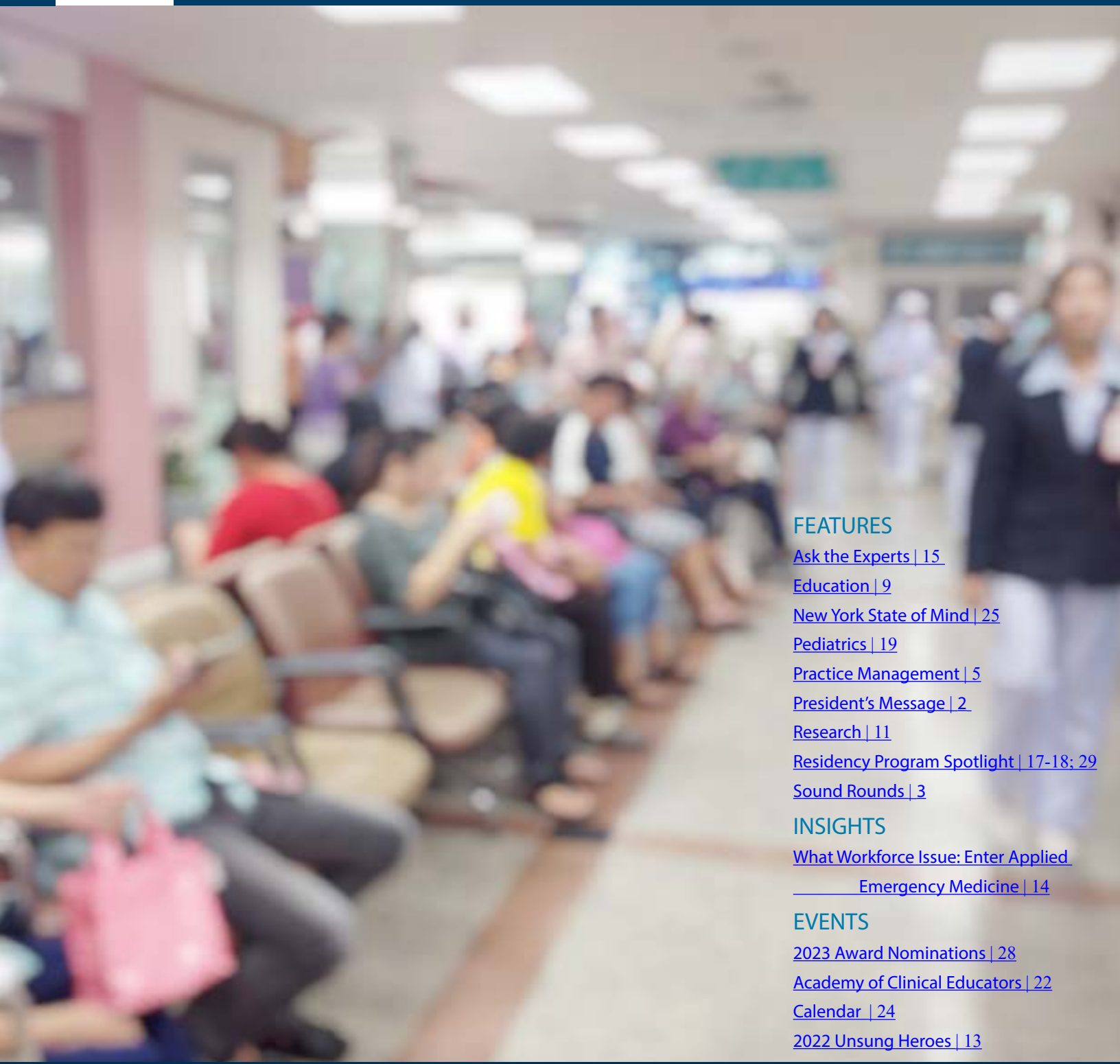
New York American College of Emergency Physicians



Empire State EPIC

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PRESIDENT'S MESSAGE

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Protecting Our Healthcare System's Most Valuable Asset

As I contemplate the biggest issues facing the Emergency Medicine (EM) physicians of New York State, several bubble to the top. While many are worthy of comment, there is one issue that seemingly surrounds me in this moment. Everywhere I turn I hear or read remarks on workplace violence, be it proposed legislation, journal articles, surveys, blog posts, social media, etc. For this reason, I decided to take time to address it here.

For too long many have rationalized behaviors that simply cannot be permitted. I vividly recall an incident as a resident where a family member threw a computer monitor from the clerk's desk after receiving bad news and frankly, it was very scary. The incident was not intervened on by leadership or by my attending. There was no process in place to manage the victims or the perpetrator of the incident. By default, the system supported the perpetrator of the violent act. This exaggerated grief reaction was accepted as "justified" that day and put above our safety. Sadly, the message I received was to trudge on. As one might expect, I have been exposed to many acts of violence in the Emergency Department (ED) since. Yet I remember this day as if it was yesterday. It was a moment that hit home. I was voluntarily entering a profession in which I would somewhat regularly encounter violence or the threat of violence in my workspace.

So why address this now with all of you? I am hopeful that expectations are shifting and we will see progress in short order. I believe we are in the moment to accelerate the evolution of workplace violence prevention in EM and ACEP is there leading the charge.

I recently reviewed the 2022 ACEP Emergency Department Violence Poll results. In some ways the results were not surprising , yet it is still eye opening. For those of you who have not reviewed the results, the short version is that violence in the ED is up. But you know that, you live it. In fact, the survey reflects you well with 8% of survey respondents from New York State. For those curious on the details, 85% of the over 2,700 emergency physicians surveyed reported a patient has threatened to return and harm them or emergency department staff, an increase since 2018. Similarly, 85% of emergency physicians reported the rate of violence experienced in emergency departments has increased over the past five years, with 45% indicating it has greatly increased. Furthermore, none of the physicians in the current study believed the rate of violence has decreased at all. The survey also reveals the linkage of ED workplace violence to burnout and negative impact on patient care.[1] I believe having this data will be powerful in moving the needle with legislation.

Along with this survey, National ACEP has announced initiatives to strengthen protections for physicians, care teams and patients through public awareness, advocating for policy changes and developing resources to help professionals mitigate and respond to these incidents.

Similarly, New York ACEP leadership and its Government Affairs Committee has formed a focus group to look at workplace violence. We plan to continue working with elected officials in this area with the goal of seeking legislation and regulations to support safe work environments in the EDs of New York State. To our New York ACEP members reading this, please know, we are in this together!

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SOUND ROUNDS

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Wait a Segond . . .

Case Presentation

A 32-year-old male presented to the Emergency Department (ED) with left knee pain. He was playing basketball when he went for a lay-up and landed on his left knee. He felt his kneecap "go sideways," but when he straightened his leg, it popped back into place. He was able to ambulate but had progressive pain and swelling in the knee. By the time the patient presented to the ED, he could not bear weight on his left leg.

On physical exam, the patella appeared in the appropriate position. The left knee was swollen with limited range of motion to flexion of the knee. The patient had exquisite tenderness over the lateral knee. Anterior and posterior drawer signs were negative. The joint felt stable to valgus strain. Varus strain caused significant pain and the exam was limited due to pain. The patient was able to lift the leg off the bed in extension.

