New York American College of Emergency Physicians

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NO SILENCE ON ED VIOLENCE

Join the Workplace Violence Prevention Alliance Now!

Learn More: www.nyacep.org

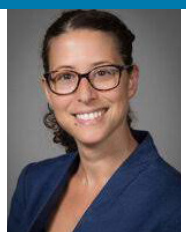
Everyone deserves a workplace free of violence to preserve the safety and security of patients and our local communities. Violence in Emergency Departments (EDs) or any other healthcare workplace should never be tolerated. Collectively we must work towards minimizing all safety hazards in the ED environment. A coalition of New York College of Emergency Physicians (NYACEP), the New York State Emergency Nurses Association (NYSENA) and the American Nurses Association of New York (ANA-NY) support the following principles:

- EDs (including waiting rooms) should establish **'Violence Free Zones'** with appropriate **signage** in all designated areas.
- Resources and new **funding** mechanisms should be developed to provide hospitals with adequate security personnel, training, technology, and other resources to prevent violence in the ED.
- All staff should be supported when **raising or reporting** safety concerns even when it may involve fellow colleagues.
- Secure, confidential **reporting mechanisms** should be developed for employees and patients involved with workplace incivility, inappropriate behavior, and other violent events.
- Safety and incident reporting **data** should be consistently collected, analyzed and available for all stakeholders to justify new departmental **interventions** and avert future events.
- A **culture** of civility and respect should be required at every ED facility across New York State.
- **Policies and procedures** should be implemented at all institutions outlining proper policies, procedures, and rights to support all victims of violence.
- All staff should be encouraged to complete **training** on harm prevention and de-escalation.
- A **zero-tolerance policy should be instituted** for employees, patients, visitors, and families that engage in violent or threatening behavior that jeopardizes the safety of others.
- Community **partnerships** should be established between EDs, hospital systems, and other local organizations for compiling resources and developing new strategies for preventing violence.

Thank you to all Emergency Departments that have joined the Workplace Violence Prevention Alliance.

A full list of departments can be found here

PRESIDENT'S MESSAGE



Nicole Berwald, MD FACEP
Chief Medical Officer
Staten Island University Hospital

Happy New Year, New York ACEP

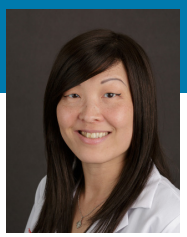
Another year has passed and with the coming of a new year brings reflections of the past, thoughts on the present and plans for the future. I joined the specialty of Emergency Medicine (EM) 20 years ago energized to take care of my community and motivated to make our specialty strong for all EM physicians and the patients we serve. What inspired me then continues to drive me today. The unique opportunities of EM physicians to care for patients when they least expect to need help, whatever the problem, small or large, impacting their lives during their most vulnerable moments.

As I embark on a new year, I remind myself of the unique connections we have with patients and their families. Our duty is to serve our communities and the value that comes with the practice of medicine never gets old. However, despite this, I am distracted by the larger issues impacting our specialty. Similar to how patient connections draw me to the daily practice of medicine, the larger issues we face motivate me to drive New York ACEP to finding solutions. We need to navigate the political landscape of medicine on a national scale and that of New York, tackling the issues that impact our local clinical arena and practice environment.

I wish it were simpler, but the issues facing emergency medicine are numerous and complex. At New York ACEP, we hit the ground running in 2024. We started the calendar year with a meeting with the New York State Office of Mental Health to discuss the climate of mental health in our emergency departments (EDs) and to better partner on available resources. We also continue to tackle the important issue of violence in the ED by partnering with the New York State Council of Emergency Nurses Association (NYSCENA) and the American Nurses Association of New York (ANA-NY) on the Workplace Violence Prevention Alliance. We have shown our shared commitment to creating a safe place in the ED for healthcare workers and patients. In addition, New York ACEP will continue to work with legislators on scope of practice issues, with a focus on the value of the physician lead team. These issues are just a few at the top of our priority list that we are determined to pursue and we are optimistic we will see results during our upcoming legislative sessions.

We will continue to plan for the future. The New York ACEP board and committees are all engaged. We are excited about what 2024 will bring as we gain traction on many of our initiatives. I hope you share our enthusiasm. With a new year comes opportunity. Happy new year, New York ACEP.

SOUND ROUNDS



Penelope C. Lema, MD RDMS FACEP
Vice Chair, Faculty Affairs
Associate Professor, Department of Emergency Medicine
Columbia University Vagelos College of Physicians & Surgeons

Guest Author
John DeAngelis, MD FPD-AEMUS
Assistant Professor, Emergency Medicine
University of Rochester Medical Center
Department of Emergency Medicine

Guest Author
Cullan Donnelly, MD
PGY- 2 Emergency Medicine Resident
University of Rochester Medical Center
Department of Emergency Medicine

FOOSH, There It Is!

Case Presentation

A 17-year-old male with no significant past medical history presented to the emergency department after being a restrained driver in a motor vehicle accident. Airbags deployed, the patient was restrained, denied loss of consciousness and had full recollection of the events. The patient reported wrist pain and believes they jammed their outstretched wrists into the steering wheel or dashboard.

Physical examination revealed a superficial friction burn over the right anatomical snuffbox with tenderness to palpation in the same area and pain with axial loading of the right thumb. No snuffbox tenderness was noted in the left wrist. The patient's vital signs were stable.

A X-ray of the right wrist showed no acute fracture or dislocation, growth plates are fused (Figure 1A).

Point-of-care ultrasound (POCUS) of the wrist was performed with a L14-6s linear transducer (Mindray Te7, Mahwah, NJ, Shenzhen, China) that demonstrated cortical discontinuity along the dorsal and volar aspects of the scaphoid bone, concerning for radiographically silent scaphoid fracture, consistent with exam (Figures 2A and 2B).

The patient had minor burn care and was splinted in a thumb spica in a neutral position and was given an orthopedic referral and followed up seven days later with repeat X-rays. Repeat assessment in the orthopedic office one week later demonstrated continued snuffbox tenderness. The repeat X-ray (Figure 1B) revealed a fracture in the proximal third of the scaphoid that was identified by POCUS during the initial Emergency Department (ED) visit one week prior.

Discussion

Scaphoid fractures have a propensity for malunion, non-union, chronic pain, arthritis, or even avascular necrosis due to the retrograde perfusion that the proximal end of the scaphoid receives.[1] The most sensitive and widely used physical exam finding is called "anatomical snuffbox tenderness," an anatomic space created by the adductor pollicis longus, extensor pollicis brevis and extensor pollicis longus on the radial aspect of the distal forearm which is where the dorsal aspect of the scaphoid bone can be palpated (Figure 3). When tenderness is encountered on physical exam, a fracture is assumed and a splint is placed with close outpatient follow-up to ensure the prevention of the morbidities associated with these fractures. Despite this common practice, it has been demonstrated in at least one retrospective study that up to 80% of splints applied were unnecessary due to a fracture not being found in subsequent imaging.[2] Splints are not a benign application; they can limit a patient's ability to work and perform activities of daily life. Plain film X-rays have only 60% sensitivity,[3] and most departments do not regularly obtain CT or MRI imaging for a more definitive evaluation due to cost, time, or limited resources. The most sensitive but non-specific physical exam finding is anatomical snuffbox tenderness, but while the sensitivity is around 90%, the specificity is only around 40%.[4] This is likely even worse if there is overlying skin injury such as an abrasion or burn, as in our case. Is there a cheaper, widely available, sensitive and specific imaging modality to identify scaphoid fractures? Scaphoid bone ultrasound has been shown to have a near 100% sensitivity and specificity when cortical disruption and effusion or hematoma are identified.[5] In this case, the patient likely had trauma to the right wrist due to axial loading against the dashboard or steering wheel of the car during impact. As previously mentioned, a unique aspect of this situation is the fact he also had a burn over his wrist from the airbag, specifically over the anatomical snuffbox, making tenderness to palpation over this area significantly less specific than baseline. Pain with palpation over a superficial burn is to be expected even without an underlying injury beneath it. With the identification of cortical disruption of the scaphoid bone using ultrasound, both in the dorsal and volar views, further evidence was obtained to support a fracture requiring splinting and close orthopedic follow-up despite a negative wrist X-ray.

Indications

- Fall onto outstretched hand
- Deformity or swelling
- Pain over anatomical snuffbox
- Pain with axial loading of the thumb
- Wrist Pain

Technique

- Use a linear ultrasound transducer on the dorsal and volar hand to obtain a sagittal view of the scaphoid (Figures 4 & 5). Transverse and oblique views should also be acquired to identify a fracture.
- Use a generous amount of ultrasound gel and have the patient's thumb in abduction and the wrist in ulnar deviation (as allowed by the patient's pain and clinical scenario).
- If the sonographic windows are too small, or if placement of

SOUND ROUNDS

Figure 1. (A) Initial xray and (B) repeat xray at one week demonstrating a subtle lucency in the proximal scaphoid consistent with a fracture (red arrow).

the ultrasound transducer on the patient is limited due to body habitus or pain, consider using a water bath.

- Once a sagittal view of the scaphoid bone is achieved, fan the transducer from side-to -side to scan through the bone to look for cortical disruption and/or hematoma

Pitfalls and Limitations

- Patient's level of pain, cooperation and body habitus.
- False positives due to osteophytes, vascular channels mimicking disruptions in bony cortex, or periosteal hematoma/swelling without cortical disruption.
- This technique with POCUS has not yet been adopted as the "gold standard" to rule out the requirement for splinting and orthopedic follow-up. If the patient has anatomical snuffbox tenderness, recommend treatment as per the current standard of care. However, POCUS can provide additional diagnostic information that an occult fracture is present not initially identified on X-ray.

Pearls

- The physical exam is key for fall onto an outstretched hand (FOOSH) injuries.
- There is a high rate of missed scaphoid fractures, however, up to 80% of splints are unnecessary in retroactive studies using follow-up imaging.
- Ultrasound of the scaphoid bone with cortical disruption and effusion present has a 100% sensitivity and specificity.
- This is not likely to change overall practice or decrease the number of splints applied in the short term, however, it can provide reassurance we are splinting a fracture. With additional research, it may be promising, with sufficient high sensitivity, to rule out fractures in the future.

Figure 3. General anatomy of the "anatomical snuffbox," with the location of the scaphoid bone.

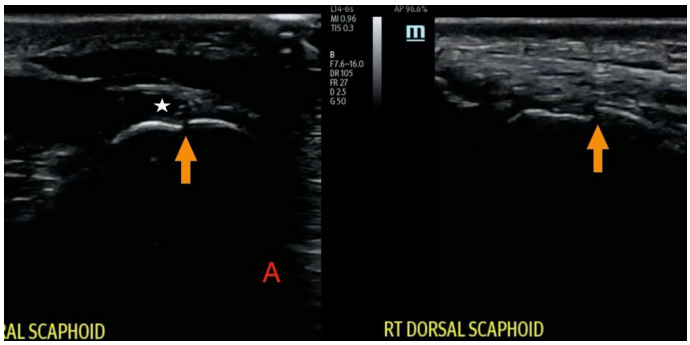


Figure 2. POCUS of the right wrist using a linear ultrasound transducer (A) ventral and (B) dorsal views of the scaphoid of the right wrist. A fracture is identified with cortical discontinuity (orange arrows) and lipohemarthrosis (white star).

References

1. Schmid GL, Lippmann S, Unverzagt S, Hofmann C, Deutsch T, Frese T. The Investigation of Suspected Fracture-a Comparison of Ultrasound With Conventional Imaging. Dtsch Arztebl Int. 2017 Nov 10;114(45):757-764. doi: 10.3238/arztebl.2017.0757. PMID: 29202925; PMCID: PMC5729224.

2. Nguyen Q, Chaudhry S, Sloan R, Bhoora I, Willard C. The clinical scaphoid fracture: early computed tomography as a practical approach. Ann R Coll Surg Engl. 2008 Sep;90(6):488-91. doi: 10.1308/003588408X300948. Epub 2008 Jul 2. PMID: 18598597; PMCID: PMC2647242.

3. Tiel-van Buul MM, van Beek EJ, Borm JJ, Gubler FM, Broekhuizen AH, van Royen EA. The value of radiographs and bone scintigraphy in suspected scaphoid fracture. A statistical analysis. J Hand Surg Br 1993; 18: 403–6.

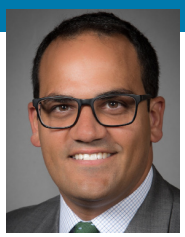
4. Freeland P. Scaphoid tubercle tenderness: a better indicator of scaphoid fractures? Arch Emerg Med. 1989 Mar;6(1):46-50. doi: 10.1136/emj.6.1.46. PMID: 2712988; PMCID: PMC1285557.

5. Ortiz, A. What is the role of ultrasonography in the early diagnosis of scaphoid fractures?, European Journal of Radiology Open, Volume 8, 2021, 100358, ISSN 2352-0477, https://doi.org/10.1016/j.ejro.2021.100358.

Figure 4. Placement of the linear ultrasound transducer over the scaphoid at the volar aspect of the wrist.

Figure 5. Placement of the linear ultrasound transducer over the scaphoid at the dorsal aspect of the wrist.

PRACTICE MANAGEMENT



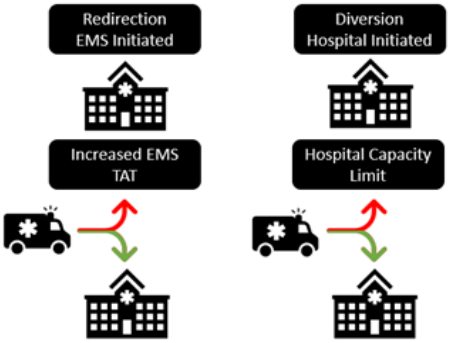
Joseph Basile, MD MBA FACEP
Chair, Department of Emergency Medicine
Medical Director, Clinical Operations
Staten Island University Hospital

Kurien Mathews, DO MBA FACEP
Department of Emergency Medicine
Medical Director, Change Management
Staten Island University Hospital

Mukund Mohan, MD
Department of Emergency Medicine
Staten Island University Hospital

Should Emergency Medical Services Based Redirection Be Standard Practice?

Understanding the interplay between Emergency Medical Services (EMS) and Emergency Department (ED) operations is crucial in improving patient care. We aimed to unravel the complex relationship between ED overcrowding and the redirection of EMS. The primary objective was to evaluate the association between ED operational metrics, particularly crowdedness, and redirection of EMS units. It is current practice to redirect 911 participating EMS vehicles away from an ED where dispatched units have an increased turnaround time (TAT). In New York City, redirection occurs when a unit waits at any ED for more than 30 minutes for three consecutive units.[1] Redirection procedures are based on limited EMS TAT data, which does not accurately predict actual ED business. We hypothesized that there would be no significant correlation between ED crowdedness and EMS redirection, especially when accounting for various confounding variables. Furthermore, this process should be distinct from Diversion, which the hospital requests.



A retrospective analysis was conducted at our academic Level 1 Trauma, STEMI (ST-Elevation Myocardial Infarction) and Comprehensive Stroke Center. It covered all EMS-transferred patients over 56 weeks, from April 2021 to May 2022. Key data sources included EMS redirection records from FDNY (Fire Department of New York) and internal ED Operational metrics such as ED length of stay (LOS), ED volume, admission volume, against medical advice (AMA) volume, boarding hours, door to room and door to triage. ED and EMS redirection data were compiled daily. Factors were analyzed using multivariable logistic regression models.

