serious adverse events. Secondary outcomes showed similar rates of adverse effects per group, of which the most common were dizziness, nausea, and headache.

CONCLUSION: Ketorolac has similar analgesic efficacy at intravenous doses of 10, 15, and 30 mg, showing that intravenous ketorolac administered at the analgesic ceiling dose (10 mg) provided effective pain relief to ED patients with moderate to severe pain without increased adverse effects.

Survival Benefit and Cost Savings From Compliance With a Simplified 3-Hour Sepsis Bundle in a Series of Prospective, Multisite, Observational Cohorts.

Leisman DE(1), Doerfler ME, Ward MF, Masick KD, Wie BJ, Gribben JL, Hamilton E, Klein Z, Bianculli AR, Akerman MB, D'Angelo JK, D'Amore JA; Department of Emergency Medicine, Hofstra-Northwell School of Medicine, Hempstead; Crit Care Med. 2016 Dec 9.

OBJECTIVES: To determine mortality and costs associated with adherence to an aggressive, 3-hour sepsis bundle versus noncompliance with greater than or equal to one bundle element for severe sepsis and septic shock patients.

DESIGN: Prospective, multisite, observational study following three sequential, independent cohorts, from a single U.S. health system, through their hospitalization.

SETTING: Cohort 1: five tertiary and six community hospitals. Cohort 2: single tertiary, academic medical center. Cohort 3: five tertiary and four community hospitals.

PATIENTS: Consecutive sample of all severe sepsis and septic shock patients (defined: infection, ≥ 2 systemic inflammatory response syndrome, and hypoperfusive organ dysfunction) identified by a quality initiative. The exposure was full 3-hour bundle compliance. Bundle elements are as follows: 1) blood cultures before antibiotics; 2) parenteral antibiotics administered less than or equal to 180 minutes from greater than or equal to two systemic inflammatory response syndrome "and" lactate ordered, or less than or equal to 60 minutes from "time-zero," whichever occurs earlier; 3) lactate result available less than or equal to 90 minutes postorder; and 4) 30 mL/kg IV crystalloid bolus initiated less than or equal to 30 minutes from "time-zero." Main outcomes were in-hospital mortality (all cohorts) and total direct costs (cohorts 2 and 3).

MEASUREMENTS AND MAIN RESULTS

RESULTS: Cohort 1: 5,819 total patients; 1,050 (18.0%) bundle compliant. Mortality: 604 (22.6%) versus 834 (26.5%); CI, 0.9-7.1%; adjusted odds ratio, 0.72; CI, 0.61-0.86; p value is less than 0.001. Cohort 2: 1,697 total patients; 739 (43.5%) bundle compliant. Mortality: 99 (13.4%) versus 171 (17.8%), CI, 1.0-7.9%; adjusted odds ratio, 0.60; CI, 0.44-0.80; p value is equal to 0.001. Mean costs: \$14,845 versus \$20,056; CI, -\$4,798 to -\$5,624; adjusted β , -\$2,851; CI, -\$4,880 to -\$822; p value is equal to 0.006. Cohort 3: 7,239 total patients; 2,115 (29.2%) bundle compliant. Mortality: 383 (18.1%) versus 1,078 (21.0%); CI, 0.9-4.9%; adjusted odds ratio, 0.84; CI, 0.73-0.96; p value is equal to 0.013. Mean costs: \$17,885 versus \$22,108; CI, -\$2,783 to -\$5,663; adjusted β , -\$1,423; CI, -\$2,574 to -\$272; p value is equal to 0.015.

CONCLUSIONS: In three independent cohorts, 3-hour bundle compliance was associated with improved survival and cost savings.

NEW YORK STATE OF MIND

Describing Visible Acute Injuries: Development of a Comprehensive Taxonomy For Research and Practice.

Rosen T, Reisig C, LoFaso VM, Bloemen EM, Clark S, McCarthy TJ, Mtui EP, Flomenbaum NE, Lachs MS; Division of Emergency Medicine, Weill Cornell Medical College, New York; *Inj Prev.* 2016 Dec 2.

BACKGROUND: Little literature exists classifying and comprehensively describing intentional and unintentional acute injuries, which would be valuable for research and practice. In preparation for a study of injury patterns in elder abuse, our goal was to develop a comprehensive taxonomy of relevant types and characteristics of visible acute injuries and evaluate it in geriatric patients.

METHODS: We conducted an exhaustive review of the medical and forensic literature focusing on injury types, descriptions, patterns and analyses. We then prepared iteratively, through consensus with a multidisciplinary, national panel of elder abuse experts, a comprehensive classification system to describe these injuries.

RESULTS: We designed a three-step process to fully describe and classify visible acute injuries: (1) determining the type of injury, (2) assigning values to each of the characteristics common to all geriatric injuries and (3) assigning values to additional characteristics relevant for specific injuries. We identified nine unique types of visible injury and seven characteristics critical to describe all these injuries, including body region(s) and precise anatomic location(s). For each injury type, we identified two to seven additional critical characteristics, such as size, shape and cleanliness. We pilot tested it on 323 injuries on 83 physical elder abuse victims and 45 unintentional fall victims from our ongoing research to ensure that it would allow for the complete and accurate description of the full spectrum of visible injuries encountered and made modifications and refinements based on this experience. We then used the classification system to evaluate 947 injuries on 80 physical elder abuse victims and 195 unintentional fall victims to assess its practical utility.

CONCLUSIONS: Our comprehensive injury taxonomy systematically integrates and expands on existing forensic and clinical research. This new classification system may

help standardise description of acute injuries and patterns among clinicians and researchers.

Spinal Fractures in Older Adult Patients Admitted After Low-Level Falls: 10-Year Incidence and Outcomes.

Jawa RS, Singer AJ, Rutigliano DN, McCormack JE, Huang EC, Shapiro MJ, Fields SD, Morelli BN, Vosswinkel JA; Department of Emergency Medicine, Stony Brook University School of Medicine, Stony Brook; *J Am Geriatr Soc.* 2016 Dec 2.