X-rays of the left knee were obtained (Figure 1). The x-rays were interpreted as no acute fracture with a moderate joint effusion. The patient received ibuprofen and acetaminophen for analgesia. On re-assessment, he was still found to be tender and unable to bear weight. Point-of-care ultrasound (POCUS) of the knee demonstrated a hyperechoic discontinuity in the lateral portion of the distal femur (Figure 2). This discontinuity in the setting of persistent pain and the large area of lipohemarthrosis seen on POCUS was concerning for an occult fracture. A CT of the left knee confirmed an avulsion fracture off the lateral distal femur consistent with a Segond fracture (Figure 3). The patient was evaluated by Orthopedic surgery the next day.

Discussion

Segond fractures are avulsion fractures of the lateral distal femur or the lateral proximal tibia which involves the lateral collateral ligament, though there are variant cases involving the medial side as well.[1] These fractures are easily missed on plain radiograph, possibly because of the small slivers of bone that are often avulsed.[2] Despite the small fracture, these injuries often involve the avulsion of a ligament which leaves the joint unstable and often require surgical fixation of the ligament for good healing. They are often also associated with meniscal injuries or anterior cruciate ligament (ACL) injuries which may also require intervention. Missing these injuries can lead to poor outcomes or missed opportunities to intervene or refer patients to orthopedics in a timely manner.

Our case demonstrates the power of POCUS integration in patient care to identify musculoskeletal injuries that can be missed with radiography. Since not all EDs have immediate access to orthopedics consultation or advanced imaging, ultrasound provides a readily available adjunct to traditional radiography that can be used at the patient's bedside to identify occult and obvious fractures. While our case involves a Segond fracture, POCUS has been utilized to look at other fractures often overlooked on radiography such as fractures of the scaphoid and sternum.[3,4] POCUS has also been utilized in the diagnosis of dislocations and can be utilized to confirm the success of fracture reductions. In our case, we were able to quickly identify a fracture that was missed on initial radiographic examination and allowed us to proceed with additional imaging, such as the CT, to provide further definitive patient management.

Indications

- Deformity
- Pain
- Swelling
- Tenderness
- Unable to bear weight

Technique

- Utilize the linear (high frequency) probe, though you can use the curvilinear probe in patients with an elevated body mass index (BMI).
- Start imaging in the sagittal plane of long bones because the cortical discontinuities of fractures are typically more obvious in the sagittal view. Image along the length of a bone or joint.
- Image in at least two planes. Obtain images in the transverse views since fractures may not follow straight lines.
- Evaluate for discontinuity along the hyperechoic straight lines created by bones.
- Keep an eye out for other pathology, including lipohemarthrosis, effusions, tendon or ligamentous discontinuity.

Pitfalls and Limitations

- Avoid ultrasound gel in lacerations and open wounds.
- Identification of fractures is highly specific but it is possible to

miss fractures depending upon the skill of the sonographer, so sensitivity varies widely. If you have a high clinical suspicion and do not see a fracture on ultrasound, recommend additional imaging such as CT or MRI.

- Fractures within the cortex of bone (spongy bone) that do not violate the compact bone or periosteum may not be visible on ultrasound because everything beyond the bony surface will appear as a shadow on the ultrasound.

Pearls

- The presence of lipohemarthrosis is strongly suggestive of a fracture.

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Figure 1. AP view x-ray of the left knee.

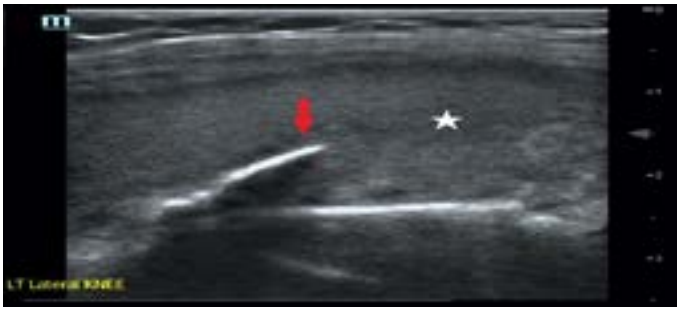

Figure 2. Ultrasound of left knee laterally over the femoral condyle demonstrating a fracture with cortical disruption (red arrow) and lipohemarthrosis (white star).

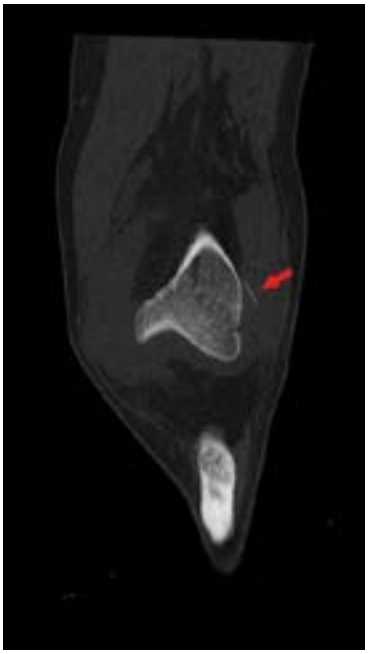

Figure 3. Non-contrast CT of the left knee in coronal section demonstrating a lateral distal femur avulsion fracture, also known as a Segond fracture (red arrow).

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Virtual Care, an Evolving EM Subspecialty

Introduction

Since being recognized by the American Board of Medical Specialties in 1979, Emergency Medicine (EM) has grown and changed to better meet the needs of patients requiring acute unscheduled care. The specialty now includes sub-specialization in toxicology, disaster medicine, ultrasonography, sports medicine, critical care, simulation and palliative care. The relative infancy of the specialty has allowed our care model to be molded by the contemporary health needs of the US population, both acute and chronic. In many communities EM serves as a safety net, compensating for limited availability of primary care.[1,2] Even in areas with the best access to primary care, EM may be the only health care option at night and on weekends. In addition to filling gaps in the regular care system, recent natural disasters and other emerging infectious disease threats have demonstrated EM's importance in public health crises. Thirty plus years into its existence as a specialty, EM can no longer be considered a new specialty, perhaps the term 'adolescent' would be more appropriate: flexible enough to remain responsive to the ever-changing health needs and challenges of the population; with a diverse enough foundation of skills and experience to strategically impact the broader healthcare landscape of the future.

In this context, it is no surprise that EM has rapidly adopted virtual care. Our specialty has been at the forefront of innovation in this area. Prior to COVID-19, most EM-based virtual care applications focused on remote consultation services, bridging gaps of in-person care in remote healthcare settings, as well as the provision of low acuity care.[3-7] The needs of the COVID-19 pandemic drove large-scale expansion of virtual care infrastructure, as well as increased patient comfort with the evolving care model.[8,9,10,11] Changes were also facilitated by the 2020 CARES Act, which expanded Medicare telehealth coverage by breaking down prior requirements of an established patient relationship and encouraging CMS services to develop virtual care solutions, including diversion of low-acuity complaints away from Emergency Departments (EDs).[12] States also removed licensure barriers. As we emerge from the pandemic there is discussion about the possibility of virtual care becoming EM's newest subspecialty.[13] Even if this does not come to pass, virtual care provides tools that will fundamentally change EM and has the potential to improve patient care and outcomes at many critical points within the health-care continuum.