The initial analysis revealed several interesting insights: EMS redirection was activated on 250 out of 392 days. Monday emerged as the most common day for redirection, accounting for 17% of redirections. We further ran our analysis factoring for the week's busiest day (Monday). The only significant ED metric was Door-to-Room with an increase in 3 minutes of TAT on days of redirection. (19.17 mins vs 16.04 mins)

This analysis is one of the first to evaluate the redirection policy of a 911 agency in relation to meaningful operational indices of the receiving ED. Redirecting patients from one busy ED to another will have a limited impact on solving ED Crowding or EMS TATs. Door-to-room times, while statistically significant, showed minimal operational differences. Additionally, an excellent marker of ED crowding and patient outcome is ED Boarding, for which redirection could not predict.[2]

Our analysis did have several limitations. ED metrics were averaged for the day and there was no detailed information on the number of redirected patients or their destinations. There was no follow-up on patients who were taken

Parameter	Estimate	Standard Error	*Pr > |t|
Intercept	-2.051259571	0.66673256	0.0023
Daily ED Volume	0.003263764	0.00261994	0.2141
LBTC	-0.008471616	0.01444575	0.5581
Daily Admit Volume	-0.00267513	0.00780468	0.7321
Avg Daily Total LOS	0.063546439	0.10823512	0.5577
Avg Daily Boarding Hours	-0.001370595	0.02877698	0.9621
Avg Daily Door-To-Room	0.034038587	0.01113709	0.0025
Avg Daily Door-To-Triage	0.007100682	0.00897914	0.4298
Monday vs the rest of the week	0.189379583	0.13411965	0.1592

*A p-value </= 0.05 is noted to be a significant factor.

to an outside hospital but then required transfer for definitive care. This study provides a foundation for further research into the impact of ED overcrowding and EMS redirection policies. Understanding these dynamics is vital for optimizing patient flow and care in emergency settings. Future studies could focus on patient outcomes post-redirection, examining the implications of such policies on patient safety and overall healthcare efficiency. These findings open doors for further exploration into how ED operations can be optimized, ensuring timely and efficient patient care, even under conditions of high patient influx.

References

1. Greater New York Hospital Association. (2021). FDNY initiatives for emergency department operations. https://www.gnyha.org/wp-content/uploads/2021/05/FDNY-initiatives-ED-operations.pdf

2. Roussel M, Teissandier D, Yordanov Y, et al. Overnight Stay in the Emergency Department and Mortality in Older Patients. JAMA Intern Med. 2023;183(12):1378–1385. doi:10.1001/jamainternmed.2023.5961

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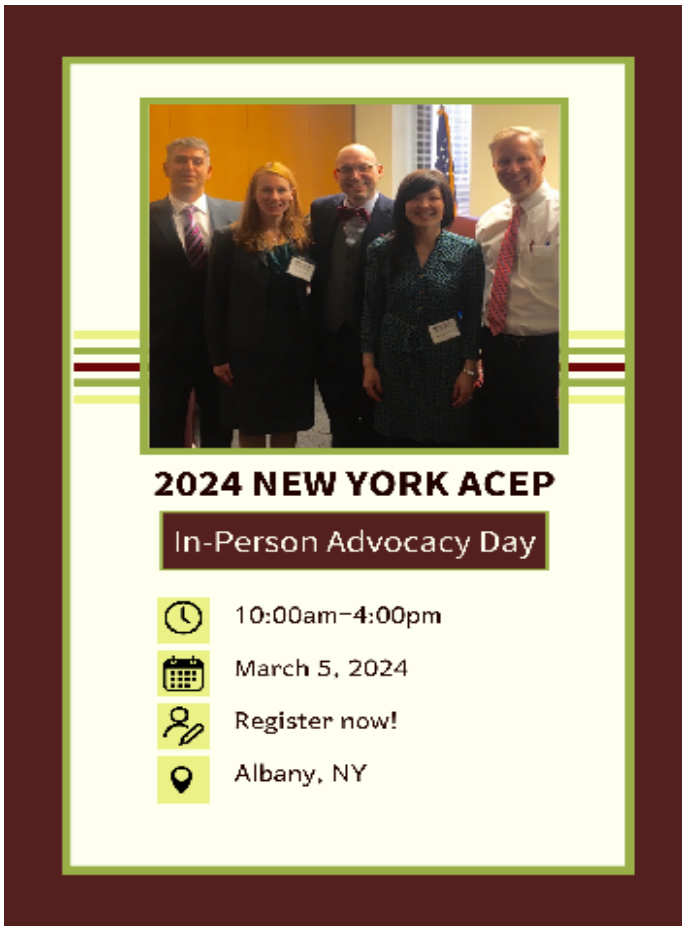


(O)pportunities for (W)omen in (L)eadership

New York ACEP is offering a one-year mentorship program for women in emergency medicine who seek mentorship for career advancement. The program pairs mentors based on career interests and will involve networking opportunities and career development webinars.

There are opportunities for Mentees in each of the following categories:

- Fellow/Junior Faculty Mentee
- Established Faculty Mentee
- Resident Mentee

Apply Now

Applications are due March 15, 2024

Applicants must meet the following program requirements:

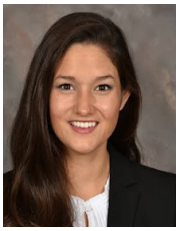
- Practice in NYS through July, 2025
- Attend the NYACEP Scientific Assemblies in 2024 and 2025
- Resident Mentee
- Be a New York ACEP Member

New York American College of Emergency Physicians

EDUCATION

Devjani Das, MD FACEP
Director, Emergency Medicine Clerkship
Director, Emergency Ultrasound Division
Associate Professor of Emergency Medicine
Columbia University Vagelos College of Physicians and Surgeons

Guest Author
Duncan Grossman, DO
Assistant Professor and Assistant Program Director
Department of Emergency Medicine
Icahn School of Medicine at Mount Sinai



Guest Author
Isley Arruda, MD
Chief Resident
Department of Emergency Medicine
Icahn School of Medicine at Mount Sinai

Guest Author
Tim Friedmann, MD
Medical Education Fellow
Department of Emergency Medicine
Icahn School of Medicine at Mount Sinai

Guest Author
Geoff Jara-Almonte, MD
Assistant Professor and Associate Program Director
Department of Emergency Medicine
Icahn School of Medicine at Mount Sinai

Big Ideas for Small Group Learning

Small group learning offers up a fantastic opportunity to diversify weekly residency conference, creating a safe space for learners to ask questions, facilitate near-peer teaching, and focus on procedural skills with individualized attention. Beyond breaking the monotony of traditional didactics, these sessions provide the added benefit of fostering community in our large residency. In a post-Covid and post-Zoom learning era, these activities have become crucial, offering multiple learning modalities, and turning residents into active participants, rather than passive listeners.

General Principles and Recommendations: Size, Split, & Prompting

The size of your small group will depend on the learning experience you envision. If you are aiming to do a lecture, or a panel with Q&A, the success of these groups depends on the delivery of the material and, therefore, the number of learners is less relevant. If you are planning on team-based activities or problem-based learning, where near-peer learning and participation are emphasized, aim for five to seven learners per group. Procedural sessions may need smaller groups or more instructors, to optimize the teacher-to-student ratio and facilitate real-time feedback and guidance.

When designing a small group session, consider how to split your learners. Random assignment can mitigate bias. This can be done by assigning numbers to learners or grouping people by birthdays / alphabetically (either by the learners or online with ChatGPT, Bard, or other available online tools). This may lump learners of different levels together, which can make creating cohesive learning points a challenge. Pre-assigning groups allows you to group learners with similar qualities – interests, life experiences, levels of training, etc. This can take significant time, thought, effort and unexpected learner absences can disrupt the experience. Random assignment within a similar group of learners (i.e. dividing junior residents by birthday month) is a good middle ground between the two techniques.

For case or problem-based learning, the emphasis should be on valuable group discussion, rather than closed-ended questions or simple recall of medical knowledge. For example, “What are the treatment options for angioedema?” is a less helpful small group prompt than, “Do you give all patients with angioedema every medication?”, “When do you pull the trigger for admission versus observing?” These activities can benefit from pre-readings and a flipped classroom model. Depending on the learning goals and objectives for a given session, different debriefing and feedback methodologies can be utilized; consider incorporating approaches such as Plus-Delta, Pendleton’s model, or Advocacy-Inquiry.

Varied Approaches to Small Group Learning

Below is a description of several options for small group learning sessions that we have found successful in our four-year residency program consisting of 100 trainees.

Gamification of Cases

Conventional oral boards cases serve as good practice for reviewing the structure and flow of board exams, but do not cater to all styles of learner or efficient transfer of content . We recognize that it was recently announced that oral boards are being phased out. Nonetheless, to facilitate discussion and peer-based education, we opted for a format inspired by “Who Wants to Be a Millionaire,” facilitated by faculty educators.

Before the small group session, facilitators went through the cases and wrote medical knowledge questions.

In our version, each small group had two teams, junior residents versus senior residents, and each team was given a case. The senior residents went first and as we progressed through the case, each member of the team was given a question. Each team had three lifelines:

1. *Phone an Attending* - You can call one attending of your choosing and ask them the question. If they don’t pick up, that’s tough cookies.
2. O*ne Minute Internet Consult* - You have 60 seconds to use one team member’s phone to look up any information and answer the question.
3. *Ask the Audience* - Open up the question to anyone on your team.

Both teams benefited from hearing each other go through answers in a small, low-stakes environment.

EDUCATION

Next Steps...

You decide to reverse this patient's anticoagulation and simultaneously initiate MTP. You start infusing multiple blood products through his multiple large bore IVs and call GI to come see the patient – they're in a case but they'll be down soon.

Someone from the service states he checked the patient's chart and noted he drinks alcohol daily and wonders if he may be coagulopathic from his history of alcohol consumption. He asks for a TEG.

QUESTION: *Draw a normal TEG curve with appropriate labels and teach the juniors what the curve means. You may not use the internet lifeline for this question.*

Procedural Small Groups

We have also incorporated procedural teaching into conference, outside of our regularly scheduled simulation curriculum. Rather than elaborate, time-intensive high-fidelity simulation scenarios, we've found success in teaching shorter, discrete procedural skills with task trainers.

Shorter sessions have included lateral canthotomy tupperware models, LMA use on airway mannequins and homemade resuscitative hysterotomy task trainers. These sessions were essentially tabletop discussions of the procedure with indications, contraindications, discussion of the pearls and pitfalls and then participation in the procedure with one-on-one coaching by a facilitator.

Our most resource-intensive session was a day devoted to nerve blocks. Each station had two ultrasounds, one for live anatomy scans and one for procedural practice. Residents practiced nerve blocks on custom made gelatin models wrapped around pork and skeleton models with individualized assistance from ultrasound-trained faculty members.

Ask me Anything

A key component of resident training is understanding practice variation amongst attending physicians and applying that knowledge to develop an individual practice pattern. To address the nuances of practice variability in particular clinical scenarios, we have organized panels featuring several attendings. In these panel discussions, we offer a chief complaint, case, and/or diagnosis and attendings provide insight into their practice. We aim to cover both common and rare presentations, as well as areas where the literature isn't clear. We've had success using practice panels as small group sessions (juniors vs. seniors, etc.) and larger group formats. We have done practice panels on PEA arrest, right lower quadrant pain in young females, airway management in CHF, hip fractures, angioedema and pediatric neurologic complaints.

Leading up to the panel session, residents are asked to suggest questions or subtopics to discuss. Each practice panel has a facilitator who collates questions and prompts discussion among panelists. For example, our PEA arrest panel covered approximately 15 prompts; these ranged from "What prompts you to give calcium and/or bicarbonate during cardiac arrest?" to "Evidence shows bringing family into the room at the end of the code can improve closure for the family. Do you incorporate this into your practice and, if so, how?"

We have found that these sessions have been well received by residents across levels of training, but in particular, senior residents have found these sessions very helpful. This also serves as an opportunity for a resident to participate as a panel facilitator; we have had interns, chief residents, and attendings be the panel facilitator.

Ask Me Anything

We've held "Ask Me Anything" (AMA) sessions in small groups for topics that residents tend to have broad questions about. We have offered critical care and pediatric emergency medicine (PEM) AMAs with faculty experts. These sessions are based on the popular Reddit threads (where users describe themselves or an experience and other users get to ask them questions) and serve as an opportunity to ask burning questions. The AMAs are especially helpful to senior residents seeking to solidify their practice and address any knowledge gaps they may have. We allow questions to be asked before and during the session.

Team-Based Activities

We've incorporated several small group activities during which residents compete or work in teams with the primary aims of enhancing teamwork, building community and catering to different learning styles. Whether groups are competing to fill out a "bingo" card of common airway skills, racing to save as many toxidrome patients as possible, or working through an oral boards case, these activities get residents out of their seats and working together. Teamwork is the bedrock of emergency medicine, and it's just as important to practice those skills off-shift as it is in the emergency department (ED). These activities often require assignment of roles, division of responsibility and group decision-making – all skills vital to the proficient ED physician, but seldom formally taught.

One example is our "airway bingo" session that required each team to select a single participant to complete each airway-centric task (laryngeal mask airway, bag valve mask, fiberoptic intubation, direct laryngoscopy, video laryngoscopy, surgical airway, blood gas interpretation, adjustment of ventilator settings) and then explain the management and common pitfalls with faculty guidance, promoting mutual learning.

Our toxicology station game rotated teams through stations focused on individual high-risk/low-frequency presentations of toxicology patients. Teams worked to answer diagnostic and management questions with visual cues (monitor photos, documented skin changes, rubber snakes, EKGs), deciding on a "final answer" as a group and accumulating points if correct. To integrate faculty guidance and support, toxicology trained emergency medicine (EM) attendings were available throughout as an 'ask an attending' feature of the game.

Acknowledging oral boards as both an assessment and educational tool, we conduct team-based cases that empower residents to voice their thought processes and facilitate learning amongst peers. These sessions foster learning on multiple levels, with junior residents recalling basic concepts, while senior learners articulate the application of these concepts and justify the team's management decisions. Such cases offer an opportunity for learners to articulate and share their thinking while enriching the collective understanding of various case scenarios, a luxury often constrained in the fast-paced high-volume ED setting.

Problem-Based Learning

Problem-based learning activities serve as a basis for lifelong learning by reinforcing the habit of going to the literature to answer clinical questions - even in stressful circumstances. Those situations that require emergency physicians to rapidly access, synthesize and apply medical literature on shift are usually high-anxiety moments involving the care of unfamiliar conditions or unstable patients. Problem-based learning activities provide a unique opportunity to prepare learners for this challenge by utilizing the principle of "train like you fight." By structuring activities as a competition or

EDUCATION

race and adding additional distractions such as music, instructors can recreate the time pressures and chaotic nature of the ED in the classroom. At the same time, care must be taken to ensure psychological safety of learners and an emphasis on fun and appropriate challenge goes a long way toward success in your activity.