OBJECTIVES: To evaluate the incidence of spinal fractures and their outcomes in the elderly who fall from low-levels in a suburban county.

DESIGN: Retrospective county-wide trauma registry review from 2004 to 2013.

SETTING: Suburban county with regionalized trauma care consisting of 11 hospitals.

PARTICIPANTS: Adult trauma patients aged ≥ 65 years who were admitted after falling from < 3 feet.

MEASUREMENTS: Demographic characteristics, comorbidities, and outcomes.

RESULTS: Spinal fractures occurred in 18% of 4,202 older adult patients admitted following trauma over this 10-year time period, in the following distribution: 43% cervical spine, 5.7% thoracic, 4.9% lumbar spine, 36% sacrococcygeal, and 9.6% multiple spinal regions. As compared to non-spinal fracture patients, more spinal fracture patients went to acute/subacute rehabilitation (47% vs 34%, $P < .001$) and fewer were discharged home (21% vs 35%, $P < .001$). In-hospital mortality rate in spinal and non-spinal fracture patients was similar (8.5% vs 9.3%, $P = .5$).

CONCLUSION: Low-level falls often resulted in a spinal fracture at a variety of levels. Vigilance in evaluation of the entire spine in this population is suggested.

Prevalence of Negative CT Scans in a Level One Trauma Center.

Hansen CK, Strayer RJ, Shy BD, Kessler S, Givre S, Shah KH; Department of Emergency Medicine, Icahn School of Medicine at Mount Sinai, New York; *Eur J Trauma Emerg Surg.* 2016 Nov 19.

PURPOSE: The rise of computed tomography (CT) use in trauma has become the subject of concern given the harms of CT including radiation, cost, over diagnosis and identification of incidental lesions. We developed a novel metric, the Negative CT Score, (Σ CT-) which quantifies

how often CT imaging identifies important injuries. Our objective was to describe the pattern of CT utilization in trauma at an urban academic level one trauma center using this novel metric.

METHODS: This was a retrospective study of intermediate level trauma patients who received CT imaging over a 1-year study period at an urban level one trauma center. We applied the Negative CT Score, (Σ CT-) to quantify the results of CT imaging. Σ CT- is computed by subtracting the number of non-extremity body regions (maximum four: head, neck, chest, abdomen) with an important positive CT finding (defined by a priori criteria) from the total number of non-extremity body regions scanned.

RESULTS: Of the 552 cases reviewed during the study period, 410 (74.3%) were male and the mean age was 40.3 years [$SD \pm 21.2$]. Four hundred eighty-six patients (88.0%) suffered blunt trauma; 66 (12.0%) suffered penetrating trauma. The average injury severity score for admitted patients was seven. Four hundred ninety-five cases had at least one CT performed. The average number of regions per patient that received CT imaging was 2.36 ($SD \pm 1.3$), and the average Σ CT- was 2.10 ($SD \pm 1.2$). Three hundred and sixty-seven (74.3%) patients had no important findings on CT imaging.

CONCLUSIONS: In a consecutive series of 552 intermediate trauma patients at our urban trauma center, 2.36 body regions were scanned per patient; of these, 2.10 regions revealed no important CT findings. We hope that these results and the Negative CT Score can be used to identify trends, variations in practice, and outliers within and across departments so that CT utilization can be optimized.

Intranasal Fentanyl for Initial Treatment of Vaso-occlusive Crisis in Sickle Cell Disease.

Fein DM, Avner JR, Scharbach K, Manwani D, Khine H; Division of Pediatric Emergency Medicine, Department of Pediatrics, Children's Hospital at Montefiore, Albert Einstein College of Medicine, Bronx; *Pediatr Blood Cancer.* 2016 Nov 10.

BACKGROUND: Analgesia administration for children with vaso-occlusive crises is often delayed in the emergency department. Intranasal fentanyl (INF) has been shown to be safe and effective in providing rapid analgesia for other painful conditions. Our objective was to determine if children with a vaso-occlusive crisis (VOC) who received initial treatment with INF compared to placebo achieved a greater

NEW YORK STATE OF MIND

decrease in pain score after 20 min.

PROCEDURE: This was a randomized, double-blind, placebo-controlled trial. Children with sickle cell disease, 3-20 years old, not taking daily opiates were eligible for the study. Subjects who presented to the emergency department with a pain score ≥ 6 were randomized to either a single dose of INF (2 $\mu\text{g}/\text{kg}$, maximum 100 μg) or an equivalent volume of intranasal saline. Pain scores were obtained using a modified Wong-Baker FACES pain scale prior to the administration of study drug and at 10, 20, and 30 min afterward. Additional analgesic medication was given per standard protocol.

RESULTS: Forty-nine subjects completed the study (24 fentanyl and 25 placebo). Subjects who received INF had a greater decrease in median pain score at 20 min compared to placebo (2 [interquartile range, (IQR) 0.5-4] vs. 1 [IQR 0-2], $P = 0.048$), but not at 10 or 30 min. There were no serious adverse events in either group.

CONCLUSION: Children who received INF had a greater decrease in pain score at 20 min compared to those who received placebo. Further studies should evaluate how to best incorporate INF into the emergency care of a child with a VOC.

Optimal Volume of Administration of Intranasal Midazolam in Children: A Randomized Clinical Trial.

Tsze DS, Ieni M, Fenster DB, Babineau J, Kriger J, Levin B, Dayan PS; Department of Pediatrics, Division of Pediatric Emergency Medicine, Columbia University College of Physicians and Surgeons, New York; Ann Emerg Med. 2016 Nov 4.

STUDY OBJECTIVE: The optimal intranasal volume of administration for achieving timely and effective sedation in children is unclear. We aimed to compare clinical outcomes relevant to procedural sedation associated with using escalating volumes of administration to administer intranasal midazolam.