In this review we discuss current EM-based virtual acute care models within the temporal framework of pre-, intra- and post-hospital care. We also discuss some of the novel use cases of EM skills in the evolving virtual care landscape, as well as potential future directions.

Pre-hospital Virtual Care

Avoidable ED use has been estimated to be as high as 56% of total ED utilization. If true, this could account for $38 billion a year in unnecessary healthcare expenditure.[14,15] Over the past three decades, urgent care centers (without the regulatory constraints of EMTALA) have become common, offering patients with insurance or the ability to pay out of pocket the opportunity to receive low acuity unscheduled care with lower wait times and at a lower cost than an ED visit.[16] More recently, hospital systems and private companies have taken this model one step further, launching virtual urgent care (VUC) programs staffed by emergency, family medicine and internal medicine physicians, as well as physician assistants, nurses and nurse practitioners. These VUC programs provide care for many of the same types of problems that may have previously been treated at an urgent care center. Critical developments within the VUC paradigm have included a better understanding of virtual examination techniques and the development of referral mechanisms for outpatient diagnostic testing. VUC has also been used as a mechanism to triage to specialty care. Thoughtfully employed, VUC can act as a triage and diversion device to reduce ED overuse and overcrowding.[17]

The experiences of COVID-19 have demonstrated that VUC can be flexibly deployed for services such as infectious disease

screening and triage for therapeutics.[8,18] It no longer requires imagination to picture VUC functioning to augment both ED and primary care responses to other types of large-scale disasters. During the COVID-19 pandemic, emergency physicians have become experts at performing a virtual examination, including the respiratory examination with and without the integration of pulse oximetry data, for both new patients and patients discharged following hospital stays and from the ED.[8,19,20] These might be considered precursors to EM involvement in *hospital at home* and *remote patient monitoring*, which will be discussed in more detail later in this review.

Virtual care is also being piloted to support paramedics and Emergency Medical Technicians (EMTs) as part of a nationwide Centers of Medicare & Medicaid Services (CMS) initiative designed to provide alternatives to the ED for patients calling 911. New York City hospital systems are partnering with the Fire Department of New York (FDNY) on the ET3 (*Triage, Treat and Transport*) program.[21] Patients calling 911 with the lowest acuity complaints may be offered a telephone-based virtual encounter as an alternative to immediate ambulance transport to an ED. A similar program through FDNY takes this model one step further, directing carefully screened patients to telephone encounters with virtual providers rather than dispatching an ambulance. A similar program in the city of Houston has been reporting successful diversion of patients from ED transport for many years.[22]

Similarly, virtual care can be used as part of the "forward triage" model - screening patients before they arrive to the ED.[23] In the early stages of the COVID-19 pandemic, this model was used to decrease the number of face-to-face interactions with patients with symptoms concerning for COVID infection, thereby decreasing possible staff exposure and conserving healthcare resources.[24] A similar pathway may be an option in high volume EDs where waiting room wait times are prolonged and in regions where few alternatives for care are available. For example, a patient with a minor wound or UTI symptoms may be triaged and asked to present to the ED a few hours later when surge has subsided or offered a telehealth visit as an alternative.

In-ED Virtual Care

In many academic institutions, EM was an early adopter of telehealth technology, partnering with specialty services to provide remote ED consultations, such as tele-stroke services.[25,26] Similarly, virtual consultations between ED providers at smaller hospitals, to hospitals providing higher levels of care have been demonstrated to improve the precision of transfer decisions and reduce unnecessary cost.[27] Such programs can provide a valuable new solution to the traditional challenge of rural EM practice and also allow large urban hospital systems to standardize care across multiple sites of varying sizes. Partnerships with critical care, toxicology, burn, dermatology, psychiatry and others allow smaller EDs to offer tertiary-level care around the clock, while the untethering of social services from their geographic location has allowed parity of case management.[28,29] Other institutions have utilized telehealth to expedite the traditional EM care delivery during times of surge, with rapid medical screening examinations of patients as they arrive to the ED and low-acuity encounters being managed via telehealth providers.[5,6,30]

Early in the COVID-19 pandemic, EDs innovated by necessity, utilizing telehealth to reduce the amount of non-essential direct patient-contact for both physicians and nurses. These experiences may offer valuable knowledge for future disasters and virulent infectious disease outbreaks, including other emerging pathogens such as monkeypox.[31] Looking further forward, it is likely EM departments with critical care divisions could also play a vital role in the iterative development of virtual intensive care models.[32]

Post-ED and Post-Hospital Virtual Care

Trends in US primary care include decreasing capacity for unscheduled sick visits, longer wait times for appointments and limited after-hours care at physicians' offices.[33,34] Research has also highlighted how patients' perceived inability to access timely care is the major motivation for ED visits and revisits.[35-37] Recent federal investment and incentive programs are designed to address this by increasing availability of primary care but even if these programs are successful, it could take decades to see large scale impact. Delays in follow-up appointments after ED visits and after hospital discharge leave patients vulnerable and undermanaged at a critical moment in their recovery process.

Virtual care can help bridge this gap in care after discharge. Available tools exist along a spectrum, from services requiring relatively few resources, such as video or telephone follow-up visits, to more resource-heavy interventions such as Community Tele-Paramedicine visits.[38,39] Using combinations of these tools, a wound check no longer requires an in-person follow-up ED visit; more complicated cases can be managed at home with virtual care visits augmented with remote patient monitoring tools, such as a wearable patch, smart glucometer or pulse oximeter. EM physicians' dynamic acute care skills could also help patients while they are waiting to establish outpatient care, reducing ED revisits and avoiding lower-acuity hospital admissions. For example: a patient with syncope could be discharged from an ED visit with a wearable sensor, allowing EKG evidence of ectopy and arrhythmia to be tracked in real time. The same patient can then be seen virtually and the EM clinician can integrate the wearable data into their decision about the patient's next steps, referring to cardiology when needed.

Virtual EM-based care in higher acuity *hospital at home* patients may become the next decade's EM transformation, similar to observations units of the early 2010s.[40] A patient with pyelonephritis that would typically be admitted, for example, could instead be discharged from the ED with continuous vital sign monitoring and at-home intravenous antibiotics, with frequent re-assessments by a virtual care provider. This level of care would require additional coordination, including having a call center to respond to abnormal signals and up-triage to the physicians. It is easy to envision a virtual care provider checking in on multiple patients in their "virtual observation" unit during a shift. If a patient appears unwell, a nurse can be sent to their home to provide additional services or evaluation, a paramedic can be sent for transport or patients can be directed to re-present to the Emergency Department for further treatment.