Small group activities can incorporate a problem-based learning approach in which participants are provided with a clinical scenario or problem that they must "solve." These sessions simulate the nuances of real-world clinical practice in which care must be individualized to a particular patient or unfamiliar conditions. Participants are asked to engage with resources such as primary literature, review articles and practice guidelines to determine the best course of action in each case and provide supporting evidence. These activities put residents in the habit of considering individualized, patient-centered care approaches to their patients' treatment plans and brings up discussion and near-peer education regarding utilization of the resources we have available in our hospitals, sometimes even spanning interdisciplinary involvement (i.e. Pulmonary Embolism Response Team, Toxicology on-call, ED Pharmacy, etc.).

Examples of problem-based learning activities we have conducted include a pulmonary embolism management exercise. In this session participants were provided challenging clinical scenarios (semi-stable patient with clot-in-transit, high-risk submassive PE in a pregnant patient) and asked to define strategies for safe anticoagulation and/or thrombolysis based upon evidence and practice guidelines. In another activity participants were provided with vignettes of patients who were suffering toxicologic emergencies and asked to identify the toxidrome and then write the exact order for the appropriate antidote.

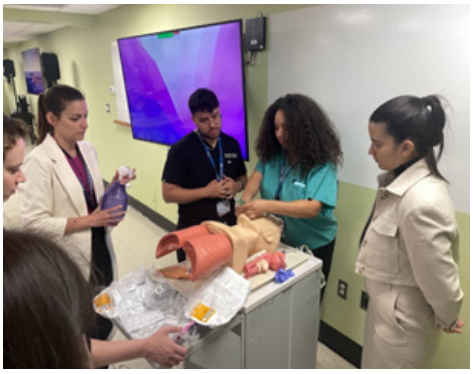
These sessions can be tailored to emphasize one or several domains of competence - including practice-based learning and improvement, medical knowledge, interpersonal and communications skills and patient care - depending on the goals of the instructor. Asking learners to engage with primary literature, assessing both its quality and the generalizability to the scenario at hand reinforces evidence-based practice.

Conclusion

Small group activities provide a way to develop and reinforce knowledge and skills critical for the emergency provider. They can promote teamwork between residents, promote connection between faculty and trainees and provide a safe space to ask questions and practice skills. The success of any individual session depends on matching learning goals with the appropriate participants' breakdown, instructors, resources, instructional modality and content. It has been our experience that adding small group instruction has the potential to enhance the teaching of virtually any topic. The variety of available approaches rewards creativity and some degree of risk-taking in designing sessions. Sometimes things don't work as expected, and occasionally things flop. Seeking feedback from participants and modeling a growth-mindset will allow educators to continue to develop.

Resources

- van Diggele C, Burgess A, Mellis C. Planning, preparing and structuring a small group teaching session. BMC medical education. 2020;20(Suppl 2):462-462. doi:10.1186/s12909-020-02281-4
- Rudolph JW, Simon R, Dufresne RL, Raemer DB. There's No Such Thing as "Nonjudgmental" Debriefing: A Theory and Method for Debriefing with Good Judgment. Simulation in healthcar : Journal of the Society for Medical Simulation. 2006;1(1):49-55. doi:10.1097/01266021-200600110-00006
- Taylor D, Miflin B. Problem-based learning: where are we now? Medical teacher. 2008;30(8):742-. doi:10.1080/01421590802217199
- Wood DF. Problem based learning. BMJ. 2003;326(7384):328-330. doi:10.1136/bmj.326.7384.328



LMA Use

Nerve block day

Resuscitative hysterotomy

NEW YORK ACEP
American College of Emergency Physicians
ADVANCING EMERGENCY CARE

2024 Scientific Assembly 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 2024 Scientific Assembly, July 9-11, 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 9 at 1:30 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 submitted online here 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.

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. The online submission form identifies all information required for each submission.

Case Reports/Series are not accepted.

We are interested in original work and consideration will be given to abstracts presented at other conferences (SAEM, ACEP), as long as a manuscript has not been published at time of submission.

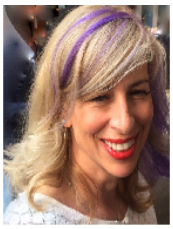
Oral presentations will be allocated 10 minutes followed by 5 minutes of Q&A. Twenty-four poster presentations will be allocated 5 minutes followed by 3 minutes of Q&A. All presenters (oral or poster) are expected to have had a significant role in the execution and report preparation of the project being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

About the Process: There will be a blind review of all abstracts. Notification letters will be sent April 22, 2024. We regret we cannot give notification information by telephone.

Submission Deadline: April 1, 2024

Research

Laura Melville, MD MS
Associate Research Director
SAFE Medical Director
NewYork-Presbyterian Brooklyn Methodist Hospital
Chair, New York Research Committee



Kaushal Shah, MD FACEP
Professor & Vice Chair of Education for Emergency Medicine
Weill Cornell Medical College

Myles Wood
Medical Student
Weill Cornell Medical College

Research with Large Databases: Our Experience with the National Trauma Databank

Introduction

With healthcare delivery rapidly evolving, large data driven research is becoming increasingly relevant to clinical practice. The National Trauma Database (NTDB) is the largest trauma registry in the United States and is composed of data from over 800 hospitals. The primary purpose of the NTDB is to provide a standardized trauma registry to inform clinicians, policy makers and other stakeholders about current challenges, trends and outcomes in trauma care. As the largest trauma registry, the NTDB offers a broad array of data for trauma patients and can serve as a pivotal tool for clinicians, researchers and policymakers alike. There are also similar databases to the NTDB that exist as well. We share our experience with the NTDB as an example of how powerful big data can be and about the advantages of using large databases for research. With all things being considered, asking research questions in the NTDB can be challenging at first. This brief letter seeks to shed light on the utility of the NTDB and how to approach asking questions within this database.

Size and Scale

With millions of patient records, the NTDB offers a comprehensive view of trauma care in the US and is able to capture the experiences of diverse patient populations across urban and rural landscapes. The NTDB captures key demographic, pre-hospital, hospital and outcome data all of which contribute to the breadth of what the NTDB has to offer. Principally, the NTDB aggregates a wide array of patient demographics, injury data, treatment measures and patient outcomes. These features place the NTDB in a unique position in guiding research, policy and clinical practice in trauma medicine.

Approaching the Research Questions

The NTDB is available through the American College of Surgeons. We were able to obtain access through our trauma surgeons. After acquiring the database, researchers have access to a wealth of data. For example, a dataset for a single year can contain millions of patient records. This presents a significant challenge and for this reason researchers commonly find it helpful to use a programming language like R or Python to both view and extract the relevant data. These programming languages also commonly have IDEs or Integrated Development Environments like R Studio that can aid investigators throughout this process.

The first step to approaching the NTDB is to ask: What is your research question? Who are your patients? How will you define these patients? For example, if you are interested in trauma patients who received a certain procedure, you can identify these patients by querying the database for patients with an ICD Procedure Code that matches the procedure of interest. How you will define your population is critically important as it will determine what parameters in the database can be useful for you.

Another common technique to identify patients is through the use of ICD diagnosis codes. Every patient in the NTDB has their respective ICD diagnosis code entries that occurred during their hospital stay. However, it is important to note this method is imperfect as specifics of a particular diagnosis for a patient are typically not present in the database.

It is important to identify your target population and gradually refine that population based on clearly defined inclusion and exclusion criteria. This is a critical framework to keep in mind: in order for the data to be manageable for analysis it needs to be filtered by both the population of interest and the parameters you wish to measure. If this aspect of the study is well defined, data analysis can be performed with ease.

Advantages of the NTDB

The key advantage to using the NTDB is that it provides easy access to a large, reliable dataset. All data entries conform to the NTDB standard which ensures consistent data entries are made across institutions. Because the NTDB is a large de-identified national database, an IRB is often not required. Due to the robustness of NTDB, you can ask questions about rare disorders in the context of trauma. The strength of the NTDB also comes from its ability to ask high level questions about health outcomes in different populations.

Limitations

It is also important to realize the NTDB can have limitations, including susceptibility to biases and confounding variables due to the NTDB's retrospective nature. These challenges are common to many retrospective database studies and it is important to keep them in mind when interpreting data from the NTDB. Additionally, yearly variations occur due to a myriad of factors and this necessitates careful interpretation of data across different years. Researchers should keep all of these factors in mind when designing studies with large databases.

Conclusion

The NTDB serves as a vital tool for trauma research and quality improvement in the US. Its expansive scope and scale offer an unparalleled view into the realities and challenges of trauma care across diverse settings. While it is important to recognize the inherent limitations to the NTDB, it remains an indispensable tool to inform clinical practice.

Bernard P. Chang, MD PhD FACEP
Associate Dean of Faculty Health, Columbia University
Vice Chair of Research
Department of Emergency Medicine

Addressing Fatigue in Emergency Physicians and Clinician Researchers

Introduction

Emergency physicians and staff members are the frontline and bulwark of the healthcare system, providing the full spectrum of acute care to patients in times of crisis. However, the demanding nature of their profession often puts them at risk of emotional exhaustion (e.g. moral injury/burnout), a phenomenon that is unfortunately common amongst emergency clinicians, with upwards of 60% of providers reporting moderate to high symptoms of burnout.[4] However, burnout is not exclusive to clinical practitioners. Researchers and academics, particularly those engaged in clinician research, also face the challenges of burnout, emphasizing the need for an interdisciplinary and holistic approach to support those dedicated to acute care science. In this piece we explore the prevalence of burnout in both emergency physicians and clinician researchers, emphasizing the importance of a comprehensive support system to foster resilience and well-being.

Understanding Burnout

Burnout is a complex and multifaceted phenomenon characterized by emotional exhaustion, depersonalization and a reduced sense of personal accomplishment.[2,3] The fast-paced, high-stakes environment of emergency medicine has been associated with near and long term effects on providers including the development of burnout among physicians.[1] The constant pressure, long hours and exposure to traumatic events can take a toll on their mental and emotional well-being, with past work finding elevated risk for the development of psychological and even physiological changes such as blood pressure, poor sleep, and anxiety.[5]

Similarly, clinician researchers, who navigate the delicate balance between clinical practice and research endeavors, face unique challenges. The pressures to publish, secure grants and juggle clinical responsibilities can lead to high degrees stress and burnout. The parallel demands of clinical and research roles make it imperative to recognize burnout as a shared concern in both spheres of such clinician-investigators.

The Interconnectedness of Clinical Practice and Research

Clinician researchers play a pivotal role in advancing medical knowledge by bridging the gap between clinical practice and research. Their work directly influences patient care, making their contributions invaluable. However, the interconnectedness of these roles also means that burnout in one domain can spill over into the other.

Emergency physicians engaged in research may find themselves caught in a cycle of burnout, as the demands of clinical practice and research responsibilities feed into each other. It is crucial to recognize this intricate balance and develop strategies to support these individuals comprehensively. To address burnout effectively, a multifaceted approach is necessary. Some potential strategies to support emergency physicians and clinician researchers in their pursuit of acute care work include:

Promoting Academic Work-Life Balance

• Create a culture that values and prioritizes work-life balance with appropriate recognition and administrative support for research and clinical efforts.

• Explore supportive scheduling approaches that address challenges often seen by clinician-investigators regarding working hours and timing of research/operational meetings which may run at different cadences to the classic emergency clinician schedule.

Team-based Approaches

• Foster a collaborative and supportive team environment. Encourage open communication and teamwork to share the burden of responsibilities. Developing strong interpersonal connections within the workplace can create a sense of community and shared responsibility.

Professional Development and Training

• Provide ongoing professional development and training opportunities. This can help emergency physicians and clinician researchers stay engaged and motivated in their respective roles. Investing in their growth and skill development contributes to a sense of accomplishment and job satisfaction.

Research Support Infrastructure

• Establish a robust infrastructure to support clinician researchers. This includes administrative assistance, dedicated academic/research time and resources for data collection and analysis. Streamlining the research process can alleviate some of the stress associated with conducting research alongside clinical duties.

Leadership and Advocacy

• Encourage leadership at all levels to advocate for the well-being of emergency physicians and clinician researchers. Address systemic issues that contribute to burnout and create a culture that prioritizes the mental and emotional health of healthcare professionals.

Conclusion

Burnout is a pervasive challenge that affects emergency physicians and clinician researchers alike. Recognizing the interconnectedness of clinical practice and research is crucial in developing comprehensive strategies to support these dedicated individuals. By fostering a culture of well-being, promoting work-life balance and providing targeted resources, we can create a resilient healthcare workforce capable of delivering high-quality acute care while advancing acute care science. Establishing such a culture will help ensure a sustainable and fulfilling future for those on the front lines of healthcare innovation.

References

1. CHANG, B. P., CARTER, E., NG, N., FLYNN, C. & TAN, T. 2018. Association of clinician burnout and perceived clinician-patient communication. The American journal of emergency medicine, 36, 156-158.
2. MASLACH, C., JACKSON, S. E., LEITER, M. P., SCHAUFELI, W. B. & SCHWAB, R. L. 1986. Maslach burnout inventory, Consulting psychologists press Palo Alto, CA.
3. MCMANUS, I. C., KEELING, A. & PAICE, E. 2004. Stress, burnout and doctors' attitudes to work are determined by personality and learning style: a twelve year longitudinal study of UK medical graduates. BMC Med, 2, 29.
4. SHANAFELT, T. D., BOONE, S., TAN, L., DYRBYE, L. N., SOTILE, W., SATELE, D., WEST, C. P., SLOAN, J. & ORESKOVICH, M. R. 2012. Burnout and satisfaction with work-life balance among US physicians relative to the general US population. Archives of internal medicine, 172, 1377-1385.
5. SHECHTER, A., DIAZ, F., MOISE, N., ANSTEY, D. E., YE, S., AGARWAL, S., BIRK, J. L., BRODIE, D., CANNONE, D. E. & CHANG, B. 2020. Psychological distress, coping behaviors, and preferences for support among New York healthcare workers during the COVID-19 pandemic. General hospital psychiatry, 66, 1-8.

Calendar

February 2024

7 Academy of Clinical Educators, Zoom Lecture, 4:00 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
16 Board of Directors Conference Call, 12:00 pm - 1:30 pm
21 Government Affairs Conference Call, 11:00 am
21 Emergency Medicine Resident Committee Conference Call, 2:00 pm
21 Research Committee Conference Call, 3:00 pm

March 2024

5 Lobby Day, Albany, NY, 10:00 am-4:00 pm
6 Academy of Clinical Educators, Zoom Lecture, 4:00 pm
13 Education Committee Conference Call, 2:45 pm
13 Professional Development Conference Call, 3:30 pm
14 Practice Management Conference Call, 1:00 pm
20 Government Affairs Conference Call, 11:00 am
20 Emergency Medicine Resident Committee Conference Call, 2:00 pm
20 Research Committee Conference Call, 3:00 pm
21 EMS Committee Conference Call, 2:30 pm

April 2024

3 Medical Student Symposium, Zoom Lecture, 6:00-9:00 pm
10 Education Committee Conference Call, 2:45 pm
10 Professional Development Conference Call, 3:30 pm
11 Practice Management Conference Call, 1:00 pm
14-16 Leadership and Advocacy Conference, Washington DC
17 Government Affairs Conference Call, 11:00 am
17 Emergency Medicine Resident Committee Conference Call, 2:00 pm
17 Research Committee Conference Call, 3:00 pm
18 EMS Committee Conference Call, 2:30 pm

New York
AMERICAN COLLEGE OF
EMERGENCY PHYSICIANS

Call for Board and Councillor Nominations

Councillor Nominations

Active members of New York ACEP interested in serving as a New York ACEP Councillor are encouraged to submit their nominations to the 2024 Nominating Committee for consideration as the committee develops the slate of candidates.