METHODS: We conducted a randomized, single-blinded, 3-arm, superiority clinical trial. Children aged 1 to 7 years and undergoing laceration repair requiring 0.5 mg/kg intranasal midazolam (5 mg/mL) were block-randomized to receive midazolam using 1 of 3 volumes of administration: 0.2, 0.5, or 1 mL. Procedures were videotaped, with outcome assessors blinded to volume of administration. Primary outcome was time to onset of minimal sedation

(ie, score of 1 on the University of Michigan Sedation Scale). Secondary outcomes included procedural distress, time to procedure start, deepest level of sedation achieved, adverse events, and clinician and caregiver satisfaction.

RESULTS: Ninety-nine children were enrolled; 96 were analyzed for the primary outcome and secondary outcomes, except for the outcome of procedural distress, for which only 90 were analyzed. Time to onset of minimal sedation for each escalating volume of administration was 4.7 minutes (95% confidence interval [CI] 3.8 to 5.4 minutes), 4.3 minutes (95% CI 3.9 to 4.9 minutes), and 5.2 minutes (95% CI 4.6 to 7.0 minutes), respectively. There were no differences in secondary outcomes except for clinician satisfaction with ease of administration: fewer clinicians were satisfied when using a volume of administration of 0.2 mL.

CONCLUSION: There was a slightly shorter time to onset of minimal sedation when a volume of administration of 0.5 mL was used compared with 1 mL, but all 3 volumes of administration produced comparable clinical outcomes. Fewer clinicians were satisfied with ease of administration with a volume of administration of 0.2 mL.

Point-of-Care Ultrasound for Diagnosis of Abscess in Skin and Soft Tissue Infections.

Subramaniam S, Bober J, Chao J, Zehtabchi S; Department of Emergency Medicine, State University of New York, Downstate Medical Center, Brooklyn; Acad Emerg Med. 2016 Nov; 23(11):1298-1306.

BACKGROUND: Traditionally, emergency department (ED) physicians rely on their clinical examination to differentiate between cellulitis and abscess when evaluating skin and soft tissue infections (SSTI). Management of an abscess requires incision and drainage, whereas cellulitis generally requires a course of antibiotics. Misdiagnosis often results in unnecessary invasive procedures, sedations (for incision and drainage in pediatric patients), or a return ED visit for failed antibiotic therapy.

OBJECTIVE: The objective was to describe the operating characteristics of point-of-care ultrasound (POCUS) compared to clinical examination in identifying abscesses in ED patients with SSTI.

METHODS: We systematically searched Medline, Web of Science, EMBASE, CINAHL, and Cochrane Library databases from inception until May 2015. Trials comparing POCUS

with clinical examination to identify abscesses when evaluating SSTI in the ED were included. Trials that included intraoral abscesses or abscess drainage in the operating room were excluded. The presence of an abscess was defined by drainage of pus. The absence of an abscess was defined as no pus drainage upon incision and drainage or resolution of SSTI without pus drainage at follow-up. Quality of trials was assessed using the QUADAS-2 tool. Operating characteristics were reported as sensitivity, specificity, positive likelihood ratio (LR+), and negative likelihood ratio (LR-), with their respective 95% confidence intervals (CI). Summary measures were calculated by generating a hierarchical summary receiver operating characteristic (HSROC) model.

RESULTS: Of 3,203 references identified, six observational studies (four pediatric trials and two adult trials) with a total of 800 patients were included. Two trials compared clinical examination with clinical examination plus POCUS. The other four trials directly compared clinical examination to POCUS. The POCUS HSROC revealed a sensitivity of 97% (95% CI = 94% to 98%), specificity of 83% (95% CI = 75% to 88%), LR+ of 5.5 (95% CI = 3.7 to 8.2), and LR- of 0.04 (95% CI = 0.02 to 0.08).

CONCLUSION: Existing evidence indicates that POCUS is useful in identifying abscess in ED patients with SSTI. In cases where physical examination is equivocal, POCUS can assist physicians to distinguish abscess from cellulitis.

Does the Use of Ibuprofen in Children with Extremity Fractures Increase their Risk for Bone Healing Complications?

DePeter KC, Blumberg SM, Dienstag Becker S, Meltzer JA; Department of Pediatrics, Division of Emergency Medicine, Jacobi Medical Center, Bronx; J Emerg Med. 2016 Oct 14.

BACKGROUND: Despite being an effective analgesic for children with fractures, some clinicians may avoid prescribing ibuprofen due to its potentially harmful effect on bone healing.

OBJECTIVE: To determine if exposure to ibuprofen is associated with an increased risk of bone healing complications in children with fractures.

METHODS: We performed a retrospective study of children aged 6 months to 17 years who presented to the pediatric emergency department (PED) with a fracture of the tibia, femur, humerus, scaphoid, or fifth metatarsus and who followed up with the orthopedic service.

NEW YORK STATE OF MIND

We chose these fractures due to their higher risk for complications. We classified patients as exposed if they received ibuprofen in the PED or during hospitalization or were prescribed ibuprofen at discharge. The main outcome was a bone healing complication as evidenced by nonunion, delayed union, or re-displacement on follow-up radiographs.

RESULTS: Of the 808 patients included in the final analysis, 338 (42%) were exposed to ibuprofen. Overall, 27 (3%) patients had a bone healing complication; 8 (1%) developed nonunion, 3 (0.4%) developed delayed union, and 16 (2%) developed re-displacement. Ten (3%) patients who were exposed to ibuprofen, and 17 (4%) who were not, developed a bone healing complication (odds ratio 0.8, 95% confidence interval 0.4-1.8; $p = 0.61$). There was no significant association between ibuprofen exposure and the development of a bone healing complication despite adjustment for potential confounders.

CONCLUSION: Children with extremity fractures who are exposed to ibuprofen do not seem to be at increased risk for clinically important

bone healing complications.