Hospitals can also minimize penalties associated with re-admissions for conditions such as chronic obstructive lung disease and congestive heart failure by integrating programs that bring medics or nurses into the homes of patients who are at high risk for readmission, supported by a virtual EM physician evaluation. Coupled with intense case management, at least one New York City-based program has demonstrated the ability to reduce readmissions in medically and socially vulnerable patients in this way.[38,39]

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Contemporary Challenges

Despite the significant progress made since the beginning of the COVID pandemic, barriers to integrating virtual care remain. While virtual care can allow for improved access and more frequent healthcare, certain societal inequities risk being magnified with an increasing reliance on virtual care. Complex technology may be less accessible for some older patients.[41] It has been demonstrated that patients in rural settings use virtual care with less frequency than those in more urban settings. People with lower socioeconomic status and some marginalized ethnic groups may not have the same access to broadband or to devices that can facilitate a virtual visit.[42-44] Marketing approaches on social media or more traditional advertising mechanisms may not focus on culturally appropriate or multi-lingual outreach. Still other limitations include challenges with the integration of new technology into existing medical records.

The growth of virtual care will depend on support at the federal level. The Center for Medicare and Medicaid Services (CMS) Acute Hospital at Home (HaH) Waiver provides a pathway for hospitals to be reimbursed for hospital level care in the patient's home for the duration of the COVID-19 public health crisis.[45] To date, 114 systems, 256 hospitals in 37 states have been granted the waiver.[46] HaH programs integrated with virtual care have the potential to offer more high-quality and cost-effective care and could be an important tool, not only for future pandemics, but also during seasonal infectious surges and climate emergencies. However, current legislation for extending the waiver for an additional two years has been stalled in the U.S. Senate since March 2022.[47]

Additionally, the reimbursement and payment structures for virtual care delivery require greater certainty regarding their longevity. To innovate, healthcare facilities will need to ensure that payment for telehealth services will be predictable not only from Medicare and Medicaid but also by third party payors. Many of the regulations and payment modifications allowing the growth of telemedicine services in EM have been tied to the COVID-19 pandemic public health emergency. With the public health emergency sunsetting and the future of these payment and regulatory changes unclear, the financial feasibility of virtual care programs remains uncertain. In New York State, the financial year 2022-2023 mirrors this concern and highlights the need to establish a more concrete reimbursement structure for virtual care and to create parity in payment across commercial insurance plans for virtual care visits. The budget also broadens the definition of "emergency medical services" to include Community Tele-Paramedicine and other newer care models.[48] These changes are needed to incentivize healthcare systems to further invest in virtual care.

Conclusions

Emergency Medicine is changing and growing with the adoption of virtual care. Although the equitable implementation of virtual care has not yet been fully realized, EM physicians should be fully prepared to leverage this technology to revolutionize the delivery of acute care, addressing long-standing challenges to the traditional ED care model: low acuity visits, long wait times, limited access to specialty care, and inadequate transitions of care. Perhaps more importantly for the future of our specialty is for emergency physicians to lead the continued growth of virtual care beyond the brick-and-mortar ED, leveraging our skills to impact critical issues such as avoidable admissions and readmissions, as well as public health strategies for the most vulnerable populations. Redefining EM practice and further diversifying the emergency physician skill set may ultimately provide solutions to other contemporary issues, including burnout and the spectra of a national workforce surplus.

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EDUCATION

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Preparing Emergency Medicine Faculty to Teach Residents

Most Emergency Medicine (EM) physicians in the United States do not pursue a career in academic medicine after residency.[1] However, a change in employment or within a department could change what is expected of them, creating a need to refresh and update the education skills of the seasoned physician.

Developing a new EM residency program at NYU Long Island School of Medicine involved not only creating great learning experiences for our residents but also growing the education and scholarship skills of the faculty who will be teaching them. Prior to the approval of our new residency program, the education occurring in our department revolved predominantly around rotating residents from other specialties, as well as visiting medical students. In 2019, the new three-year accelerated MD curriculum at NYU Long Island School of Medicine welcomed its first class of students. Our faculty began educating these medical students during their EM required clerkship and have recently started a sub-internship for visiting students. However, with the arrival of our first class of residents in July 2023, many of our faculty will be teaching EM residents for the first time since their own residency training. Additionally, the program's faculty will have new expectations for participation in scholarship.

In preparation for this new cohort of learners, we created a longitudinal faculty development curriculum to refresh and cultivate various aspects of their medical education skills. After performing a literature search to learn about faculty development programs, we were surprised by the paucity of information published about the presence of these programs within the specialty of EM. Based on recommendations from both our mentors and the literature, we applied Kern's 6-step approach[2] to ensure our own physicians' needs and interests would dictate the design of the curriculum. We created a needs-based assessment Qualtrics© survey as our modality of collecting this information. The seven-question survey took less than five minutes to complete and included options for comments to allow for open responses. We sent the survey to all adult and pediatric emergency physicians on staff at our institution. The chair, as well as the vice chair of education, were in support of the mission and encouraged staff participation assuring anonymity and no impact on physician employment or compensation.

Thirty of the forty EM and pediatric EM physicians (75%) responded to the survey. The responses showed that faculty were most interested in learning more about giving feedback, lecturing, how to get started on research and how to access institutional resources for research. They also felt most comfortable with their skills in on-shift supervision, bedside teaching and leading a small group. Our open responses allowed some faculty to express a desire to learn more about the remediation process, physician wellness and procedural skills such as pericardiocentesis, vaginal deliveries and the slit lamp exam.

We designed a year-long, monthly one-hour lecture series that concludes with a simulation day to solidify confidence in performing and teaching hands-on procedures and ultrasound. Upon designing the curriculum we prioritized the topics that were of highest interest to our faculty. The order of topics was decided based on how urgently they were needed in preparation for the residency and speaker availability. With one exception, all speakers were from within our institution and were chosen based on recommendations of the NYU Long Island School of Medicine Designated Institutional Official (DIO) and Assistant Dean of Faculty Development and Mentoring. Some of our interactive monthly didactic sessions include Giving Feedback, Interactive Learning Techniques, Giving a Great Lecture, What is Scholarship?, How to Write and Submit an Abstract and Introduction to GME Evaluations, Milestones and the Remediation Process. The simulation day will consist of ultrasound workshops to ensure confidence in bedside ultrasound teaching and procedure labs to practice skills in teaching critical procedures. To encourage attendance and participation we applied for CME credits to be awarded for all sessions and those who attend all sessions will receive a certificate of completion for the course.

We are soliciting feedback from our faculty on how effective each session has been in developing their education and scholarship skills. This feedback will be incorporated to further tailor the course to the needs of this faculty population and to provide a resource to future faculty who are new to departments with education and scholarship expectations. We hope investigating this curriculum within our own department will encourage other departments and professional organizations to implement specialty-driven faculty development curriculums for physicians newly entering academic settings at any point of their career.

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Emergency Department Research During COVID-19 Pandemic

As the COVID-19 pandemic emerged, we witnessed the unfolding of the greatest public health challenges and tragedies of this era. Emergency departments (EDs) are on the front line of this public health crisis. The ED plays a key role in evaluating patients presenting with COVID-19 infection. Although research is an integral part of emergency medicine, the pandemic has stretched hospital resources and this in turn put an unprecedented strain and disruption on clinical research. This has overwhelmed emergency department capacity. Initially, the pandemic has undermined the ability of clinical researchers to do their jobs. Many academic centers have paused their clinical research. The pandemic brought a complex, unexpected and long-term implications. There was an urgency for research needs to be addressed during this difficult time.