Councillors with Terms Ending in 2024

- Nicole Berwald, MD FACEP
- Robert Bramante, MD FACEP
- Arlene Chung, MD FACEP
- Mark Curato, DO FACEP
- Keith Grams, MD FACEP
- Abbas Husain, MD FACEP
- Stuart G. Kessler, MD FACEP
- Daniel Lakoff, MD MBA MS FACEP
- Kurien Mathews, DO MBA
- Laura Melville, MD
- Joshua Moskovitz, MD MBA MPH FACEP
- Nestor Nestor, MD FACEP
- Jeffrey Rabrich, DO MBA FACEP FAEMS
- Virgil Smaltz, MD MPA FACEP
- Jeffrey Thompson, MD FACEP
- Peter Viccellio, MD FACEP

Councillors with Terms Ending in 2025

- Brahim Ardolic, MD FACEP
- Kirby P. Black, MD FACEP
- Erik Blutinger, MD MSc
- Lauren J. Curato, DO FACEP
- Sanjey Gupta, MD FACEP
- Laura Iavicoli, MD FACEP
- Marc P. Kanter, MD FACEP
- Elyse Katz Lavine, MD FACEP
- Penelope C. Lema, MD FACEP
- Sophia Lin, MD RDMS
- Livia M. Santiago-Rosado, MD FACEP
- L. Carlos Zapata, MD FACEP

The Board of Directors will elect Councillors at the Thursday, July 11, 2024 Board meeting at the Sagamore Resort. Members interested in representing New York ACEP at the ACEP Annual Council Meeting (September 27-28, 2024 in Las Vegas) should submit a nomination form and their CV to New York ACEP. New York ACEP will be represented by 30 Councillors at the 2024 ACEP Council meeting.

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 2024 Nominating Committee for considerations 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 10, 2024 at the Sagamore Resort on Lake George.

Board Members with Terms Ending in 2024

- Arlene S. Chung, MD MACM FACEP
- Mark Curato, DO FACEP
- Jeffrey Thompson, MD FACEP
- Keith Grams, MD FACEP

Interested candidates should review the Criteria for New York ACEP Board Nomination, Board Member Duties and Responsibilities and send a completed nomination form along with a copy of their CV to New York ACEP by April 5, 2024. Self nomination and nominations of colleagues are accepted.

Visit New York ACEP using this link for additional information and the nomination form.

Successful nominees will be notified by May 10, 2024. 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.

Nomination Deadline: April, 5, 2024

New York EM Residency Spotlight

NYU Grossman Long Island School of Medicine

Demographics

Program Director: Alexandra Ortego MD, FACEP

Program Coordinator: Nicole Oquendo

Program Coordinator E-mail Address: nicole.oquendo@nyulangone.org

Hospital Capabilities: STEMI, Stroke, Trauma

Total Number of EM Residents: 6

Residents Trained Each Year: 6

Inagural Resident Class Year: 2026

Benefits Offered: Rosh Review, Membership Dues, Lab Coats, Discounted Housing, Dental Insurance, Health Insurance, Vision Insurance, Life Insurance, Disability Insurance

Website Link: https://medli.nyu.edu/departments-divisions/emergency-medicine/education/residency

Twitter: @NYUHospLI_EM

Instagram: @NYULISOM_EMRes

Most Unique Program Feature: As a relatively new program, our residents have the unique experience of helping shape our residency. Resident feedback is highly valued, and we are continuously implementing resident suggestions to make our department an even greater place to train. This not only benefits our program but also our residents who will bring to their careers, the skills and experience to implement positive change.

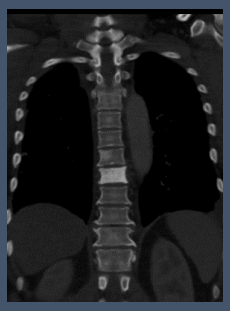
What are you most proud of with your program? We are particularly proud of how close-knit our program is. Our residents receive a lot of individualized attention and feedback as well as benefit from a robust mentorship program. It's the type of place where when you show up to work, you're not only familiar with the career interests of the person sitting next to you but also their life outside of medicine. In our department, we feel empowered to give feedback, initiate change, and support one another.

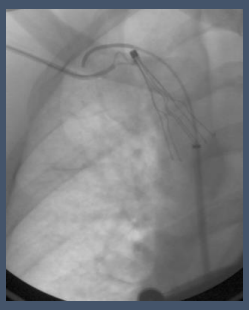
What makes your program an excellent place to complete a residency? We are proud of our ability to care for our diverse, high-acuity patient population. NYU has been ranked as a #1 Hospital in New York for the last couple of years and because of that reputation, we draw patients from a wide catchment area. The Emergency Department is very busy with approximately 87,000 visits per year with a higher-than-average admission rate. It is a Level 1 Trauma Center, Comprehensive Stroke Center, and STEMI Receiving Hospital so our residents have ample opportunity to care for many critically ill patients. The makeup of our surrounding communities is racially, ethnically, and socioeconomically diverse; we see patients from almost all walks of life. We care for many patients for whom English is not their primary language, patients with limited access to healthcare, and patients with complex medical conditions who are followed closely by sub-specialists.

NEW YORK ACEP
American College of Emergency Physicians
ADVANCING EMERGENCY CARE

2024 Scientific Assembly Research Forum

Call for Visual Diagnosis Images

The New York American College of Emergency Physicians is now accepting image case reports for presentation at the 2024 Scientific Assembly, July 9-11, at the Sagamore Resort on Lake George in Bolton Landing, New York.

Guidelines. Clinical or Radiological Images will be accepted. Submissions may include up to two figures. The case report, discussion and diagnosis (excluding the four questions to test conference attendees) should not exceed 300 words. The Case report must be uploaded as an individual word document, and the discussion, diagnosis and questions must be uploaded as a separate word document. Images should either be (1) rare, (2) offer new insight into a known disease, or (3) a classic image that has not previously been reported. Please limit to four references. Please adhere to your local institution's guidelines for deidentifying and submitting medical images of patients.

Structure of the Case Report in Word format (Clearly identify each bulleted section below in the submission).

- Title
- Authors and affiliations
- Case Report: The case report should be written in complete sentences using grammatically correct English. Accepted Case Reports will be published as is.
  - Limit to several sentences on how the patient presented and do not include the diagnosis.
- Discussion should include the following (as applicable)
  - Define the pathology and describe the findings (if it is a radiographic image)
  - Overview (background, pathophysiology, etiology, epidemiology)
  - Usual presentation (History and Physical)
  - Differential Diagnosis
  - Workup
  - Treatment
- Why is it important for an emergency physician to be familiar with this diagnosis?
- Four questions to test conference attendee knowledge (multiple choice or True/False)
  - *The questions may address issues of etiology, clinical presentation, differential diagnosis, diagnostic testing, natural history of disease, risk factors, management/treatment, potential complications, patient disposition or other subjects pertinent to pre-hospital and hospital-based emergency medicine healthcare providers. For each question, you should indicate a single correct answer and provide a brief discussion of the correct answer.*

The case report, discussion and diagnosis (excluding the four questions to test conference attendees) should not exceed 300 words.

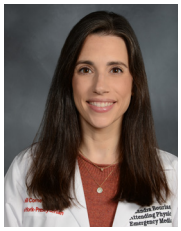
- The image(s) should be submitted as a separate .jpg or .png file. Image descriptions and arrows identifying pathology should be included in the Discussion word document but should not be included in the final presentation. **Videos will not be accepted.**
  - 300 dpi resolution

About the Process. There will be a blind review of all image case reports. Ten images will be displayed during the conference.

Submission Deadline: April 1, 2024

PEDIATRICS

Geoff Jara-Almonte, MD
Associate Residency Director
Department of Emergency Medicine
Icahn School of Medicine at Mount Sinai
NYC H+H Elmhurst Hospital Center



Alexandra Bourlas, DO
Clinical Instructor in Emergency Medicine
Weill Cornell Medicine
Attending Physician
NewYork-Presbyterian

A Neonatal Resuscitation Refresher

It's likely every emergency medicine (EM) physician's worst nightmare (or at least one of the many): An imminent or precipitous delivery. Two patients for the price of one and so much can go wrong. But as is an ever-running theme in our specialty, we must be prepared for any- and everything that comes through our doors.

The good news is if this does occur on shift, the likelihood you will need to do much more for this new addition to the world apart from a quick neonatal evaluation and cord clamping is low. Studies suggest only about 10% of all newly born infants require some breathing assistance at birth, with extensive resuscitation necessary in up to 1%. Even with this relative rarity, neonatal mortality in the US is about 4 per 1000 live births and many EM physicians feel they need more exposure to neonatal resuscitation. So, without further ado, a refresher on the very important topic of neonatal resuscitation. (We'll leave the Moms for another day).

Preparation

In the rare instance you receive a pre-hospital notification for a neonatal resuscitation, the first step is preparation. Turns out, a lot of equipment and resources may be necessary to support this patient (see below). Most importantly, however, make sure to have a neonatal radiant warmer turned on and warmed up and ensure you have a compressed air source, oxygen blender with flow meter, neonatal pulse oximeter, bag-valve mask and laryngeal mask available in your resuscitation bay. Familiarize yourself with this equipment early and often. The last thing you want at that critical moment is to have to figure out how to operate any of it. And though all resuscitative gear has some level of importance, the greatest resource any of us can have is the help of our respiratory therapy and NICU comrades.

Neonatal Resuscitation Equipment	
Radiant warmer with servocontrol temperature sensor	IV infusion equipment
Prewarmed towels/blankets	IV fluids (D10W, NS)
Wall suction, suction catheters, bulb syringes	Umbilical catheter tray
Heated, humidified oxygen source	Curved hemostat
Compressed air source and oxygen blender	Two iris curved forceps, no teeth)
Cardiorespiratory monitor/monitor leads	Scalpel, needle holder, scissors, sutures
Pulse oximeter	Syringes
Bag (T-piece, flow-inflating or self-inflating) *with* monometer	Gauze sponges
Masks (sizes 1, 2, 3, 4)	3.5F, 5F umbilical catheters
Laryngoscope (0, 1 blade)	3-way stopcock
Endotracheal tubes (2.5, 3.0, 3.5, 4.0)	Umbilical tape
Meconium aspirator	Povidone-iodine solution
CO_2 detector	Polyethylene bags or plastic wrap
Nasogastric tubes (5F, 8F)	
Tintinalli's Emergency Medicine, 9e; 2020	

Once the patient(s) arrives, quickly perform an assessment of the maternal and fetal history. What is the gravidity and parity? When was her last menstrual period or does she know her estimated gestational age (EGA)? What's the patient's prenatal history? Did they have gestational diabetes or hypertension in pregnancy? Are there any concerns for infectious serologies or known genetic anomalies? Did the patient have any prenatal care? Is she experiencing a fever or have there been prolonged rupture of membranes? Was there meconium-stained amniotic fluid? If a precipitous delivery has occurred, there may not be time to ask all of this up front. Perhaps the mother doesn't know how pregnant she is, or that she was even pregnant at all. In cases like these, move onto the fetal assessment and ask questions along the way. The fetal physical exam can provide clues to help you approximate an EGA if the mother is unsure. For example, if eyes are spontaneously opening, the neonate is likely term or >37 weeks EGA. If the eyes are fused shut, they're more likely between 20-28 weeks. Other signs of prematurity, include thin, translucent and sticky skin and shiny, smooth soles of the feet without creasing. Lanugo, the fine hair covering a fetus acquires in utero, appears around 20-25 weeks, is abundant by 28 weeks and normally is shed at about 33-36 weeks. All of this information will be helpful in guiding your resuscitative efforts, including the unfortunate decision of when to terminate those efforts.

Resuscitation

Is the infant breathing/crying spontaneously with good tone? If so, get that baby to mom and complete your assessment while they're enjoying skin-to-skin bonding. Make sure to provide warmth via skin-to-skin or blankets, clear the nose and mouth with bulb suction if there are signs of obstructed breathing, dry the baby and provide ongoing assessment of respiratory effort and tone. In cases like these, you can allow for delayed cord clamping of 1-3 minutes in both term and healthy pre-term neonates, as it can reduce the need for blood transfusion, increase neonatal iron stores and may improve survival. For those newborns requiring immediate resuscitative intervention, the cord should be clamped and cut and the baby should be moved to the isolette for further evaluation and care.

The First 30 Seconds – The T- ABCs

The goal is to complete an initial clinical assessment and provide quick and easy interventions in the first 30 seconds or less after birth, starting with the T-ABCs: Temperature, Airway, Breathing, and then Circulation. Newborns showing poor tone or poor respiratory effort should be placed under a preheated radiant heat source (e.g. radiant warmer) and gently dried and stimulated with a warm towel. If you have a very-low-

birth-weight newborn or one <29 weeks EGA, they should be placed in a polyethylene bag. Plastic food wrap or a food-grade 1-gallon plastic bag may also be used. Take care to avoid hyperthermia, which may precipitate apnea and worsen hypoxic-ischemic injury in depressed infants.

If the infant is not breathing, dry and provide stimulation by rubbing the back or tapping their foot a few times. If there is still no response, open the airway using a jaw thrust and place them in the sniffing position with towels beneath the shoulders. If there appears to be obstruction from amniotic fluid, gently suction the nose and throat with a bulb or 8F catheter. Current guidelines advise against routine deep suctioning of the newborn as tracheal suctioning can cause reflex bradycardia and apnea. If none of these efforts are successful, time to move on to the next 30 seconds of interventions.

The Next 30 Seconds – Heart Rate and Positive Pressure Ventilation

If the neonatal heart rate is >100 bpm, but they are persistently cyanotic or with labored breathing, open the airway and suction nose and mouth. Attach a pulse oximeter to the right hand or wrist to measure a preductal SpO2 and apply supplemental oxygen to achieve targeted preductal O2 saturation goals (see below). If the heart rate is <100 bpm, or if the neonate is gasping or remains apneic after the initial steps above, it's time to start positive pressure ventilation (PPV).

PPV can be administered via a few different types of devices, including self-inflating bags, flow-inflating bags and T-piece resuscitators. Check with your hospital's central supply or NICU to determine what is available to you and familiarize yourself with its operation. Flow-inflating bags are typically preferred by neonatal resuscitationists, but they take more training and experience to properly operate. In inexperienced hands, self-inflating bags are superior. Start PPV with a ventilation rate of 40-60 breaths/min. Care must be taken to avoid volutrauma and barotrauma. Ensure that a neonatal (not child- or adult-sized) Bag Valve Mask (BVM) is used. Provide just enough volume to achieve visible chest rise. Infant BVMs include a manometer and pop-off valve that typically limits peak inspiratory pressure (PIP) to 20 mmHg when active. Attention must be paid to ensure excessive PIP is not provided. Typically, a PIP of 20 cmH2O is usually sufficient, but as high as 30 – 40 cmH2O may be required for the first breath or two to overcome the surface tension in fluid-filled alveoli. Exposure to excessive inspiratory pressures can cause pneumothorax and compromise your resuscitation. Additionally, start resuscitative efforts on room air as excessive oxygenation is associated with increased mortality.