Is There a Role for Intravenous Subdissociative-Dose Ketamine Administered as an Adjunct to Opioids or as a Single Agent for Acute Pain Management in the Emergency Department?

Motov S, Rosenbaum S, Vilke GM, Nakajima Y; Maimonides Medical Center, Brooklyn; *J Emerg Med.* 2016 Dec; 51(6):752-757.

BACKGROUND: Whether acute or chronic, emergency physicians frequently encounter patients reporting pain. It is the responsibility of the emergency physician to assess and evaluate, and if appropriate, safely and effectively reduce pain. Recently, analgesics other than opioids are being considered in an effort to provide safe alternatives for pain management in the emergency department (ED). Opioids have significant adverse effects such as respiratory depression, hypotension, and sedation, to say nothing of their potential for abuse. Although ketamine has long been used in the ED for procedural sedation and rapid sequence intubation, it is used

infrequently for analgesia. Recent evidence suggests that ketamine use in subdissociative doses proves to be effective for pain control and serves as a feasible alternative to traditional opioids. This paper evaluates ketamine's analgesic effectiveness and safety in the ED.

METHODS: This is a literature review of randomized controlled trials, systematic reviews, meta-analyses, and observational studies evaluating ketamine for pain control in the ED setting. Based on these search parameters, eight studies were included in the final analysis and graded based on the American Academy of Emergency Medicine Clinical Practice Committee manuscript review process.

RESULTS: A total of eight papers were reviewed in detail and graded. Recommendations were given based upon this review process.

CONCLUSIONS: Subdissociative-dose ketamine (low-dose ketamine) is effective and safe to use alone or in combination with opioid analgesics for the treatment of acute pain in the ED. Its use is associated with higher rates of minor, but well-tolerated adverse side effects.

LEADERSHIP OPPORTUNITY: TeamHealth is looking for a Medical Director to lead our team at Lourdes Hospital in Binghamton, New York.

Perks of this opportunity:

- 42,000-Annual volume ED offers 55 hours of Physician coverage and 12 hours of APC coverage daily
- Great nursing support and dedicated back-up specialties
- Resources to be an exceptional leader with a balanced clinical workload
- Independent Contractor Model
- Sign on & relocation incentives
- Administrative Stipend

Qualifications:

- Strong communication and leadership skills
- BC in Emergency Medicine with administrative experience, preferred

Contact: Leslie Stockton, Physician Recruiter, at leslie_stockton@teamhealth.com or (865) 560-8422.

TEAMHealth

THE
University of Vermont
HEALTH NETWORK

Champlain Valley Physicians Hospital

Emergency Medicine Opportunity Plattsburgh, New York

Details

- Employment or Independent Contractor models available
- Newly renovated ER with EMR
- Adjacent Fast Track 9am—11 pm
- Annual visits of 50,000
- FT and PT positions available
- Progressive community hospital situated on park-like campus

Community

- Plattsburgh is a nationally recognized city in Upstate NY
- Enjoy living on the shores of Lake Champlain and at the foothills of the Adirondack Mountains
- Montreal, Lake Placid Olympic Region and Burlington, VT are all within an hours drive
- Live where others vacation!

Contact Becky Larkin at (518) 314-3025 or RLarkin@cvph.org

www.UVMHealth.org/CVPH

Become part of our patient care centered team, where we're not just caregivers - we're friends and neighbors, offering expertise and compassion to our communities.



Sydney E. De Angelis, MD FACEP
Medical Director, Emergency Department
Brookhaven Memorial Hospital Medical Center/USACS of Suffolk

Advocacy – It Doesn’t Hurt a Bit

When I talk to my colleagues about getting involved in political advocacy, I frequently see an expression wash across their faces that suggests I asked them to do something distasteful. It’s akin to the response I get when I ask my husband to change my son’s diaper, or I approach a doctor about picking up a week-end shift.

I admit that, I too, had misgivings about advocacy when I was a new EM doc. In residency, politics was the furthest thing from my mind. Keeping patients (and myself) alive on each shift was the priority. Sure, we all bristled at the things we saw as unfair or unjust. But if we weren’t eating, sleeping or showering on a daily basis, what could we do? We complained, and except for the most ambitious and enlightened of us, that’s as far as it went.

As a new attending, I was better fed and well rested, and obviously, I had more money. I finally had the mental space to ponder issues like EMTALA, malpractice and lack of access to medical care, since I was facing their ramifications on every shift. At the same time, I was apprehensive of getting involved in a political system I perceived as, at best, ineffective and at worst, corrupt. Even worse, I was embarrassed by my lack of knowledge about health care policy. I felt overwhelmed and didn’t think I personally could make a difference. So, when asked, I would reluctantly

write an email or make a phone call to support or oppose some bill. That’s all I was comfortable with at the time.

Thankfully, I got the opportunity to learn what advocacy really meant when I was in my group’s leadership program. We attended the ACEP Leadership and Advocacy Conference in Washington, DC, in May 2009.

I freely admit I was out of my element. I mean, I hadn’t worn a suit since my residency interview, but, I did know Emergency Medicine, and I was passionate about providing the best care

for my patients. Seeing hundreds of emergency physicians standing in front of the Capitol in their white coats on Lobby Day, I got inspired. I figured they wouldn’t schlep all the way to DC for a futile exercise. I was fortunate enough to be in a group with Andy Sama and other New York docs. It was an amazing experience. I was invited to join the New York ACEP Government Affairs Committee. After that, there was no looking back. My experiences quickly dispelled the myths I held. I think they’re common, so I’ll address them one at a time.

Advocacy takes a lot of time, money and effort.