Research was influenced in several ways by this global pandemic. The COVID-19 pandemic highlighted many challenges for emergency department operations including research. Emergency physicians had to adapt their clinical procedures and many non-Covid related research activities were suspended. Herein, from the ED perspective, we discuss here several strategies to improve research participation. So, what should researchers be doing? It became apparent that more research is urgently needed to identify effective strategies for developing new modalities. We suggest several steps that could mitigate the impact of the COVID-19 pandemic on clinical research.

Protecting the Staff and Study Participants

Since COVID-19 is highly contagious, safety of staff and participants is the most important step that should be ensured. The magnitude of this crisis posed significant safety considerations. Safety became the dominant theme for conducting research projects. Research staff are concerned about their risk of exposure during in-person patient visits. Since the primary purpose of medical research is to generate new knowledge, this goal can never take precedence over the rights and interests of all research participants. It is important to balance patient safety with the cost of halting clinical trials. It is also important to consider safety risks and decide how best to proceed or temporarily halt research projects. Every effort should be made to limit the direct contact between investigators and their subjects. Risk can be mitigated by reducing research-only visits or scheduling such visits using video or other virtual platforms. It is also necessary to consider whether a research visit changes the risk-benefit ratio for study participants. When contact is necessary, consider ensuring adequate personal protective equipment (PPE) is available for the protection of both the ED staff as well as research participants. Without proper PPE, ED staff are at high risk of infection. During a time of shortages, activities that require PPE use may be limited.

Uncertainty around COVID-19 has resulted in misconceptions and concerns. Among participants, there was a general fear and apprehension and they should be thoroughly addressed. Appropriate PPE is required to help address these concerns.

Maximize Trust

This pandemic provokes fear, anxiety and uncertainty. The willingness for research participation is dependent on the mutual trust in the research setting. Maintaining trust is essential when making the decision to participate in a research study. A patient-centered approach should be developed ensuring that a subject's participation is voluntary and that they enter the study with adequate information. This will help to foster a climate of respectful and mutual trust between science and society. Several consortiums and research groups were convened during the pandemic.

Limited Workforce

Research staff have been relegated to other assignments. Also, COVID-19 infection among staff further reduced the research workforce. During this time, there was competition with other clinical responsibilities.

Virtual Consenting

Virtual consenting was often used to prioritize patient and staff safety. Obtaining consent by telephone or video contact should be encouraged. This has become an innovative tool with a most significant potential for application in clinical research. Although not all clinical research can be performed by telemedicine, it can be used to obtain participants' virtual consent and continued follow-up sessions.

Networking and Collaboration

During this crisis, interdisciplinary collaboration is critical for research to continue. Researchers should recognize the need to facilitate collective efforts. COVID-19 requires collaborative response and increased research coordination is essential. It is also important to assign roles to facilitate completion of tasks such as writing, gleaning data, statistical analysis, assembling references, etc.

Data Collection and Manipulation

It is suggested standardized mechanisms for data collection be developed. Also, data use agreements among investigators should be clearly delineated. Also, prior discussion among legal departments regarding data sharing is important. In addition, data sharing and findings will promote multi-center studies. These changes will help in the timely completion of research projects.

Conducting research during the pandemic has its challenges. Lessons learned must

RESEARCH

be implemented. We highlighted challenges encountered and summarize the key strategies necessary for the successful conduct of clinical research. The COVID-19 pandemic may help to serve as an opportunity for the EDs to reassess future research strategies. It is a priority to develop such mitigation strategies. We must take advantage of such necessary steps to provide adequate resources and strategies for researchers and participants. Research is the only way that can help prepare for future pandemics and public health crises. Researchers should be aware of these challenges and these strategic solutions. In summary, we look forward to more ED-focused clinical research in the foreseeable future.

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Join us this year in acknowledging the enormous efforts of emergency medicine's unsung heroes who go above and beyond for their colleagues, patients and community.

These recipients, nominated by their department chair, embody what it means to be an emergency physician.

Their impact goes well beyond those they directly treat. They train young clinicians, share their skills, knowledge and experience and are always willing to do whatever is needed for their patients and colleagues.

Join us in honoring the 2022 New York ACEP Unsung Hero recipients - true leaders in emergency medicine.

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Michelle Dimare, MD
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Lucy Willis, MD
NYP | Weill Cornell

Tommy Wong, MD
Mount Sinai West, Icahn School of Medicine at Mount Sinai

Livia Santiago-Rosado, MD FACEP
Commissioner, Dutchess County Department of Behavioral & Community Health

What Workforce Issue? Enter Applied Emergency Medicine

Most of us have heard of *applied mathematics*, defined as the application of mathematical methods to other fields such as physics, biology, engineering or finance.[1] It is distinct from *pure mathematics*, the use of mathematics for its own sake with a focus on solving problems encountered by other mathematicians.[2] Utilizing this framework, many of us practice "pure" emergency medicine (EM), where we apply our knowledge and training to care for patients and lead clinical teams within the walls of an emergency department. Related activities including EM teaching, research and administration can introduce some diversification to our practice, but these areas are still integrally derived from pure EM. **However, there are opportunities to apply the tenets and knowledge of EM to situations and problems outside of the scope of EM, beyond the ED or even the hospital walls: this constitutes *applied EM*.** When we hear the drumbeat about EM physician oversupply, it becomes apparent the calculus has not considered *applied EM*.

Emergency physicians (EPs) can make excellent health care administrators. EPs tend to be thoughtful and resourceful medical directors due to our skills in teamwork, patient advocacy, and ad hoc problem-solving. For these reasons, we are also valuable additions to hospital-wide committees, agency task forces and boards. **Well done, the job of a Chief Medical Officer or Chief Executive Officer requires knowledge of the spectrum of health care delivery and finances, coupled with the ability to prioritize, promote collaboration and create accountability. We do these things daily.** A urologist may not often cross paths with a psychiatrist or a pediatric neurologist but we frequently work alongside all three of them and understand something about their different clinical approaches and workflows. We come in contact with trauma surgeons and toxicologists, primary care offices and urgent care centers, cath labs and case managers. And because we intersect with all of them in our pure EM practice, EPs know more about different facets of care delivery than most of our colleagues.

Translating our team-building skills from the clinical bedside to the hospital level reveals many similarities: assigning roles, establishing graduated responsibility, clear communication of expectations.