As in most resuscitations with children, neonatal resuscitation requires attention to airway and breathing before circulation. Bradycardia (even when extreme) is usually a result of respiratory failure. Before compressions or resuscitative medications, first make sure you are effectively ventilating your patient. Delaying PPV can increase patient mortality and prolongs hospitalization. Watch for chest rise and an increase in heart rate, which is the most sensitive indicator for successful ventilation – An increase in heart rate within 5-10 breaths suggests you are effectively ventilating your patient. Utilize your 3-lead EKG to gauge your efforts.

Permissive Hypoxia

You're seeing a rise in heart rate, but the neonate's pulse oximeter is only reading 65%. Don't panic! Fetal circulation undergoes many physiologic changes at birth. At this point, the baby is relying on its own lungs to supply oxygenated blood for systemic circulation. The gradual increase in oxygen saturation (SpO2) within the first few minutes of life reflects this transition to extrauterine life . This transitional process normally occurs in a few minutes and, rarely, can take up to hours or even days. By the first minute of life, the normal neonate's SpO2 is 60% to 65%, increasing steadily by 10% about every 2 minutes. Only after roughly 10 minutes of life will the full-term, healthy neonate exhibit an SpO2 of >85%.

Targeted Pulse Oxygen Levels During Newborn Resuscitation	
Time After Birth	Target Oxygen Saturation (Preductal)
1 min	60-65%
2 min	65-70%
3 min	70-75%
4 min	75-80%
5 min	80-85%
10 min	85-90%
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If you aren't seeing a response to PPV, attempt the following corrective steps prior to moving to more advanced resuscitative efforts. This is commonly known by the mnemonic: MR. SOPA

M - Mask (adjust to improve seal)

R - Reposition head to open airway

S - Suction (the mouth first, then the nose)

O - Open the mouth (jaw thrust)

P - Pressure (increase it until chest rise is noted – Max PIP 40cmH2O)

A - Airway control (aka intubate!)

60 Seconds and Beyond – Advanced Resuscitation

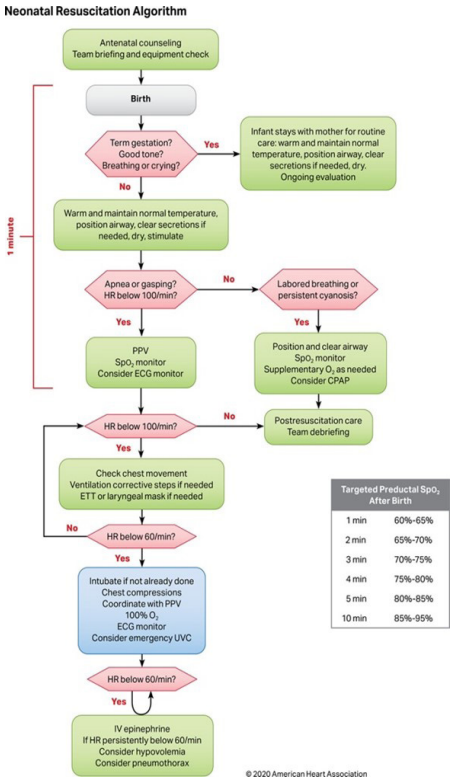
Yes, you understood that correctly. Our goal is to attempt all of the above within the first 60 seconds of life. If the neonatal heart rate is <60 bpm despite your best efforts, it's time to start chest compressions. This should be done at a rate of 3 compressions to 1 breath for a total of 30 breaths and 90 compressions (120 events) per minute. The two-thumb technique seems to be superior in generating greater peak systolic pressures. However, the two-finger technique may be more practical if a colleague is simultaneously attempting umbilical vessel catheterization. At this time, you've likely intubated the patient and are ventilating them with an FiO2 of 100%. Once the neonatal heart rate has exceeded 60 beats/min, you can stop chest compressions and focus on ventilation, increasing the ventilation rate to 40-60 breaths/min. Slowly wean PPV when the heart rate exceeds 100 bpm and the newborn has begun to breathe spontaneously.

If the heart rate has not improved despite adequate ventilation and compressions for 45-60 seconds, it's time for vascular access and epinephrine. IV/IO access can be obtained, but consider umbilical vein catheterization if access is difficult to obtain or if you think blood transfusion or prolonged infusions may be necessary. As is a common theme with this topic, familiarizing yourself with an umbilical vein catheterization is paramount for success. Epinephrine can be given 0.01 to 0.03 milligram/kg IV/IO or endotracheal dosing 0.05 to 0.1 milligram/kg. Volume expansion should also be considered when there is known or suspected blood loss (e.g. pallor, poor perfusion or weak pulses). Administer 10 mL/kg of 0.9% saline normal saline or O-negative blood – slowly over 3-5 minutes. The slow infusion is especially important in premature infants who are at risk for intraventricular hemorrhage. You may also want to check for hypoglycemia and pneumothorax at this time. Hypoglycemia is associated with adverse outcomes following birth asphyxia. Check for hypoglycemia (<50 mg/dL) and correct as needed with 5mL/kg IV push of D10 or a D10 infusion at 4-7mg/kg/min. You can assess for pneumothorax quickly utilizing the transillumination test – place a light source on the chest wall. A translucent chest wall and visible light source is suggestive of pneumothorax. If there is high clinical suspicion for pneumothorax, you may also perform needle aspiration with a saline-filled syringe in the 2nd or 3rd intercostal space at the mid-clavicular line. When air bubbles are present in the syringe, you have entered the pneumothorax and can evacuate it.

Up to 90% of newborns will require only basic maneuvers such as warming, drying and stimulation. And when a newborn requires resuscitation, there may be abnormalities in major organ systems at play. The list of potential organ system dysfunctions and considerations for post-resuscitative

PEDIATRICS

care is lengthy and out of our scope of practice. Hopefully by this time in your efforts, the NICU team has taken over and/or you have initiated



transfer to a tertiary or quaternary care center.

The American Heart Association (AHA) and Neonatal Resuscitation Program (NRP) have algorithms to guide clinicians through the process step-by-step.

Termination of Efforts

In all true medical emergencies, advanced preparation can mean the difference between good and bad outcomes – life or death. But sometimes we are unsuccessful despite our best efforts, and our patients die. Just as it is important to know when and how to do everything you can to save a life, it is equally as important to know when to stop. EGA, signs of life during resuscitative efforts, length of active resuscitation and presence of severe congenital anomalies all must be considered when making this difficult decision. Peri-viability is typically noted between 22-24 weeks EGA and data suggests that a neonate with no signs of life and an EGA of <22 weeks has a 0% chance of survival, with comfort care rather than resuscitation, the recommended course of action. Additionally, newborns with no signs of life after 10 minutes of continuous resuscitation are virtually certain to suffer severe morbidity and/or mortality if vital signs are restored. If there are no signs of life despite performing all steps of resuscitation approximately 15-20 minutes after birth, we have an ethical responsibility to begin discussing a change in goals of care and cessation of our efforts with the team and family.

Neonatal resuscitation is a rare and highly stressful event. The last thing any emergency medicine physician wants is to be unprepared when the stakes are this high. Luckily, the vast majority of deliveries are uncomplicated and require very little from us. In the rare event where more intervention is necessary, remember that anticipation, preparation and effective team communication are the keys to success. Focus on providing high quality respiratory support, considering airway and breathing before circulation, using the neonate's heart rate as your guide. And get help early from whomever is willing and able.

References

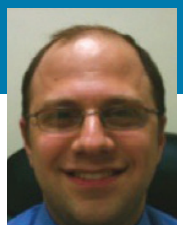
1. Collin MF. Resuscitation of Neonates. In: Tintinalli JE, Ma O, Yealy DM, Meckler GD, Stapczynski J, Cline DM, Thomas SH. eds. Tintinalli's Emergency Medicine: A Comprehensive Study Guide, 9e. McGraw Hill; 2020. Accessed March 23, 2023. https://accessmedicine-mhmedical-com.clinicalproxy.libr.ccny.cuny.edu/content.aspx?bookid=2353&sectionid=219643848

2. Aziz K, Lee HC, Escobedo MB, et al. Part 5: Neonatal Resuscitation: 2020 American Heart Association Guidelines for Cardiopulmonary Resuscitation and Emergency Cardiovascular Care. Circulation. 2020;142(16_suppl_2):S524-S550. doi:10.1161/CIR.0000000000000902

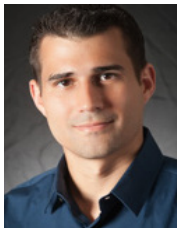
3. Vo AT, Cho CS. Neonatal Resuscitation in the ED. Pediatric Emergency Medicine Practice. December 1, 2020. Accessed April 3, 2023. https://www.ebmedicine.net/topics/critical-care/neonatal-resuscitation

4. Ersdal HL, Mduma E, Svensen E, Perlman JM. Early initiation of basic resuscitation interventions including face mask ventilation may reduce birth asphyxia related mortality in low-income countries: a prospective descriptive observational study. Resuscitation. 2012;83:869–873. doi: 10.1016/j.resuscitation.2011.12.011

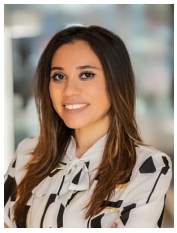
5. Berazategui JP, Aguilar A, Escobedo M, Dannaway D, Guinsburg R, de Almeida MF, Saker F, Fernández A, Albornoz G, Valera M, Amado D, Puig G, Althabe F, Szyld E; ANR study group. Risk factors for advanced resuscitation in term and near-term infants: a case-control study. Arch Dis Child Fetal Neonatal Ed. 2017;102:F44–F50. doi: 10.1136/archdischild-2015-309525



Moshe Weizberg, MD FACEP
Medical Director, Emergency Department
Maimonides Midwood Community Hospital
Chair, New York ACEP Professional Development Committee



Interviewer
William Caputo, MD MS FACEP
Residency Director
Department of Emergency Medicine
Staten Island University Hospital



Interviewee
Shorok Hassan, DO
Assistant Program Director
Department of Emergency Medicine
Staten Island University Hospital

From Good to Great: Improving Your Lecture Quality

It was my privilege to speak with Dr. Shorok Hassan. Dr. Hassan is well-known nationally as a dynamic speaker and for the superb quality of her lectures.**Thank you, Dr. Hassan, for taking the time to participate in this interview.**

What was your magical moment when you knew you were destined for speaking greatness?

SH:I would have to say during intern year when I had to present for the CPC (clinical pathology case) competition, which was the first time I lectured for a large audience. It brought out my creative side as I realized my slides needed to be unique in order to engage the audience and stand out from the other lectures. It forced me to take it up a notch which, apparently, seemed to resonate positively with the judges since I ended up winning that competition. From that point on, I was hooked. I found my voice and started to hone my skills to become a great speaker and, in turn, impart those lessons to future lecturers.

Many lecturers are hampered by a fear of public speaking. Is this something you've experienced and, if so, how did you overcome it?

SH: For sure! Getting up on that stage those first few times triggered my fear of public speaking. However, I was able to overcome it with some good 'ole "mind over matter." I would practice countless times and remind myself that, having put in the hard work, I was confident that I knew the content of which I spoke. Also, being passionate about the topic you are discussing and the art of speaking, in general, has helped. More importantly, I allowed myself to have fun with the process. Focusing on all of that, instead of the fear of being in front of an audience, freed me to enjoy the moment. In doing so, I found myself excited to be able to share useful information. I like to think that that enthusiasm has been contagious.

What is your process for developing a lecture?

SH: For me, it is important to start by choosing a topic which could be most beneficial and that I would truly enjoy presenting. Then, I build upon the topic by developing key take home points. From there, it is a matter of constructing slides with high quality images to serve as cues to really drive home my points. After that, I practice and, at times, even record myself to see how I can improve. Finally, after perfecting my timing and even more practice, it's "Go time!"

What opportunities would you recommend junior learners take advantage of to improve their lectures?

SH: Watch and learn from your EM lecturers and peers. Do something different to stand out. But, ultimately, remember to just BE YOURSELF. Let your personality shine! We all have something unique to bring to that stage. You want people to remember you and what you have to share.

Also, challenge yourself to accept the opportunities around you despite any fear. Perhaps start with lectures with audiences you may find slightly less intimidating. For example, try lecturing to medical students and grow from there. Lecture at your home institution(s) and then expand to other hospital conferences. Take part in various lecture competitions as this can be an excellent opportunity to learn and become more creative. After giving any lecture, don't forget to ask for feedback. These are just some suggestions which hopefully can help you along the way to developing your skills as a lecturer.

Aside from those excellent tips, are there any resources that you would recommend?

SH: For one thing, don't underestimate the power of learning from other lecturers. You can learn from watching those you find inspiring and even those you may find less so. There are plenty of helpful videos online which discuss how to be an effective speaker. You can also see examples of how lectures can be given on a multitude of topics such as by watching TED talks and going to national conferences. You may also want to consider attending, or watching, workshops which offer pointers as to how to be creative with your presentations. I would also recommend investing in a stock images service that gives you access to high quality photos, which can make a noticeable difference in your slides.

What do you love most about lecturing?

SH: That's a tough question to answer with just one reply. There are so many ways I benefit from giving lectures. In preparing for every lecture, I learn something new each time. It excites me to see when I am able to reach my audience. The hope that they can leave the experience with a deeper understanding and, possibly, a spark of inspiration is an honor. And, who knows? Maybe it will help them get the motivation to step on stage and lecture, as happened to me. That is a feeling I will never forget.

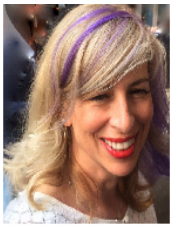
What are your top 10 pearls for improving your lecture quality?

1. Just be yourself!
2. Be passionate about your topic.
3. Narrow your topic. "Less is more."
4. Organize your thoughts by jotting down your major take home points.
5. Place this framework onto your slides. No bullet points!
6. Avoid making busy slides. Use those HD images.
7. Maintain good eye contact.
8. Avoid hiding behind the podium; be interactive while presenting.
9. No reading off the slides or pieces of paper. This is one of the fastest ways to lose your audience.
10. Again: PRACTICE, PRACTICE, PRACTICE. And be open to feedback.

Bonus tip! This can't be stressed enough: Always remember to have **fun** with this process!

Research

Adrian Cotarelo, MD MHS
Research Director
St. John's Riverside Hospital



Laura Melville, MD MS
Associate Research Director
SAFE Medical Director
NewYork-Presbyterian Brooklyn Methodist Hospital
Chair, New York Research Committee

Challenging the Assumptions – An Evidence-Based Review of Psychogenic Non-Epileptic Seizures

Previously known (and often referred to) as "pseudoseizures", psychogenic nonepileptic seizures (PNES) represent a disturbance of motor, sensory, autonomic and cognitive function that closely resemble epileptic seizures. In contrast with epilepsy, this seizure-like activity does not represent abnormal neuronal conduction, but instead is thought to be psychogenic in origin. PNES remains a poorly understood and often stigmatized condition. Through this review of some of the recent literature, we hope to challenge some commonly held assumptions about this relatively common, but not benign, condition.