Health care advocacy can take minutes, a year, or it can be a full time job. All levels of

involvement are important. Sure, there are those of us who live and breathe this stuff. That’s great, and necessary for us to succeed! But most of us aren’t inclined to run for office or write white papers, and that’s fine. Advocacy is as simple as getting out to cast your vote for a local candidate that supports funding EMS. Taking five minutes to email or call your state legislator to defeat legislation that would expand our malpractice liability. Your participation in New York ACEP Lobby Day in Albany once a year directly impacts legislation affecting emergency care in New York. Not interested in interacting directly? No problem. What’s faster or more convenient than writing a check? Surprisingly, it doesn’t take a lot of money. If you join the New York Emergency Medicine Political Action Committee (PAC), and donate the equivalent of one shift a year, it costs you the equivalent of a cup of coffee a day to protect your livelihood and the welfare of your patients. We’d better believe that insurance companies and trial lawyers have their representatives out there. The docs who go to fundraisers are our voice. A small amount from many of us makes our voice louder, clearer and more effective.

Politicians won’t listen to us anyway.

I used to think that hundreds of people had to call to get a legislator’s attention. I learned 10 calls about an issue are considered significant! Can you imagine the impact we would have if all 2,650 New York ACEP members called when there was an Action Alert? I was also shocked at the eagerness of legislators and their staffs to talk with us. Remember, our assem-

*I felt overwhelmed
and didn’t think I
personally could
make a difference.*

blymen and senators live and work in the same communities we do. They get bombarded with information from people on many sides of the same issue. They're required to make decisions on topics with which they have little or no personal experience. Imagine if you had to vote on a law about how beekeepers managed apiaries. Don't know what an apiary is? Neither did I until I looked on Wikipedia. But there are laws about this in New York. The point is, what information do you want lawmakers to have when deciding how to vote on bills about emergency care? For the most part, legislators respect our profession and value our knowledge. They are genuinely interested in doing the right thing for their constituents on matters pertaining to health care.

My political involvement won't make a difference to my daily practice.

See above. Going to lobby day once a year is an eye-opener. I recommend we all do it at least once. Personal conversations change policy. For example, the original I-STOP legislation would have required us to consult the PMP for every controlled substance prescription we write. How would that affect your ED throughput? The five-day supply exemption is a direct result of these efforts. Time and time again, we see that politics are really putting a face and a personal story to our concerns. We become a trusted resource, and when new things come up, we get in on the negotiations.

I don't understand enough about health policy or politics to get involved.

Here is my dirty little secret- I still don't feel like I will ever understand enough, and I've been on the Government Affairs Committee for

several years. But here's the upside- we're very lucky in New York ACEP. We have experienced veterans and bright young physicians who have been interested in this from the beginning of their careers. Just like in residency, we support each other. I am constantly learning. All that's really required is that we care, and work together, in whatever way we're capable.

Over the years, through my involvement in health care advocacy, I built relationships with other EM docs, and have had many opportunities I never would have had otherwise. More importantly, I derive immense hope and satisfaction from knowing that I am part of a larger endeavor that fights (and wins) for my patients, colleagues, profession, and community. This year, please consider getting involved in advocacy one level above your current comfort level. I promise, it doesn't hurt a bit.



Location:

New York Academy of Medicine
1216 Fifth Avenue at 103rd Street
New York, NY 10029

Registration

For credit card payments: • **online:** www.nyacep.org
• **call:** 585.872.2417 • **fax:** 585.872.2419
If paying by check, mail registration and payment to:
New York ACEP, 1130 Crosspointe Lane Suite 10B,
Webster, NY 14580-2986

ASK THE EXPERTS



Robert M. Bramante, MD FACEP
Associate Chair, Emergency Medicine
Good Samaritan Hospital Medical Center
Progressive Emergency Physicians



Interview with:
Kathleen Clem, MD FACEP
Chief Medical Officer/ Vice President
Florida Hospital East Orlando
Chair, ACEP Membership Committee

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



Benefits of ACEP membership: Tangible and intangible.

Dr. Kathleen Clem is currently serving as the Chief Medical Officer and Vice President for Florida Hospital East Orlando and chair of the national ACEP Membership Committee. It is in this role that I have had the privilege of meeting and working with her on this committee. Dr. Clem has had numerous roles in both emergency medicine and within ACEP. While those of you reading this publication are members of ACEP, we discuss with Dr. Clem the benefits of ACEP membership from an organizational and personal standpoint with the hope the information enriches and helps you to promote membership in the organization.

Why did you get involved and stay involved with ACEP?

ACEP is an organization I have been involved with throughout my entire career. Regardless of the role I was in or the stage of my career, it provided resources and networking. Despite moves and career changes, ACEP has provided me with continuous support and resources. During my career, I have faced local, regional, and national challenges. When my organization was exposed to a Centers for Medicaid and Medicare Services (CMS) audit, I was able to reach out and receive guidance and support from both the national level and my state chapter.

Emergency physicians are often encouraged to find their niche. ACEP includes members from all niches. These individuals are at varying levels willing to mentor or looking to

be mentored. The sheer volume of members creates a large support structure. ACEP leadership has been very supportive of its members and in supporting emergency department leadership. In addition to ACEP, I participate in other organizations and find that ACEP dovetails well with them for joint improvement of the specialty.

Truly the experience of being a member with the network and support provided have more than paid back my dues over the years. The national meetings and camaraderie are excellent and I always return invigorated after having shared the experience of the meeting. The quality speakers, the high yield information and spending time with my career family are all beneficial to me personally and intellectually.

What is the biggest benefit ACEP provides its members?

Think of your emergency medicine career like a drive and day-to-day things are fine. Then the day comes along where you hit a bump or multiple bumps in the road. ACEP, and the relationships you develop in the organization, provide a network and safety net that is there and ready to respond.

ACEP provides many specific resources in the following categories: career and practice management, leadership and networking, advocacy, and consumer discounts. An extensive list of these benefits is available on the ACEP website. Highlights include the portfolio and CME tracker, *Annals of Emergency Medicine*, career and financial planning resources, the

member directory, the 911 Advocacy Network, and numerous commercial discounts. ACEP sections of membership provide mentoring, leadership and networking opportunities for those looking for a niche or to further their interests in emergency medicine.