There are also gatekeeper roles well suited to applied EM, such as physician advisors for both health systems and payors.[3] **Physician advisors are experts on evidence-based health care utilization including the *what, where, when and how* of resource utilization.** They also have expertise on documentation towards clinical necessity; if you have ever ensured your chart contained wording like "imminent deterioration" or "inadequate outpatient access" to build a case for admission, you have had a window into their world. Because we are expert consumers of knowledge and literature around risk and benefit, we are in a unique position to consider whether a patient would be likely to benefit from admission vs. discharge, or when adding imaging (and *which* imaging) may be valuable to the outpatient evaluation of a subacute condition. Physician advisors are also tasked with being a liaison for communication and education with clinicians, which is most certainly in our wheelhouse.[4]

Then there is applied EM in public health administration. Last year I was appointed as the commissioner for my county health department and have appreciated the preparation obtained through my career in EM.[5] I transitioned to ED administration early in my career because while I appreciated using my clinical skills to help a few dozen patients and family members per shift, the frustrations encountered during those shifts, things that were systemic and made my work or my patients' lives harder, spurred me to try to do something about them. **Within a few years, I realized I derived more satisfaction from finding ways to help my colleagues and patients en masse by applying my EM mental model to those problems: ask insightful questions to better understand the problem, figure out what data to collect, evaluate the available data and be able to make informed decisions despite incomplete information.** These are all integral to the health commissioner role. So is collaborating with team members and relying on their expertise, while quarterbacking their contributions to achieve alignment and synergy. **Other than the fact that your patient list is an entire population, it's still very much like EM.** You prioritize the sickest or most dysfunctional parts, while ensuring you accommodate vulnerable populations. As an expert on secondary gain and on chronic disease gone wild, you understand the relationship between health care and public health, and how the activities of one can either augment or diminish the impact of the other. You provide education, apply interventions and assess their effectiveness. You navigate politics and difficult constituents and colleagues, determine a plan of action, consuming ever-evolving literature to inform your decisions, and hopefully get it right most of the time.

We continue to hear a lot of concern about a purported "workforce issue" in EM. I share the dominant disdain towards residency programs and slots conceived for profit, in the absence of community need or robust academic and practice standards. But having worked clinically in multiple locations in New York State including New York City, I can also attest that none of those locations have been consistently fully staffed with EPs. But that's just the beginning; there is a sea of opportunities that remain for EM doctors willing to look beyond the patient's curtain. **I would urge socially- and public health-minded EPs among us to look into inhabiting the spaces of health administration, utilization and most importantly, public health leadership.** Increasingly, EPs have been selected as state and local health commissioners (or deputy commissioners).[6, 7, 8] Currently, both Kentucky and Alaska have EPs helping lead their state health departments.[9, 10] That EPs have successfully led public health in cities[11] and counties[12] throughout the US should be no surprise: the role of health commissioner is made to order for EPs. **The "workforce**

continued on page 21

ASK THE EXPERTS

Moshe Weizberg, MD FACEP
Chair, Department of Emergency Medicine
New York Community Hospital
Chair, New York ACEP Professional Development Committee

Interviewee
Jordana Haber, MD MACM FACEP
Director of Clinical Education and Simulation
Associate Professor, Department of Emergency Medicine, Kirk Kerkorian School of Medicine at UNLV

Interviewer
Muhammad Waseem, MD MS FACEP CHSE-A
Research Director, Emergency Medicine, Lincoln Medical Center; Professor, Emergency Medicine and Pediatrics, Weill Cornell Medicine

Dr. Jordana Haber completed her Emergency Medicine (EM) residency training at Lincoln Medical Center, Bronx. She then completed a two-year Medical Education Fellowship at Maimonides Medical Center and a Masters in Academic Medicine through University of Southern California (USC) Keck School. She is an Associate Professor of Emergency Medicine at Kirk Kerkorian School of Medicine in Las Vegas, where she serves as the Director of Clinical Education and Simulation and Medical Director for the Sexual Assault Nurse Examiner (SANE) program. Her academic focuses are mindfulness, narrative medicine, faculty development, simulation and health equity.

What inspired you to pursue a career in academic emergency medicine?

I feel very fortunate for early experiences in my career path that guided me to where I am today. When I was a medical student and resident, I was inspired by the emergency medicine clinical educators I worked with for their ability to be decisive, competent and to remain calm in the midst of chaos. A busy emergency department is the most stimulating place to teach the nuances of clinical medicine. We are the resuscitationists, we are the response team when there is any kind of disaster, whether confronted by a mass casualty or a pandemic. We are often the primary diagnosticians and we are the medical safety net for our communities. Educating my patients, as well as teaching and learning with our trainees is what keeps me continually engaged, challenged and excited about the work I do. My father's career as an oral surgeon also has had a significant influence on my pursuit of an academic path. I saw how teaching and mentoring were central to his work and gave him a lot of meaning and satisfaction. An academic path is one way to add balance and joy in an emergency medicine career.

What is Mindful EM?

Mindful EM is a way of practice that emphasizes the cognitive and affective domains of emergency medicine. I am most interested in medical decision making that occurs during emergency care. The emergency department is by nature chaotic, stressful and unpredictable. Clearly, a challenging place for effective cognitive work. We know that most medical errors that occur in emergency medicine are due to cognitive errors, errors in our thinking and judgement. The clinicians I most respect and have tried to emulate are the ones who are continually even-tempered, focused, unbiased, nonjudgmental, reflective and practice sound systematic habits. They are also humble, compassionate and approachable. Mindfulness and metacognition, being aware of our thinking, is an important skill set that can be studied, taught and practiced just like any other procedure. A mindful practice requires continuous reflection in a field of medicine that otherwise pushes us to be reactive and move on.

Describe challenges that are important to decision making in emergency medicine.

It's hard to imagine a more challenging place to make decisions than the setting of the emergency room (ER). As emergency physicians we are called upon to make numerous critical decisions while managing multiple patients simultaneously over the course of any given shift. And in the background, there are continuous distractions all competing for our attention. The variability in presentations and the vast amount of medicine we are responsible for adds to our cognitive burden and decision-making fatigue. Shift work in general has unique challenges. We can feel tired or moody simply from a constantly changing and unpredictable work schedule and poor sleep habits. In addition, we often lack rapport with our patients and are forced to make minute decisions and form immediate impressions, which makes us highly susceptible to cognitive bias. None of us are immune to biases that are formed by the environment in which we practice and our prior experiences. Yet, if we are continuously aware of our biases and the various cognitive error traps, we can decrease our risk of cognitive errors substantially.

Help us understand how emergency medicine educators can best teach skills of mindfulness in the emergency department.

Teaching mindful habits is similar to teaching other skill sets that are critical to emergency medicine practice. The first step is recognizing the importance and gravity of cognitive errors. It is important to have knowledge of the different types of decision-making errors that we are particularly at risk for in emergency medicine. Dr. Croskerry's research[1] is a great reference for understanding cognitive errors in emergency medicine.

Metacognition, thinking about our thinking, is the cornerstone to preventing cognitive errors. We should encourage our learners to develop their reflective skills. This means both reflecting in real time while making decisions in the midst of distractions and also after the moment, such as in a team debrief or with their mentor or colleague after a shift. Morbidity and Mortality presentations should be done regularly, in a safe and supportive environment and include a discussion on the cognitive errors that are relevant to the case. Each year I give our intern class a talk on mindfulness, along with a journal to write about experiences and cases they are affected by. Critical and meaningful reflection allows us to grow from an experience and be better in our future practice. As educators, we can encourage a growth-mindset,

talk about our own failures and how we have learned from our prior cases.