Epidemiology

While the incidence and prevalence of psychogenic nonepileptic seizures are difficult to estimate (given that not every patient undergoes the diagnostic gold standard video EEG monitoring), its incidence is estimated at 1.5-5 cases per 100,000 persons per year, while the prevalence is estimated from 2-33 per 100,000 persons.[1] The prevalence is estimated based on a year 2000 population-based study in Iceland, which may limit generalizability worldwide, however newer data is sparse. A 2014 literature review found similar results given newer aggregate data, although this review still included these older studies.[2] In contrast, the incidence of epilepsy worldwide is estimated at 67.77 per 100,000 persons per year, and the prevalence is estimated at 7.6 per 1000 people.[3]

Clinical features of PNES closely mimic epilepsy, often leading to difficulty in diagnosis. While advances in epilepsy research continue to improve management, rates of epilepsy misdiagnosis remain up to 20%. A 2017 literature review found that of those who are misdiagnosed with epilepsy, up to 23% are ultimately attributed to PNES.[4] Frontal lobe epilepsy presents particularly similarly to PNES, with brief episodes of impaired (or preserved[5]) consciousness, vocalizations, irregular tonic-clonic movements and normal EEG waveforms[6], highlighting the difficulty in arriving at an appropriate diagnosis.

Diagnosis

The International League Against Epilepsy recommends diagnosis via a combination of history, video-EEG monitoring and description of a witnessed event.[7] Video-EEG monitoring shows normal EEG activity during seizure-like episodes. They recommend that PNES be managed without antiepileptic drug treatment, with cognitive behavioral therapy being the most studied form of management.

Episodes of PNES often occur in front of witnesses. A 2005 study by the University of South Florida found that 75% of seizure-like episodes that occurred in the waiting room or exam room were ultimately diagnosed as PNES.[8] Further, a 2010 UK study noted that, among 254 patients who underwent EEG video monitoring, all 25 who had a seizure-like episode before or during lead placement were found to have PNES.[9]

"Typical" Features

Contrary to popular belief, clinical signs of PNES are often difficult to distinguish. A 2010 review found that, unlike epileptic seizures, PNES do not often occur during sleep and those that occur during apparent sleep are often found to have waveforms indicative of wakefulness on EEG.[10] This same review found that PNES often mimic tonic-clonic or focal seizures with impaired alertness and are less likely to mimic absence, focal seizures with preserved alertness, or atonic seizures. Features found to be typical of PNES include ictal tearfulness, less incidence and less severity of tongue biting and incontinence, absent post-ictal confusion, ictal vocalization, asynchronous movements, pelvic thrusting and side to side body motions.[10]

While these features are thought to be typical, **no single feature is sensitive or specific enough to diagnose PNES.**[11] One study challenged physicians from different specialties to diagnose epilepsy or PNES in a series of patients after watching a short video clip of each. While not generalizable worldwide given the small sample size, lack of accompanying EEG and methodology of giving a diagnostic guess after one viewing of the video, diagnoses by Emergency physicians in this particular pool had a sensitivity and specificity of just 63%.[12]

Comorbidities

Interestingly, 5-10% of PNES patients have concurrent epilepsy. Video EEG monitoring of these patients shows both true seizure activity, alongside seizure-like episodes with normal waveforms. In these patients, the psychogenic seizures were found to mimic their epilepsy.[13]

Patients with PNES maintain higher prevalence of psychiatric comorbidities than those with epilepsy alone, however these conditions are also more common in patients with epilepsy than the general population. One study compared neuropsychological profiles of patients with PNES against those with epilepsy and found that psychiatric disease alone is not specific for PNES. While PNES is often thought to be associated with psychosocial stress, stress is also found to precipitate seizures in epilepsy.[14] A 2023 study found no difference in the prevalence of comorbid psychiatric disorders between patients with PNES and those that also had comorbid confirmed epilepsy.[15]

Neurologist involvement remains important during the withdrawal of antiseizure medication, although only a minority of patients will achieve cessation of seizure-like activity.[16] Given the gross similarity to seizures, it is important to take note of the differences between PNES and epilepsy.

Recommendations

- Full seizure work-up should be pursued for a first-time seizure, even in the presence of PNES features as they are not independently diagnostic.
- While psychiatric diseases are prevalent in PNES patients, they are also common in patients with epilepsy and their presence should not be considered diagnostic for PNES.
- Distinguishing organic seizure activity from non-epileptic seizure activity is more difficult than one might imagine, and PNES patients are often misdiagnosed.
- Epilepsy can occur concurrently with PNES and some forms of epilepsy may present with similar features of both. Video-EEG remains the gold standard for PNES diagnosis.
- PNES patients should follow up with neurology for safe discontinuation of AEDs as well as continued education and support for non-AED management, including cognitive behavioral therapy.

References

1. Sigurdardottir KR, Olafsson E. Incidence of psychogenic seizures in adults: a population-based study in Iceland. Epilepsia. 1998;39(7):749-52.
2. Asadi-pooya AA, Sperling MR. Epidemiology of psychogenic nonepileptic seizures. Epilepsy Behav. 2015;46:60-5.
3. Fiest KM, Sauro KM, Wiebe S, et al. Prevalence and incidence of epilepsy: A systematic review and meta-analysis of international studies. Neurology. 2017;88(3):296-303.
4. Oto MM. The misdiagnosis of epilepsy: Appraising risks and managing uncertainty. Seizure. 2017;44:143-146.
5. Jobst BC, Siegel AM, Thadani VM, Roberts DW, Rhodes HC, Williamson PD. Intractable seizures of frontal lobe origin: clinical characteristics, localizing signs, and results of surgery. Epilepsia. 2000;41(9):1139-52.
6. Jobst BC, Williamson PD. Frontal lobe seizures. Psychiatr Clin North Am. 2005;28(3):635-51, 648-9.
7. Lafrance WC, Baker GA, Duncan R, Goldstein LH, Reuber M. Minimum requirements for the diagnosis of psychogenic nonepileptic seizures: a staged approach: a report from the International League Against Epilepsy Nonepileptic Seizures Task Force. Epilepsia. 2013;54(11):2005-18.
8. Benbadis SR. A spell in the epilepsy clinic and a history of "chronic pain" or "fibromyalgia" independently predict a diagnosis of psychogenic seizures. Epilepsy Behav. 2005;6(2):264-5.
9. Woollacott IO, Scott C, Fish DR, Smith SM, Walker MC. When do psychogenic nonepileptic seizures occur on a video/EEG telemetry unit?. Epilepsy Behav. 2010;17(2):228-35.
10. Avbersek A, Sisodiya S. Does the primary literature provide support for clinical signs used to distinguish psychogenic nonepileptic seizures from epileptic seizures?. J Neurol Neurosurg Psychiatry. 2010;81(7):719-25.
11. Reuber M, Elger CE. Psychogenic nonepileptic seizures: review and update. Epilepsy Behav. 2003;4(3):205-16.
12. Seneviratne U, Rajendran D, Brusco M, Phan TG. How good are we at diagnosing seizures based on semiology?. Epilepsia. 2012;53(4):e63-6.
13. Henry TR, Drury I. Ictal behaviors during nonepileptic seizures differ in patients with temporal lobe interictal epileptiform EEG activity and patients without interictal epileptiform EEG abnormalities. Epilepsia. 1998;39(2):175-82.
14. Strutt AM, Hill SW, Scott BM, Uber-zak L, Fogel TG. A comprehensive neuropsychological profile of women with psychogenic nonepileptic seizures. Epilepsy Behav. 2011;20(1):24-8.
15. ALKhaldi NA, Paredes-Aragón E, Kim DD, Yu YJ, ALKhateeb M, Mirsattari SM. Psychogenic non-epileptic seizures with and without epilepsy: Exploring the influence of co-existing psychiatric disorders on clinical characteristics and outcomes. Epilepsy Res. 2024 Jan;199:107279. doi: 10.1016/j.eplepsyres.2023.107279. Epub 2023 Dec 12. PMID: 38101178.
16. Reuber M, Mitchell AJ, Howlett S, Elger CE. Measuring outcome in psychogenic nonepileptic seizures: how relevant is seizure remission?. Epilepsia. 2005;46(11):1788-95.

New York EM Residency Spotlight

South Shore University Hospital, Zucker/Northwell

Demographics

Program Director: Daniel Frank, MD FACEP

Program Coordinator: Morgan Farra

Program Coordinator E-mail Address: mfarra@northwell.edu

Hospital Capabilities: STEMI, Stroke, Trauma

Total Number of EM Residents: 18

Residents Trained Each Year: 6

Inagural Resident Class Year: 2019

Benefits Offered: ROSH Review, Membership Dues Coverage, Lab Coat(s), In-House On-Call Meals, Dental Insurance, Health Insurance, Vision Insurance, Life Insurance, Disability Insurance, Professional Liability Coverage

Other Benefits: Stipend for travel to other rotations

Website Link: http://www.bayshoreem.com/

Instagram Link: @bayshoreEMdoc

What is the most unique feature of your program? The emergency department at South Shore University Hospital is located in Bay Shore, New York on the south shore of Long Island, close to Fire Island and the Great South Bay. The area is home to the full socioeconomic spectrum of patients, including a large Spanish-speaking Central American population, and provides a robust and comprehensive experience for our residents. Our residents train with faculty with decades of combined teaching experience in graduate medical education. A number of our teaching faculty are also fellowship trained in specialties like pediatric emergency medicine, critical care, emergency ultrasound, EMS, hyperbaric medicine, and medical simulation. Our residents have unfettered access to Northwell's robust simulation centers, including the Center for Learning and Innovation and the cadaver lab at the Bio-Skills Center. The residents train in a department that sees approximately 84,000 patients per year (13% pediatric patients), and is a certified Level II Trauma center, STEMI center, and comprehensive stroke center utilizing endovascular techniques. We serve as the tertiary receiving facility for Northwell's eastern region. All together this provides our residents with the opportunity to train with a diverse, complex, and high-acuity patient population. Most uniquely, our program trains a small cohort of 6 residents per year in this high-volume, high acuity environment, providing a detailed and personalized 3-year experience for all of our trainees.

New York EM Residency Spotlight

What is your favorite aspect of the program? Simply, the size of our program. This is by design with no plans to increase our cohort. This is unique amongst NY-based programs. Our departmental volume is on par with many other regional programs who support more residents. Our program size allows for greater exposure to procedures, critical cases, and support from faculty.

What is your program known for? Size of our residency program relative to our departmental volume is unique amongst New York area programs. This allows our residents to see more patients, more critical cases, and perform more procedures. We also have a high volume of pediatric critical care cases, providing a residents with another critical experience.

We have also greatly enhanced our social emergency medicine programs. We have ongoing pipeline programs with students from neighboring schools, who recently participated in a research symposium. Our faculty assist with community events throughout the area, and tour schools to mentor children with career options.

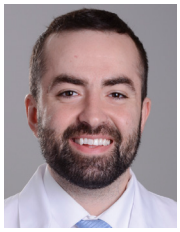
What are you most proud of with your program? As our program becomes more established and we graduate more residents, more and more of our seniors are applying for advanced fellowships in areas such as: critical care; wilderness medicine; medical education and simulation; and ultrasound.

EMERGENCY MEDICINE RESIDENCY PROGRAM LEADERSHIP TEAM

Daniel Frank, MD
Program Director

Andrew Mastanduono, MD
Associate Program Director

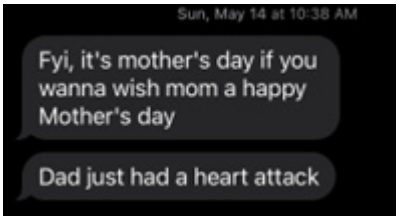
Debby Yanes, MD
Associate Program Director



Kevin Amir Ghaffari, MD
PGY-2 Emergency Medicine Resident
University at Buffalo SUNY

Grief Burdened by Knowledge
Finding motivation through loss during residency

On a beautiful summer day in Buffalo, NY I found myself a few hours into the morning shift at the small stand-alone emergency department we rotate through as first-year residents. It was Mother's Day and I had made sure to send a morning text to my Mom wishing her a great day. As an intern, I was enjoying the experience of working in a different environment and I was beginning to get a feel for the differences in workflow not being at one of our program's larger academic hospitals. I was excited because later in the week I was going to a big national conference in Austin where I had some friends living and was going to cheer on our Sonogames team. Suddenly, a young girl was brought in by her mother with an object surrounding her hand… *what is that?* I immediately stopped dictating a note and evaluated the patient, seeing an entire blender around her hand with the blade secured into one of her little fingers. I initiated the appropriate treatment and work-up (including a more appropriate than usual tetanus shot) and quickly facilitated transfer to our children's hospital. After some shared collegiality with one of our pediatric emergency medicine (PEM) attendings, I hung up the phone to see my cell phone light up with a text message from my brother.



A great older brother ensuring I reached out to our Mom nonetheless.

"Dad just had a heart attack." *What*? Out of immediate confusion, I called my brother for clarification - my family isn't in healthcare and maybe there was some misunderstanding. *How would he know he had a heart attack?* He told me that our Mom just called him to let him know and he wasn't sure what was happening because she was hysterical. I quickly hung up. *Why would they contact my brother and not me if this is serious?* I called my Mom and there was no response. I called my sister who was living with my parents in Virginia at the time and she told me the EMS crew is doing CPR. *CPR? What the hell do you mean CPR?* I asked her "Who is in the room? How many people? Is a paramedic there? Is he hooked up to a monitor?" Overwhelmed she says "I'm not sure, I don't see a monitor?" I asked her to give the phone to one of the EMS providers. A gentleman said "Hello" and I calmly said, "Hi this is the son of the patient, I am an ER physician, what is going on?" He let me know that my dad is receiving compressions from a LUCAS device. They could not get IV access and needed to get IO access. They had been running the code for approximately 12 minutes and my sister had done CPR for 6 minutes or so before they arrived. I asked what my Dad's rhythm was during pulse checks… There was silence. *Why is there silence? Are you checking for a shockable rhythm??* After some pause he says asystole. I asked what the initial rhythm was, he said asystole. My eyes well up as I pace in the back hall of the standalone emergency department, ancillary staff starting to become aware something must be happening. I think to myself *"Wait, is my Dad actually not going to make it?"* I am still on the phone and the advanced EMT tells me there are two paramedics on the scene. I asked if they intubated and he said they attempted and couldn't on one attempt - only a supraglottic device could be placed. I shake my head as my adrenaline continues to surge, *this is over.* The EMT starts telling me his son is also an ER doctor, I share a few kind words clearly confused about how this is a point of conversation and then ask to speak with the paramedic on scene. I asked what hospital in Virginia is providing medical direction and where they are in regard to terminating the code. A few minutes go by and he lets me know my Dad has unfortunately died.

I let the attending I was working with know what had happened, holding back tears. He immediately told me to leave and to not worry about anything else but being with my family. He offered to buy me a flight home if I needed it and shared his number stating he'll let the chiefs and appropriate faculty know. I gathered my belongings and walked out to my car in a complete daze. I had managed to hold it together until I closed my driver's seat door and then my emotions flooded out. *How is this possible*? My parents had just visited me in Buffalo for the first time since residency began two weeks prior and I gave them a tour of the city, showed them where I work and shared the excitement of my new life with them. My dad had just retired in January, he was supposed to travel the world with my Mom, *just how is this possible*? After composing myself I drove to my apartment and looked at flights - unfortunately, none were available until late at night. I packed essential belongings in around ten minutes and then hit the road - a ten-hour road trip began.