In medicine and in life, things are fine until they are not. These resources and the bonds you make with your involvement are there for you when those situations arise.

Why should someone get actively involved in ACEP?

We all work in the field and have a responsibility to give back as physicians. ACEP supports emergency medicine and all of us. Taking part actively in the organization not only leads to more benefit for the individual but benefit for the group as a whole. Most importantly, time spent giving back is time well spent as it is rewarded with positive results. The ACEP leadership and staff are supportive and welcoming of members looking to be involved and will assist them along the way to reach their personal and organizational goals. Involvement can be on the state level, in sections, or nationally. There are opportunities to contribute in multiple ways including with education, on committees, as mentors, and many other opportunities.

What is the benefit of group membership and how can one encourage group participation?

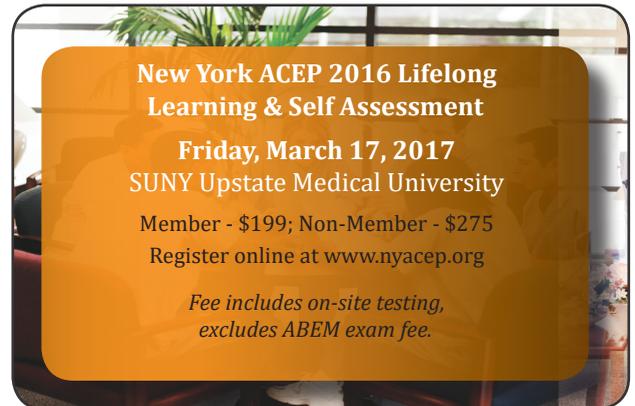
Group membership can be driven by the group leader. However, if it is not, you can bring ACEP group membership to the attention of

ASK THE EXPERTS

your colleagues and the group leadership. ACEP has many resources that can be more easily shared when all the group members are part of the organization. Additionally, the available education and practice resources help improve the members in the group. Camaraderie is improved as well when the physicians in your group share and participate in the organization. Additionally, ACEP provides additional benefits and discounts to groups with both 100%

participation and groups that participate in the group billing program.

In my opinion, ACEP membership and participation in ACEP is a priceless addition to my career, my leadership roles, and my emergency medicine knowledge. I encourage all emergency physicians to become members and encourage their colleagues to join by informing them of the benefits.



New York ACEP 2016 Lifelong Learning & Self Assessment
Friday, March 17, 2017
SUNY Upstate Medical University
Member - \$199; Non-Member - \$275
Register online at www.nyacep.org
Fee includes on-site testing, excludes ABEM exam fee.

ACEP Legislative Advocacy Conference and Leadership Summit

Washington, DC | March 12-15, 2017 | Grand Hyatt

Don't just work
for your EM group.
OWN IT.



- Democratic group
- Partnership opportunity
- Physician-owned and led

Immediate openings! Apply online at
www.eddocs.com/careers



Emergency
Service
Partners, LP

(888) 800-8237
edjobs@eddocs.com

PEDIATRICS



Denis R. Pauzé, MD FACEP
Vice Chairman Operations and Associate Professor of Emergency
Medicine and Pediatric
Department of Emergency Medicine
Albany Medical Center



Daniel K. Pauzé, MD FACEP
Associate Medical Director
Albany Medical Center Hospital

ACEP 2016; Peds EM Rapid Fire Summary

ACEP's 2016 Scientific Assembly in Las Vegas was a big hit, with many fantastic lectures. Included in these were dozens of Pediatric EM (PEM) lectures, many presented in a "Rapid" short lecture format.

We thought it would be interesting to provide a quick summary of a few of these great PEM lectures. The title of the lecture and the associated speaker is listed, followed by some of the presenter's high points and/or slides/discussion topics presented during their lecture. So a quick summary of many great PEM lectures!

RAPID FIRE: Fever in the Second Month of Life: Everything, Nothing, or Something--What's the Appropriate Workup? Jennifer D. Walthall, MD

1. Pick a study and a clinical decision rule to identify a low risk infant (Rochester, Boston or Philadelphia criteria). This is important as only 58% of kids with a fever and serious bacterial illness (SBI) will look clinically ill to an experienced physician on their first presentation.
2. Consider Step by Step criteria and watch for future validation. This pathway looks at the child's appearance, age, UA result and biomarkers for ruling out SBI. It is new, but shows promise. Biomarkers such as procalcitonin and CRP show promise as well.
3. Send a fourth tube for CSF. Enteroviral PCR can decrease hospitalization length of stay as well as provide the family with information and expectation for course of illness. HSV is rare in this age group, but children do not need to be febrile. Unless the child is less than 21 days, the HSV PCR is not routinely recommended for well appearing febrile infants. If you're considering the diagnosis, also send off blood PCR and LFTs. HSV has a very low prevalence but high mortality (15%) in the second month of life.
4. Think about obtaining a Respiratory Viral panel for admitted children as this may shorten admission length of stay.
5. For kids you're sending home, don't do point of care influenza or RSV. Use AAP Bronchiolitis guidelines on testing.
6. Don't bag the urine. Always collect a catheter sample AND culture with a mechanism for follow up.
7. For treatment: Direct therapy toward E.coli. Consider third generation cephalosporin and ampicillin. Ampicillin will cover enterococcus in the urine, which is becoming more prevalent. If the child looks sick, cover GBBS in which Ampicillin and Gentamicin work synergistically. For older infants, consider Vancomycin.
8. Oral antibiotics are infrequently warranted with the exception of

perianal strep, staphylococcal diaper rash and perhaps in some selected patients a positive urinalysis. Any diagnosis of otitis media in this age group is suspect due to inability to see tympanic membranes. Do not prescribe antibiotics without CSF.