How do you recommend people incorporate mindfulness or metacognition into their clinical shifts?

On shift mindfulness requires a "reflection in action" approach. This means being aware of one's thinking and mood at all times. We can choose rituals during our practice, such as when we wash our hands before seeing a patient or when we introduce ourselves to our patients, to check in and make sure we are focused and a have a clear head. It is helpful to identify critical stop and think moments during a shift. For example, after creating an assessment and plan, when reviewing results and before a patient's disposition. There are questions we can ask ourselves during a stop and think moment that can help us prevent errors, such as "Is there anything else this could be?" "Does something not fit?" "Are there any concerning data points?" "Could more than one thing be going on here?" When I work with students and residents, we discuss a differential diagnosis for each case as well as potential cognitive error traps.

I mentioned the affective domain earlier. The affective domain has the potential to significantly influence the cognitive domain. This is our "mood" or reaction to the situation we are in. Our mood and decision making are likely affected negatively at the end of shift when we are most fatigued or just after a high stress case, for example. If we are aware of this, we can know to slow down and check our thinking. We are often working in the affective domain when we are interacting with patients and their families or when interacting with our consults. We are more prone to error when we are having a contentious interaction. On the flip side, having a positive attitude, having a growth mindset, being aware of our potential biases, being approachable, giving others the benefit of the doubt, can really help us make better decisions. As EM educators and mentors we need to exemplify this behavior and highlight its importance.

Mindfulness is thought to be something we practice outside of work but it has a very necessary place in the chaotic emergency department as well and it is essential to both physician wellness as well as patient care. The emergency department is an amazing place to teach clinical medicine alongside habits of mindfulness.

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New York EM Residency Spotlight

Staten Island University Hospital

Demographics

Program Director: William Caputo, MD RDMS FACEP

Program Coordinator: Jennifer Cohen (jcohen15@northwell.edu)

Hospital Capabilities: STEMI, Stroke, Trauma

Total Number of EM Residents: 30

Residents Train Each Year: 10

Inagural Resident Class Year: 2010

Fellowships Offered: Medical Education, Administration, Ultrasound, Global Health

Benefits Offered: ROSH Review, Membership Dues Coverage, Health Insurance, Life Insurance, Disability Insurance, Professional Liability Coverage

Other Benefits: Meal Stipend, Housing Stipend

Website Link: statenislandem.com

Twitter Link: @statenislandem

Instagram Link: siuhemresidency

New York EM Residency Spotlight

Staten Island University Hospital

Most Unique Progam Feature: The program has a dedicated "Procedure Team" rotation where our 3rd year residents on consulted for procedures (Lumbar Punctures, Midlines, Central Lines, Dialysis access, Nerve blocks) from the inpatient teams.

Favorite Program Aspect: The program has tremendous support from the Executive Director (Dr. Brahim Ardolic) to our Chair (Dr. Joseph Basile) and down the line. Our residents get individualized attention and they get pushed to be the best they can be. When there is something that can be done to improve the program or give a resident a great learning experience, we find a way to make it happen. Everything that we have created here started from the ground level and we have worked hard to make it where we are now. The sky is the limit and we have the right people here pushing the limits.

Program Is Know For: Our program is known for the motto " Work hard, play hard." We have a strong focus on resident wellness and haveprotected time every Tuesday night for resident conferences. Staten Island is known for it's great food and has a real family vibe. Our residency is our family and everyone is there for one another.

Our program is dedicated to making the strongest residents and giving them individual attention. We work hard to produce the best lecturers and professional speakers in Emergency Medicine. We have a string focus on Women in Medicine and host yearly FemInEM conferences. The program is well known for it's Ultrasound teaching and Sono in Staten training videos.

Achievements: Battle for the Borough lecturing Champions (2017-2022); ALLNYC SIMWar champs 2021; National ACEP SIMWar champions 2022; EMRA Quiz Show champions 2022 We are most proud of our residents and their accomplishments.

They have proven time and time again that they can stand toe to toe with any program in the country. Our residents are the reigning national EMRA/ACEP SIMWars champions and are undefeated in the Battle for the Boroughs New York City lecturing competition.

Our residents also become very strong attendings and we are proud to hear form their employers with how well they are performing in their new hospital. We regularly have candidates apply to our program because they worked with one of our graduates and want to train where they did. Our graduates have moved on to several leadership roles and continue to write the history of Emergency Medicine.

What Makes Your Program an Excellent Place to Complete a Residency? Our program is designed to give the highest level of training in Emergency Medicine. Our hospital consists of two sites (North and South) which are two of only three hospitals on Staten Island. SIUH North is a level-I trauma center, a STEMI center with a 24-hour cath lab, a regional burn center, and a stroke center. SIUH South is a community-based hospital with a faster pace and limited back-up services available. Here you will be exposed to real-life community-based emergency medicine. Our residents also rotate through Newark Beth Israel for their PICU experience, which is the busiest PICU in New Jersey.

We have a strong faculty of emergency medicine trained physicians who are eager to share their expertise and experience with you. Fellowship-trained physicians will teach you the subspecialties including pediatrics, toxicology, administration, and ultrasound. Throughout your rotations, you will receive superb training in all of emergency medicine, with intense focus on pediatrics and critical care. You will also be taught all emergency procedures in a structured and methodical way. Our conferences are known for being the highest quality in the area and are very innovative. We have excellent Ultrasound training for our residents, including advanced Ultrasound (e.g. TEE) and regional blocks. Our simulation experience speaks for itself, as winners of ALL NYC SIMWars and national ACEP SIMWars in 2022.

PEDIATRICS

Geoff W. Jara-Almonte, MD
Associate Residency Director, Department of Emergency Medicine
Icahn School of Medicine at Mount Sinai

Bronchiolitis

With two hours to go on a busy evening shift, a new patient pops up on the board. The line on the EMR reads nine mo M. CC: Breathing Problem VS: T 37.9 RR 38 HR 148 SpO2 95%. Everyone else is busy, so you decide to pick up the kiddo.

The parents tell you their child was born full term and had no complications at birth; his vaccines are up to date. Parents noticed two days ago he started with rhinorrhea and nasal congestion and then one day ago began to cough. They feel like his cough has just been worsening and thought he was breathing hard tonight so elected to bring him in. On exam you find a well-developed baby sitting upright in the parent's lap. He is interactive and curious. On lung exam you note bilateral wheezing and scattered crackles. As you finish your exam you start to come to a working diagnosis.

Bronchiolitis is a clinical diagnosis that, according to the American Academy of Pediatrics, is recognized as "*a constellation of signs and symptoms occurring in children younger than two years, including a viral upper respiratory tract prodrome followed by increased respiratory effort and wheezing*."[1]

We usually consider the diagnosis in young children presenting with acute respiratory infections who have both upper and lower respiratory tract involvement and present in the typical "RSV season". There is a broad differential to consider including bacterial and viral pneumonias, influenza, reactive airway disease and croup. Other less common conditions to consider include airway foreign bodies and congestive heart failure.