I learned a lot about myself on that drive. Very early on during my trip, I felt the need to reach out to my program director personally. I let him know what was going on and shared how I was feeling. I found myself going over differential diagnoses as to how this could happen. My Dad had never spent a day in the hospital and I found myself at a loss reflecting on his sudden passing and comparing his fate to that of other chronically ill older patients I have taken care of. I found myself asking for advice

about whether to get an autopsy and appropriately, my faculty mentor and program director stated this was a personal and family choice. I reflected on who my Dad was, having never had surgery and the process of obtaining an autopsy. *My Dad wouldn't have wanted this and nine times out of ten he had an adverse cardiac event*. I shared these sentiments with my family and we decided to forego the autopsy. I called my closest friends and shared the news. Disbelief and sadness echoed through each call. I was then alone, driving on the road, playing songs I knew my Dad loved, traveling mile by mile.

I arrived safely at home and I embraced my family. Everyone was still in shock and truly unaware of what he exactly would have wanted as a funeral considering we all believed he had several years still with us. We celebrated the man he was, a lifelong NASA aerospace engineer who had given so much to his family, friends and community. I found myself speaking at his funeral, as the "doctor youngest child", seen by extended family and friends for the first time in years. As a first-generation immigrant to this country, my Dad loved my public speaking abilities. He would always give me praise whether it was at a casual event, my TEDx talk or thesis defense. I put on one more public speaking performance, just for him.

I returned to residency a few weeks later with a changed perspective. I was starting a month at our children's hospital and found myself working with the same PEM attending who confirmed the blender blade girl did well. Soon after, I started an EMS/Tox module where I found myself hyperfocused on the pivotal role EMS plays in out-of-hospital cardiac arrest. Frequently, I was reminded of my Dad considering our critical line of work. I couldn't help but feel it was unfair I wasn't allotted the opportunity to use my medical knowledge to help him. From time to time, I will find myself back in those first moments on the phone thinking *If only I had been there when he arrested, maybe things could be different. I wish I would have had a video or something to see how it all played out. Was this truly ACS? Was this a PE because he came and visited me? Why was this EMT telling me about his son when my Dad was dying?* **Stop**. Live in the present, embrace the past and allow it to serve you as you move forward. As time goes by, I find myself motivated beyond measure, knowing my Dad now has a front-row seat to the life I create. Part of my motivation likely comes from, to quote some of my Dad's colleagues, him being a "computational fluid dynamicist of the highest integrity" which is quite a tall order to follow.

I can say with the utmost confidence I would not have been able to rebound in the capacity that I did had it not been for the amazing program support I received. Residency is such a unique process that I feel it's hard to characterize for someone who has not experienced it. The difference a residency family makes, not only through professional growth but personal growth, is something I feel lucky to be a part of. While my Dad's death was made more difficult by medical knowledge, the care I provide patients moving forward will only improve as a result of this lived experience I have gone through. Rest in peace, Farhad Ghaffari.

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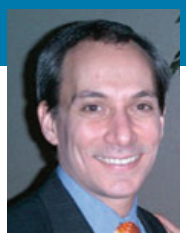

Theodore J. Gaeta, DO MPH FACEP
Residency Program Director
NewYork-Presbyterian Brooklyn Methodist Hospital

Differences in Emergency Medicine Resident Procedural Reporting by Race and Ethnicity.

Arno K, Bradby C, Shappell E, Mannix A, Fix M, Jordan J, Cooney R, Crzyzaniak SM, Gottlieb M; Department of Emergency Medicine Maimonides Medical Center, Brooklyn; AEM Educ Train; 2024 Jan 16;8:e10930.

BACKGROUND: The recruitment, retention, and training of physicians from groups underrepresented in medicine (UiM) is critically important to the practice of emergency medicine (EM). Studies across specialties have demonstrated disparities in operative experiences among UiM resident learners who are UiM; however, there are limited data on procedural disparities in EM.

OBJECTIVE: We sought to quantify the association between racial and ethnic identities that are UiM and the number of procedures reported among EM residents.

METHODS: We conducted a retrospective review of procedural differences by UiM status (using self-identified race and ethnicity) among graduating EM residents at nine training programs over a 10-year period. Sites were selected to ensure diversity of program length, program type, and geography. Data from residents in combined training programs, those who did not complete their full training at that institution, and those with missing data or electing not to report race/ethnicity were excluded. We calculated median and interquartile ranges for each procedure by UiM status. We conducted multivariable regression analyses accounting for UiM status, gender, and site as well as a sensitivity analysis excluding values >3 standard deviations from the mean for each procedure.

RESULTS: We collected data from 988 total residents, with 718 (73%) being non-UiM, 204 (21%) being UiM, 48 (5%) electing not to specific race/ethnicity, and 18 (2%) missing race/ethnicity data. While unadjusted data demonstrated a difference between UiM and non-UiM resident numbers across several procedures, there were no significant differences in procedures reported after accounting for gender and site in the primary or sensitivity analyses.

CONCLUSIONS: We did not identify a statistically significant difference in reported procedures between UiM and non-UiM residents in EM. Future work should include qualitative investigations of UiM resident experience surrounding procedures as well as mixed-methods studies to examine how these data interact.

Resuscitative Transesophageal Echocardiography in Emergency Departments in the United States and Canada: A Cross-Sectional Survey.

Teran F; On behalf ACEP Emergency Ultrasound Section and the Resuscitative TEE Collaborative Registry (rTEECoRe) Investigators; Department of Emergency Medicine, Weill Cornell Medicine, New York; Am J Emerg Med; 2024 Feb;76:164-172.

INTRODUCTION: Over the past two decades, transesophageal echocardiography (TEE) has been used with increasing frequency to evaluate critically ill patients outside of traditional settings. The purpose of this study was to characterize the number of programs, users, practice characteristics, training and competency requirements and barriers for the current use of resuscitative transesophageal echocardiography (TEE) in Emergency Departments (EDs) in the United States and Canada.

METHODS: A closed internet-based, cross-sectional, point-prevalence survey was administered via email to 120 program directors of emergency ultrasound fellowships (EUSF) and 43 physicians from EDs without EUSF from the United States and Canada.

RESULTS: Ninety-eight percent of surveyed participants responded. Twenty percent of respondents reported having active resuscitative TEE programs. The majority of participating hospitals (70%) were academic centers with residency programs. A total of 33 programs reported using resuscitative TEE in their ED and of those, 82% were programs with EUSF. Most programs performing TEE (79%) had less than five attending physicians performing TEE. Evaluation of patients during resuscitation from cardiac arrest (100%) and post-arrest care (76%) are the two most frequent indications for TEE in the ED. The most common core elements of resuscitative TEE protocols used are: assessment of left ventricular (LV) systolic function (97%), assessment of right ventricular (RV) function (88%), evaluation of pericardial effusion / tamponade (52%). All programs reported using formal didactics in their training programs, 94% reported using high-fidelity simulation, and 79% live scanning of patients. Financial concerns were the most common barrier use of TEE in the ED (58%), followed by maintenance of equipment (30%), and credentialing/privileges (30%).

CONCLUSIONS: This study provides a snapshot of the practice of resuscitative TEE in EDs in the United States and Canada revealing the existence of 33 programs using this emerging modality in the care of critically ill patients.

Bridging the Digital Health Divide-Patient Experiences With Mobile Integrated Health and Facilitated Telehealth by Community-Level Indicators of Health Disparity.

Daniels B, McGinnis C, Topaz LS, Greenwald P, Turchioe MR, Creber RMM, Sharma R; Department of Emergency Medicine, Weill Cornell Medicine, New York; J Am Med Inform Assoc; 2024 Jan 24.

OBJECTIVE: Evaluate the impact of community tele-paramedicine (CTP) on patient experience and satisfaction relative to community-level indicators of health disparity.

MATERIALS AND METHODS: This mixed-methods study evaluates patient-reported satisfaction and experience with CTP, a facilitated telehealth program combining in-home paramedic visits with video visits by emergency physicians. Anonymous post-CTP visit survey responses and themes derived from directed content analysis of in-depth interviews from participants of a randomized clinical trial of mobile integrated health and telehealth were stratified into high, moderate, and low health disparity Community Health Districts (CHD) according to the 2018 New York City (NYC) Community Health Survey.

RESULTS: Among 232 CTP patients, 55% resided in high or moderate disparity CHDs but accounted for 66% of visits between April 2019 and October 2021. CHDs with the highest proportion of CTP visits were more adversely impacted by social determinants of health relative to the NYC average. Satisfaction surveys were completed in 37% of 2078 CTP visits

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between February 2021 and March 2023 demonstrating high patient satisfaction that did not vary by community-level health disparity. Qualitative interviews conducted with 19 patients identified differing perspectives on the value of CTP: patients in high-disparity CHDs expressed themes aligned with improved health literacy, self-efficacy, and a more engaged health system, whereas those from low-disparity CHDs focused on convenience and uniquely identified redundancies in at-home services.

CONCLUSIONS: This mixed-methods analysis suggests CTP bridges the digital health divide by facilitating telehealth in communities negatively impacted by health disparities.

Pilot Implementation of a Telemedicine Care Bundle: Antimicrobial Stewardship, Patient Satisfaction, Clinician Satisfaction, and Usability in Patients With Sinusitis.

Grabinski Z, Leybov V, Battistich S, Roberts B, Migliozzi Z, Wang Y, Reddy H, Smith SW; Department of Emergency Medicine, NYU Langone Health, New York; J Telemed Telecare; 2024 Jan 18.

BACKGROUND: Telemedicine-specific clinical pathways (CPWs), coupled with electronic health record (EHR) order panels, provide an opportunity to ensure evidence and guideline concordant care for conditions at risk for inconsistent diagnoses and management strategies. Standardized provider and patient-facing illness scripts may fill gaps in clinicians' communication skills secondary to a training deficit in virtual care delivery. We aimed to implement and assess the impact of a novel care bundle for sinusitis on antimicrobial use, patient satisfaction, clinician satisfaction, and usability in patients with sinusitis.

METHODS: A sinusitis care bundle (SCB) for virtual urgent care patients included a sinusitis CPW with communication scripts, sinusitis order panels (SOP), and a patient education smart-phrase (SPESP) within visit instructions. Antimicrobial use was assessed during a 15-month period prior to the start of SCB element implementations and 14-months following, using statistical process control charts. Patient satisfaction was measured using Likert-style surveys. Clinician satisfaction was assessed using a novel survey addressing the SCB-targeted domains (decision support, communication, efficiency, usability, and overall satisfaction).

RESULTS: There were 69,785 and 64,019 evaluable patients in the pre-care and post-care bundle periods, respectively. Despite a significant increase in patients receiving a sinusitis diagnosis in the post-care bundle period (3.2% pre- vs. 6.2% post-, $p<0.001$), antimicrobial prescribing decreased by 3.9% ($p<0.001$), with statistical process control evidence of special cause change. There was a 5.1% decrease ($p<0.001$) in negative patient survey responses after implementation. Clinician survey revealed substantial agreement in the domains relating to improving communication with patients and/or families, with the highest satisfaction for the SPESP over the SOP.

CONCLUSIONS: Implementation of a telemedicine care bundle for patients diagnosed with sinusitis can balance multiple elements of quality care. The combination of a clinical care pathway, standardized language, and order panels within the EHR has the potential to improve patient satisfaction and decrease antimicrobial prescribing.

The Association Between Social Determinants of Health and Traumatic Brain Injury: A Scoping Review.

Taylor S, Brayan K, Storch B, Suh Y, Walsh S, Avrith N, Wyler B, Cropano C, Dams-O'Connor K; Department of Emergency Medicine, Mount Sinai Morningside Hospital, New York; J Neurotrauma; 2024 Jan 10.

Traumatic brain injury (TBI) is a leading cause of death and disability worldwide. However, disparities exist in the populations that acquire TBIs with a greater burden and poorer outcomes associated with communities of color and lower socioeconomic status. To combat health inequities such as these, institutions have begun to target social determinants of health (SDoH) which are environmental factors that affect health outcomes and risks. SDoH may play a role in sustaining a TBI and provide modifiable targets for action to reduce the risk of TBI, especially in high-risk communities. In this study, we describe the existing literature regarding SDoH and their association with sustaining a TBI. We performed a scoping review with a comprehensive search of the Ovid MEDLINE/Embase databases. To summarize the literature, this review adapts the World Health Organization's Commission on SDoH's conceptual framework. Fifty-nine full-text articles, including five focusing on lower and middle-income countries, met our study criteria. Results of the scoping review indicate that several structural determinants of health were associated with TBI risk. Lower educational attainment and income levels were associated with higher odds of TBI. In addition, multiple studies highlight that minority populations were identified as having higher odds of TBI than their White counterparts. Literature highlighting intermediate determinants of health examined in this review describes associations between sustaining a TBI and rurality, work environment, medical conditions, medication/substance use and adversity. Recommended exploration into lesser-researched SDoH is discussed and the expansion of this review to other aspects of the TBI continuum is warranted.

Exploring the Feasibility of At-Home Lung Ultra-Portable Ultrasound: Parent-Performed Pediatric Lung Imaging.

Malia L, Nye ML, Kessler DO; Department of Emergency Medicine, Columbia University Vagelos College of Physicians and Surgeons, New York; J Ultrasound Med; 2024 Jan 4.

OBJECTIVE: To determine if caregivers would be able to successfully perform in home lung ultrasounds on their children without direct supervision after undergoing a basic tutorial that would allow for expert interpretation.

METHODS: A prospective exploratory single-center cohort study was conducted on patients (0-18 years) presenting to a pediatric emergency department with a respiratory complaint or COVID-related illness. Caregivers underwent a brief hands-on session and were instructed to scan the lungs daily for 7 days. Images were assessed using a modified POCUS IQ score. Descriptive statistics were used to describe the data and bivariate analysis was used to compare groups.

RESULTS: Eighteen patients were enrolled; the average age of the parent scanner was 31.9 years and 78% were female. Of all participants, 77.8% scanned on day one. Parents were able to successfully perform some part of the daily scan session for an average of 3.8 out of 7 days. The average POCUS IQ score overall was 6.7 (out of 12).

CONCLUSION: Our study demonstrates the feasibility and acceptability of caregiver ability to obtain adequate lung ultrasound images, at home under no guidance, using the Butterfly iQ probe. Further studies are needed to investigate the accessibility of ultra-portable ultrasound and the ability to integrate with the at-home hospital model, specifically in the pediatric population.

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The Observation of Pediatric Skull Fractures Without an Associated Brain Injury in a Non-Trauma Center.

Waseem M, Esposito KD, Cedano K, Shariff MA, Priovolos S; Emergency Medicine, New York City (NYC) Health + Hospitals/Lincoln, New York; Cureus; 2023 Dec 15;15(12):e50571.

INTRODUCTION: Young children experiencing head trauma are prone to skull fractures. Pediatric skull fractures are distinct from adults as they have a greater capacity to undergo remodeling. The objective of this study was to evaluate whether children with isolated skull fractures without an underlying brain injury and normal neurological exam require a transfer to a tertiary hospital with pediatric neurosurgery service.

METHODS: A retrospective chart review was performed to review children under five years old presenting to the emergency department of a non-pediatric trauma center with an isolated skull fracture resulting from head trauma without intracerebral hemorrhage between 2015 and 2021. The inclusion criteria consisted of children who have isolated skull fractures without underlying injuries and normal neurological examination. We reviewed these patients' injury characteristics, disposition, and clinical outcomes. The t-test and chi-square were used for evaluating the groups and evaluating the transfer to a dedicated trauma care facility.