RAPID FIRE: Pediatric Status Asthmaticus in 2016: What's In Your Kitchen Sink? Emily C. MacNeill, MD

1. BE AGGRESSIVE EARLY in the course of a severe status asthmaticus.
2. High dose of albuterol (20-40 mg/hour) may be used.
3. Early atrovent usage can decrease hospitalization.
4. Give steroids EARLY on in the course of presentation, even in triage. Consider Dexamethasone over prednisone.
5. Magnesium can be an effective adjunct and can decrease admission rates.
6. Terbutaline given early can lessen intubation rates in severely affected patients.
7. Children with status are usually dry due to increased insensible losses and decreased po intake. Consider giving fluids to all kids who are receiving high dose albuterol and IV magnesium.
8. Noninvasive positive pressure ventilation (NIPPV) with correct pediatric equipment may be a useful adjunct.

RAPID FIRE: Can I Clear This Kid's Neck? Emily C. MacNeill, MD

1. Pediatric cervical spine injuries are rare. The younger the child, the lower the incidence of cervical injury.
2. For kids, injuries are higher up on the cervical spine, there is less bony injury, and kids can have SCIWORA. At about age 8, we start to see adult cervical spine physics.
3. If you don't have a protocol or guideline at your institution, you need one! Three major rules, NEXUS, Canadian, and PECARN. Understand limitations and benefits of all.
4. Plain films still have utility in children and the approach to imaging may differ depending on the age group involved:
 - a. For adolescents, attempt to clear the neck clinically. For suspected injury, high mechanism in older children may require CT. Lower mechanism may consider the use of plain films.
 - b. For kids 3 to 10 years old there are many options. Consider the mechanism of injury in these patients. Talk to family

PEDIATRICS

regarding risk of imaging or missed diagnosis. Plain films can be considered in this population. If performing a head CT, consider scanning down to C3 to evaluate the most high risk areas for this population. Kids' necks are very lax and kids more frequently have injury at C1 and C2.

- c. For really young kids, remember that cervical spine injuries are very rare and many kids can be cleared clinically. Radiation risk is highest in this population. If there is a concerning mechanism consider a screening x ray or a focused CT.

RAPID FIRE: ALTE: Can This Kid Go Home?

Jennifer D. Walthall, MD

1. New terminology: BRUE (Brief Resolved Unexplained Event) replaces ALTE.
2. A BRUE is an event lasting less than one minute in a child less than one year old associated with: cyanosis/pallor, absent, decreased or irregular breathing, marked change in muscle tone (both hypertonia and hypotonia) and altered level of responsiveness.
3. Must be back to baseline upon presentation without findings to explain event.
4. Kids with BRUE and meet Low Risk Criteria who can be considered to be discharged home. Low risk criteria are:
 - a. Age greater than 60 days, gestational age greater than 32 weeks and post conceptional age greater than 45 weeks, first BRUE, no CPR by trained provider, no features of concern in history such as Non Accidental Trauma (NAT), family history of sudden death or concern for toxic exposures.
 - b. No physical exam findings (bruising, murmurs or organomegaly)
5. Kids who meet low risk BRUE criteria do not need an expansive work-up, though consider EKG and pertussis testing.
6. Shared decision making is important upon disposition.

RAPID FIRE: Pediatric Chest Pain and Syncope: Bad or Benign? Dr. Mimi Lu

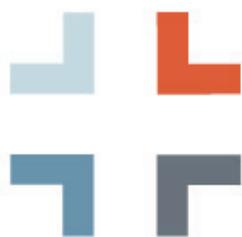
1. Red flags: exertional chest pain or exertional syncope, hypoxia, persistent tachycardia out of proportion (think myocarditis).
2. History of Kawasaki disease or cardiac surgery, sickle cell, connective tissue disorder.

3. Alarming family history.
4. Chest pain or syncope while playing sports/exertional is a red flag for hypertrophic cardiomyopathy or Brugada or Arrhythmogenic RV dysplasia.

RAPID FIRE: Subtle Signs of Abuse: It's Not All About Bruises Dr. Richard Cantor

1. The Scope of the Problem: 4 children die every day from abuse, 44% are under the age of 1. Abuse occurs across every socioeconomic level, all ethnic and cultural lines, all religions and all educational levels.
2. Red flags: Inconsistent explanation of injury based upon physical or developmental abilities; changing explanation, vague explanation or delay in seeking care.
3. A sentinel injury is a poorly explained minor injury in a non-mobile infant. If not properly identified or investigated, this may lead to another more severe abusive event. We must pick up on the clues of a sentinel event.
4. Examples of sentinel injury include
 - a. Bruising, burns, oropharyngeal injuries in those under 6 months of age.
 - b. Skull, femur, humerus, radius, ulna, tib/fib in those < 12 months of age.
 - c. Rib fractures, abdominal/genital trauma < 24 months.
5. Physical clues for abuse: any injury in a perambulatory infant (bruises, oral injuries, fractures), injuries to multiple organ systems, multiple injuries in different stages of healing, patterned injuries.
6. Missed Opportunities to Dx; Important reads discussed during this lecture: Testing for Abuse in Children with Sentinel Injuries (Lindberg DM Pediatrics 2015); Missed Opportunities to Diagnose Child Physical Abuse (Thorpe E PEC 2014); Sentinel injuries in infants evaluated for Child Physical Abuse (Pediatrics 2013).
7. TEN-4 rule: A decision rule to help clinicians know "when to worry" about certain bruises in kids
 - a. Torso Ears Neck injuries on a < 4 year old.
 - b. ANY bruise on < 4 month old.
8. Lips are a common area of abusive oral injury; frena tears in a nonambulatory infant is a red flag.
9. All children < 2 years of age with any suspicious injury should get a skeletal survey.