RESULTS: We identified 26 children who had isolated skull fractures with no underlying brain injury and normal neurological examination. The two most common mechanisms of injury were falls (64%) and motor vehicle collisions (MVC) (11%). The median age of patients was six months old. The location of the skull fractures was as follows: parietal (46%), occipital (19%), temporal (15%), frontal (7.7%), occipital + parietal (7.7%), and parietal + frontal (3.8%). Four fractures were depressed (15%) and the remainder were non-displaced. Eleven children with skull fractures (42%) were transferred to a designated pediatric trauma center and the remaining 58% were hospitalized for observation and monitored at the primary hospital. None of the children with skull fractures required intubation or other advanced interventions.

CONCLUSION: In this relatively limited sample, approximately one-third of the children with isolated skull fractures without brain injury were managed successfully in a non-tertiary care center. However, none of them required surgical intervention. Thus, we propose that patients akin to those in this study can be observed at a local hospital without being transferred to a pediatric trauma center.

Brief, Cognitive-Behavioral Intervention To Promote Treatment Seeking in Adults With Severe Alcohol Use Disorder: A Randomized Controlled Trial.

Conner KR, Maisto SA, Abar B, Szafranski S, Chiang A, Hutchison M, Aldalur A, Stecker T; Department of Emergency Medicine, University of Rochester Medical Center, Rochester; Addiction; 2023 Dec;118(12):2342-2351.

BACKGROUND AND AIMS: There is little RCT evidence that brief interventions improve treatment seeking in individuals with severe alcohol use disorder (AUD) or treatment seeking reduces alcohol use. The aim was to test the efficacy of a brief intervention to increase treatment seeking in treatment naïve adults with severe AUD and measure its effects on alcohol use.

DESIGN: Parallel group, non-pharmacologic RCT with intervention (n=197) and active control (n=203) conditions, with blinded assessors conducting follow-ups at 1, 3 and 6 months.

SETTING: Online recruitment in a 17-county region of upstate New York, USA.

PARTICIPANTS: Inclusion criteria consisted of ages ≥18 years, Alcohol Use Disorders Identification Test score ≥16, exceeds recommended limits for alcohol use and no history of AUD treatment. n=400; 50% female; 79% white; mean age, 40.7; mean education, 14.6 years.

INTERVENTION AND COMPARATOR: One-session telephone-delivered interventions: Cognitive-Behavioral Therapy for Treatment Seeking (CBT-TS; intervention), review of a National Institute on Alcohol Abuse and Alcoholism pamphlet on AUD treatment (control).

MEASUREMENTS: Self-report of any AUD treatment use over 3 months (primary outcome) and two standard measures of alcohol use over 6 months (secondary outcomes).

FINDINGS: Intent-to-treat analyses were used. Assessment follow-up rates were ≥93%. Any alcohol-related treatment use over 3-month follow-up was obtained by 38 (19%) intervention participants and 36 (18%) control participants, a non-significant difference, $\chi 2$ [1]=0.16, P=0.689. Secondary analysis showed a significant interaction term between sex and intervention assignment (β=-1.197, P=0.027). The interaction suggested CBT-TS was effective in men (22% vs 13%), although the evidence was somewhat weak (P=0.071), and it was not effective in women (17% vs 24%).

CONCLUSIONS: A one-session cognitive-behavioral therapy intervention to increase treatment seeking in treatment naïve adults with severe alcohol use disorder did not increase treatment seeking.

Perceptions of the Healthcare System Among Black Men With Previously Undiagnosed Diabetes and Prediabetes.

Rony M, Quintero-Arias C, Osorio M, Ararso Y, Norman EM, Ravenell JE, Wall SP, Lee DC; Department of Emergency Medicine, NYU School of Medicine, New York; J Racial Ethn Health Disparities; 2023 Dec;10(6):3150-3158.

OBJECTIVE: Given the significant disparities in diabetes burden and access to care, this study uses qualitative interviews of Black men having HbA1c levels consistent with previously undiagnosed diabetes or prediabetes to understand their perceptions of the healthcare system.

RESEARCH DESIGN AND METHODS: We recruited Black men from Black-owned barbershops in Brooklyn, NY, who were screened using point-of-care HbA1c tests. Among those with HbA1c levels within prediabetes or diabetes thresholds, qualitative interviews were conducted to uncover prevalent themes related to their overall health status, health behaviors, utilization of healthcare services, and experiences with the healthcare system. We used a theoretical framework from the William and Mohammed medical mistrust model to guide our qualitative analysis.

RESULTS: Fifty-two Black men without a prior history of diabetes and an HbA1c reading at or above 5.7% were interviewed. Many participants stated that their health was in good condition. Some participants expressed being surprised by their abnormal HbA1c reading because it was not previously mentioned by their healthcare providers. Furthermore, many of our participants shared recent examples of negative interactions with physicians when describing their experiences with the healthcare system. Finally, several participants cited a preference for incorporating non-pharmaceutical options in their diabetes management plans.

CONCLUSION: To help alleviate the disparity in diabetes burden among Black men, healthcare providers should take a more active role in recognizing and addressing their own implicit biases, engage in understanding the specific healthcare needs and expectations of each patient, and consider emphasizing non-medication approaches to improve glycemic control.

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Good Saves: How Emergency Medicine Residents Are Learning From Success.

Bralow L, McCaffery E, Leuchten S; Emergency Medicine, St. Barnabas Hospital Health System, Bronx; Cureus; 2023 Nov 27;15(11):e49508.

INTRODUCTION: The practice of learning from medical errors is well-established and well-researched in the literature on morbidity and mortality conferences. However, durable learning from case-based education occurs not only through the analysis of medical errors but also through the evaluation of how critical decisions were made to result in a positive clinical outcome, what we will call a "good save." The aim of the current study is to provide an overview of how US-based emergency medicine residencies are teaching using "good saves."

METHODS: A national survey of emergency medicine (EM) residency leadership was distributed through the Council of Residency Directors (CORD) and the Society of Academic Emergency Medicine (SAEM) listservs. A descriptive analysis of the results was undertaken.

RESULTS: Residency leadership representing 67 different US EM training programs participated in our survey. Of these, only 19 programs use formal learning objectives and dedicated education time to teach from "good saves." Thirty-six programs provide informal recognition, often in the form of a "shout-out." Residency leadership is motivated to provide this recognition and learning through efforts to promote wellness and resiliency among EM residents. Notably, the use of prizes and awards is not necessary.

DISCUSSION: Some EM residencies in the United States are making targeted efforts to promote the recognition of successful clinical care. This recognition and education are being used as tools both to promote wellness and to teach resiliency. However, there is wide heterogeneity in approaches. Our survey provides examples of the many ways that "good saves" can be incorporated into any EM residency curriculum with the potential for significant impact.

Pediatric Mental Health Emergencies During 5 COVID-19 Waves in New York City.

Levine DA, Oh PS, Nash KA, Simmons W, Grinspan ZM, Abramson EL, Platt SL, Green C; Department of Emergency Medicine, New York-Presbyterian Hospital, New York; Pediatrics 2023 Nov 1;152(5):e2022060553.

OBJECTIVES: To describe the proportion of pediatric mental health emergency department (MH-ED) visits across 5 COVID-19 waves in New York City (NYC) and to examine the relationship between MH-ED visits, COVID-19 prevalence, and societal restrictions.

METHODS: We conducted a time-series analysis of MH-ED visits among patients ages 5 to 17 years using the INSIGHT Clinical Research Network, a database from 5 medical centers in NYC from January 1, 2016, to June 12, 2022. We estimated seasonally adjusted changes in MH-ED visit rates during the COVID-19 pandemic, compared with predicted prepandemic levels, specific to each COVID-19 wave and stratified by mental health diagnoses and sociodemographic characteristics. We estimated associations between MH-ED visit rates, COVID-19 prevalence, and societal restrictions measured by the Stringency Index.

RESULTS: Of 686 500 ED visits in the cohort, 27 168 (4.0%) were MH-ED visits. The proportion of MH-ED visits was higher during each COVID-19 wave compared with predicted prepandemic trends. Increased MH-ED visits were seen for eating disorders across all waves; anxiety disorders in all except wave 3; depressive disorders and suicidality/self-harm in wave 2; and substance use disorders in waves 2, 4, and 5. MH-ED visits were increased from expected among female, adolescent, Asian race, high Child Opportunity Index patients. There was no association between MH-ED visits and NYC COVID-19 prevalence or NY State Stringency Index.

CONCLUSIONS: The proportion of pediatric MH-ED visits during the COVID-19 pandemic was higher during each wave compared with the predicted prepandemic period, with varied increases among diagnostic and sociodemographic subgroups. Enhanced pediatric mental health resources are essential to address these findings.

Reducing Low-Value ED Coags Across 11 Hospitals in a Safety Net Setting.

Walker TR, Bochner RE, Alaiev D, Talledo J, Tsega S, Krouss M, Cho HJ; Department of Emergency Medicine, NYC Health + Hospitals/Lincoln, Bronx; Am J Emerg Med; 2023 Nov;73:88-94.

BACKGROUND: Prothrombin/international normalized ratio and activated partial thromboplastin time (PT/INR and aPTT) are frequently ordered in emergency departments (EDs), but rarely affect management. They offer limited utility outside of select indications. Several quality improvement initiatives have shown reduction in ED use of PT/INR and aPTT using multifaceted interventions in well-resourced settings. Successful reduction of these low-value tests has not yet been shown using a single intervention across a large hospital system in a safety net setting. This study aims to determine if an intervention of two BPAs is associated with a reduction in PT/INR and aPTT usage across a large safety net system.

METHODS: This initiative was set at a large safety net system in the United States with 11 acute care hospitals. Two Best Practice Advisories (BPAs) discouraging inappropriate PT/INR and aPTT use were implemented from March 16, 2022-August 30, 2022. Order rate per 100 ED patients during the pre-intervention period was compared to the post-intervention period on both the system and individual hospital level. Complete blood count (CBC) testing served as a control, and packed red blood cell transfusions served as a balancing measure. An interrupted time series regression analysis was performed to capture immediate and temporal changes in ordering for all tests in the pre and post-intervention periods.

RESULTS: PT/INR tests exhibited an absolute decline of 4.11 tests per 100 ED encounters (95% confidence interval -5.17 to -3.05; relative reduction of 18.9%). aPTT tests exhibited absolute decline of 4.03 tests per 100 ED encounters (95% CI -5.10 to -2.97; relative reduction of 19.8%). The control measure, CBC, did not significantly change (-0.43, 95% CI -2.83 to 1.96). Individual hospitals showed variable response, with absolute reductions from 2.02 to 9.6 tests per 100 ED encounters for PT/INR (relative reduction 12.1%-30.5%) and 2.07 to 10.04 for aPTT (relative reduction 12.1%-31.4%). Regression analysis showed that the intervention caused an immediate 25.7% decline in PT/INR and 24.7% decline in aPTT tests compared to the control measure. The slope differences (rate of order increase pre vs post intervention) did not significantly decline compared to the control.

CONCLUSIONS: This BPA intervention reduced PT/INR and aPTT use across 11 EDs in a large, urban, safety net system. Further study is needed in implementation to other non-safety net settings.

NEW YORK STATE OF MIND

Spotlighting the Imbalance: Gender Disparities Among Speakers and Awardees at Pediatric Emergency Medicine Conferences.

Reichard KG, Levine DA, Reed J, Barrick-Groskopf L, Bechtel K, Cooper G, Hall JE, White ML, Langhan ML; Department of Emergency Medicine, Montefiore Nyack Hospital, Nyack; Acad Emerg Med; 2023 Nov;30(11):1138-1143.

BACKGROUND: There are wide variations in the gender makeup of speakers at national pediatric emergency medicine (PEM) conferences with no significant change in recent years.

OBJECTIVE: Gender disparities exist among national speakers and award recipients. PEM represents the intersection of pediatrics, a female-dominated specialty with approximately 58% women, and emergency medicine, a male-dominated specialty. We describe the proportion of women speakers and award recipients at two national PEM conferences, the American Academy of Pediatrics (AAP) Section on Emergency Medicine (SOEM) and the Advanced PEM Assembly (APEMA), to the AAP National Conference & Exhibition (NCE), a national pediatric conference.

METHODS: Data from SOEM and APEMA, obtained from 2016 to 2021 were compared to the 2021 NCE. Invited speakers, abstract presenters, and award recipients were identified. Gender was determined by searching each individual's name for self-identification. Gender proportions were compared across conferences, speaker type, and year.

RESULTS: Compared to the NCE, a significantly smaller proportion of women were invited speakers at APEMA (NCE 59.9% vs. APEMA 38.8%, $p<0.001$), but similar proportions of women were invited speakers (53.9%, $p=0.178$) and awardees at SOEM (50% vs. 50%, $p=1.0$). A larger number of women were SOEM abstract presenters than invited speakers (63.3% vs. 53.9%, $p=0.041$). Between 2016 and 2021, the proportion of women invited speakers (SOEM, $p=0.744$; APEMA, $p=0.947$) or abstract presenters (SOEM, $p=0.632$) did not significantly change.

CONCLUSIONS: Compared to NCE, women are underrepresented as speakers at APEMA, but not at SOEM. Abstract presenters are more likely to be women compared to invited speakers. While awards appear equally distributed, recipients do not mirror the proportion of women in PEM. Conference organizers and leaders in PEM should ensure gender equity in national recognition.

Interpretation of Cardiac Standstill in Children Using Point-of-Care Ultrasound.

Yanni E, Tsung JW, Hu K, Tay ET; Department of Emergency Medicine, NYU Langone Medical Center, New York; Ann Emerg Med; 2023 Nov;82(5):566-572.

STUDY OBJECTIVE: This study aimed to determine the level of agreement among pediatric emergency medicine (PEM) physicians in whether various point-of-care ultrasound (POCUS) video clips represent cardiac standstill in children and to highlight the factors that may be associated with the lack of agreement.

METHODS: A single, online, cross-sectional, convenience sample survey was administered to PEM attendings and fellows with variable ultrasound experience. PEM attendings with an experience of 25 cardiac POCUS scans or more were the primary subgroup based on ultrasound proficiency set by the American College of Emergency Physicians. The survey contained 11 unique, 6-second video clips of cardiac POCUS performed during pulseless arrest in pediatric patients and asked the respondent if the video clip represented a cardiac standstill. The level of interobserver agreement was determined using the Krippendorff's α (Kα) coefficient across the subgroups.

RESULTS: A total of 263 PEM attendings and fellows completed the survey (9.9% response rate). Of the 263 total responses, 110 responses were from the primary subgroup of experienced PEM attendings with at least 25 previously seen cardiac POCUS scans. Across all video clips, PEM attendings with 25 scans or more had an acceptable agreement (Kα=0.740; 95% CI 0.735 to 0.745). The agreement was the highest for video clips wherein the wall motion corresponded to the valve motion. However, the agreement fell to unacceptable levels (Kα=0.304; 95% CI 0.287 to 0.321) across video clips wherein the wall motion occurred without the valve motion.

CONCLUSION: There is an overall acceptable interobserver agreement when interpreting cardiac standstill among PEM attendings with an experience of at least 25 previously reported cardiac POCUS scans. However, factors that may influence the lack of agreement include discordances between the wall and valve motion, suboptimal views, and the lack of a formal reference standard. More specific consensus reference standards of pediatric cardiac standstill may help to improve interobserver agreement moving forward and should include more specific details regarding the wall and valve motion.