Special Thanks to



ISLAND MEDICAL
MANAGEMENT

For Their Support of New York ACEP's Resident Research Conference

EMERGENCY PHYSICIAN NEW YORK OPPORTUNITY

UP TO \$75K COMMENCEMENT BONUS



“*Schumacher Clinical Partners gives me access to a wealth of information, support and resources to enhance my ability to lead my team. SCP stands for putting the patient first and doing what is right for our patients.*”

Dr. Anuj Vohra, DO, FACEP
Chairman & Medical Director



Orange Regional Medical Center Middletown, NY

- 73K ED Volume
- Level II Trauma Center
- Newly built hospital in 2011
- Academic: EM residency, Internships – FP and Psych, 3rd and 4th year med students
- 24/7: Lab, x-ray, CT, ultrasound, MRI with 24-hour access to radiology
- EPIC EMR
- 53 beds includes 8 fast track; 5 Behavioral Health; 6 Peds
- 60 hours physician coverage; 12 hours EM Peds coverage; 44 hours MLP coverage
- Exceptional back-up coverage: ENT, Ortho, Ob/Gyn, Neuro, Plastics, Thoracic and more
- Under 90 minutes from New York City

You knew you wanted to be a doctor. You put in the time and paid your dues.
But there were also people who believed in you, supported,
sustained and inspired you to be and do your best.

There still are.

WE'RE IN THIS TOGETHER.



Interested in learning more?

Please contact Sarah Hysell at 337.521.2513, Sarah_Hysell@SchumacherClinical.com

Or visit us online at www.schumacherclinical.com/careers.

ALBANY UPDATE



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

New York ACEP Scores a Victory on Addressing Overcrowding

On January 11, 2017, the New York State Department of Health (NYS DOH) reissued their Guidance Document for Hospitals, Overcrowding/Emergency Department Preparedness. The Guidance was issued after efforts put forth by New York ACEP. New York ACEP addressed hospital crowding and ambulance diversion with New York State Health Commissioner Howard Zucker at the May 2015 ED Director Forum and later followed up with a letter asking the NYS DOH to reissue the 2003 Guidance Document. The Department acknowledged New York ACEP's concerns and ultimately agreed to reissue the document.

Governor Cuomo's State of the State Address

Members of the State Legislature returned to Albany January 4 to begin the 2017 Legislative Session. In a departure from long standing tradition, Governor Andrew Cuomo did not deliver an annual State of the State address to legislators in Albany on opening day. Instead, he gave the speech to members of the public in six regions of the State including New York City, Western New York, Hudson Valley, Long Island, Capital Region, and Central New York.

In his written State of the State address, Governor Cuomo proposed a repeal of the exemption in emergency departments for practitioners to consult the Prescription Monitoring Program (PMP) registry before prescribing a controlled substance, provided that the quantity prescribed does not exceed a 5-day supply. The repeal of this exemption is part of a broader proposal to combat opioid addiction.

New York ACEP is opposed to repealing

this exemption. It was enacted in 2012 as part of the original I-STOP law in recognition of the very busy environment in hospital emergency departments and the life or death circumstances that can arise for patients. Unlike other practitioners such as primary care, dentists and others, emergency physicians do not have knowledge in advance of a patient's arrival as to whether a pain medication may be indicated during the visit. This makes it much more difficult to delegate the consultation with the PMP.

A 2015 study in the *Annals of Emergency Medicine* found that the majority of opioid prescriptions in the emergency department have a low pill count and are almost exclusively immediate release formulations, not long-acting medications such as methadone, oxycontin, and MS-Contin which are more strongly associated with overdoses. The conclusion of the study was that the "data shows that opioid prescribing in the ED is done with caution and aligned with short-term use goals, suggesting that emergency physicians generally follow guideline recommendations to limit opioid prescriptions to only three to five days and avoid long-acting opioids."

New York ACEP will vigorously oppose this proposal.

2017-18 Proposed Executive Budget

Governor Cuomo released his 2017-18 proposed State Budget late on the evening of January 18. The spending plan totals \$153.2 million and closes the \$3.5 billion budget gap. The budget includes \$1 billion in increased funding for education and continues the State's millionaire tax which is set to expire this year, bringing in \$3.7 billion dollars in revenue. The Governor also proposes \$2 billion over five years for drinking water infrastructure improvement and a tax cut for middle and upper middle class earners.

New York ACEP Annual Lobby Day, March 7, 2017

On Tuesday, March 7 members of the New York ACEP Board and their colleagues will travel to Albany for the annual lobby day to meet with key legislators and staff on New York ACEP's 2017 legislative priorities including: fair payment to emergency physicians, opposition to the elimination of the emergency department exemption for consulting the PMP before prescribing opioids, and opposition to regressive liability reform.

Liability reform was a serious topic of discussion in Albany last year. Legislation to change the statute of limitations for medical, dental, and podiatric malpractice from two and half years to the "Date of Discovery (DOD)" was ultimately killed in the final hours of the 2016 Legislative Session. New York ACEP is monitoring this issue and will proactively lobby against it should it emerge this year.

Following the lobby day, we will work with Executive Director JoAnne Tarantelli to continue to keep members apprised of activities in Albany as they relate to New York ACEP's goals. As we have done in the past, we will be sending out Action Alerts and other calls for grassroots activities to advance your priorities. We greatly appreciate all of your local efforts which are critical to New York ACEP's success.



Family life. Amazing EM career. You can have both.

US Acute Care Solutions values family, and the diverse ways families are born. As physician owners, we are one family, united in our mission to care for patients and each other. When a clinician in our group decides to have a child by birth or adoption, the rest of us rally around to ensure they receive the time they need to pursue their dream of family, and the support they need to continue excelling in their careers as physicians and leaders. At USACS, we're living life to the fullest, together.



Own your future now. Visit usacs.com
or call Darrin Grella at 800-828-0898. dgrella@usacs.com



Founded by ESP, ERGENTUS, APEX, TBEP, MEP, EPPH and EMP