Differentiating bronchiolitis from reactive airway disease in the setting of a concomitant upper respiratory infection (URI) is probably the most challenging discrimination to make. Repeated prior episodes of wheezing, formal diagnosis of asthma, personal history of atopy or a strong family history of asthma or atopy may make one more suspicious for reactive airway disease. Bacterial pneumonia classically presents with a more abrupt onset of high fever and lower respiratory tract signs and symptoms whereas in bronchiolitis fever is typically lower grace (< 38.3) and lower respiratory tract findings occur only after a URI prodrome. Influenza too typically has a higher-grade fever and more systemic involvement; lower respiratory tract findings are uncommon however. Croup may also present with URI that progresses to increased respiratory effort and tachypnea. In the case of croup, however, respiratory distress is due to upper airway obstruction rather than lower. Differentiation can be made based on the presence of stridor and characteristic "brassy" cough in croup as opposed to wheezing in bronchiolitis.

An aspirated airway foreign body is a rare cause of wheezing. There may be a history of choking but not always. Typically wheezing is focal. Onset is classically abrupt and fever is absent in acute aspiration. Pulmonary edema due to congestive heart failure may present as wheezing. A history of progressively poor feeding, diaphoresis with feeding and poor weight gain may increase suspicion. On exam one may note hepatomegaly or heart murmur.

On further history the parents deny any family or personal history of atopy. They confirm there has been no high-grade fever and confirm a progression of symptoms typical of bronchiolitis. Prior to the development of URI symptoms a few days ago he had been in his usual state of health with no concerns. The parents also report at daycare several children have been ill with "a chest cold".

At this point you feel fairly confident with the diagnosis of bronchiolitis but wonder if you should perform additional testing.

Bronchiolitis is a clinical diagnosis and generally does not require ancillary studies to confirm the diagnosis or exclude complications in patients who are not critically ill. Children will commonly have abnormalities on chest x-ray including peribronchial cuffing, atelectasis or hyperinflation, however their presence has not been shown to correlate with progression to severe disease. X-ray should probably be reserved for cases in which there are clinical features that support an alternative diagnosis.

Viral testing is commonly performed, though strong evidence to support its patient-level utility is lacking. Respiratory Syncytial Virus (RSV) is the most common causative etiology of bronchiolitis, accounting for about 75% of cases. A multitude of other viruses including rhinovirus, metapneumovirus, adenovirus, non-sabre coronaviruses and parainfluenza virus have been implicated as well. However, in most emergency department (ED) settings only RSV testing (sometimes in combination with influenza and SARS-CoV2) is readily available. A negative RSV test does not exclude bronchiolitis.

Some evidence does suggest that RSV, as compared to rhinovirus, has a typical course of illness and so confirmation of infection may allow for more accurate patient counseling. In addition, many inpatient services will "cohort" RSV positive patients as an infection control measure. Confirmation of RSV infection may reduce antibiotic use as well. For these reasons testing is commonly performed in the ED.

In some centers a respiratory virus panel that tests for a multitude of other viral pathogens may also be obtained. In general, identification of a specific viral pathogen does little to alter management. In addition, prolonged viral shedding after resolution of an acute infection may result in a positive result that is unrelated to the acute presentation, thus complicating the diagnostic process. Additional discussion of the potential benefits and pitfalls of respiratory viral testing are beyond the scope of this discussion.

In general, additional studies such as blood count and serum chemistries are not helpful except in the setting of critical illness.

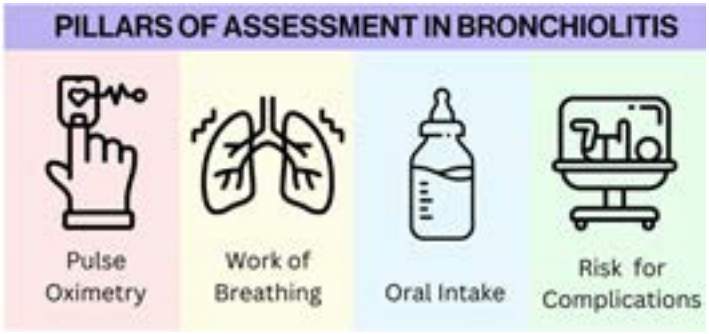
You decide to obtain an RSV test, which returns positive. You discuss with the parents their child has classic RSV bronchiolitis and discuss the typical clinical course. The parents tell you that a friend's child was recently admitted to the hospital for bronchiolitis and wonder if that is necessary for their son.

PEDIATRICS

The clinical severity of bronchiolitis is highly variable. In the vast majority of cases it is a relatively benign self-limited disease. However, severe disease may occur and can be complicated by respiratory failure, apnea or dehydration. Disposition decisions should be made based upon the current clinical severity, anticipated clinical course, host factors that affect potential for decompensation, availability of follow-up and caregiver comfort and resources.

A variety of clinical scoring systems have been developed that assess severity of illness and risk of progression however none has demonstrated definite superiority. When formulating a disposition plan the emergency clinician should consider four essential questions:

1) Is there hypoxia?
2) Is there significantly increased work of breathing or respiratory distress?
3) Is the patient able to maintain adequate oral intake?
4) Is the patient at high risk for complications or rapid/severe progression of disease?



Inpatient management is generally indicated for children with hypoxia. The exact level at which admission is indicated is not clear. Many providers would be comfortable with outpatient management if the SpO2 > 95% and would admit if SpO2 < 91. Between 90% and 95% there exists a degree of variability in practice. The American Academy of Pediatrics (AAP) guidelines allow for managing those children with SpO2 >90 without supplemental oxygen as a treatment option; whether they should be routinely admitted for monitoring of the oxygen saturation is not clear. Some authors have suggested that infants with isolated hypoxia who are not in respiratory distress may be managed with home oxygen.

Work of breathing is a clinical assessment that requires a careful and attentive physical exam. A large body of literature has documented the inaccuracy of triage respiratory rate; it is imperative the emergency clinician assess this themself. Some studies have identified tachypnea as a risk factor for progression to respiratory failure. Examination for accessory muscle use must be performed with the child undressed; it is impossible to assess for subtle subcostal or intercostal retractions with a onesie on. Careful attention should be paid to detect tracheal tugging, grunting, nasal flaring and head bobbing; presence of these signs may portend progression toward respiratory failure.

A reasonably careful feeding history should be obtained: how much has the patient fed in the last 12-24 hours, how much would they usually have fed and what is the adequacy of urine output as measured by number and fullness of wet diapers. It is not unusual for children to feed less while ill. Older children who are taking solids may have decreased or ceased solid intake. This may be distressing to parents but is generally well tolerated so long as there is adequate fluid intake. In younger infants fluid intake may fall off and parents may report providing smaller more frequent feedings. Again, this is generally sufficient. It may be reasonable to observe one or two feedings in the ED to get a better sense of the adequacy of oral intake. Those patients who manifest clinical signs of dehydration or are observed to be unable to tolerate sufficient feeds may require admission for IV or enteral hydration.

The most serious complications of bronchiolitis are respiratory failure and apnea. Several host factors have been described that may be associated with development of either complication. These include prematurity, young age, bronchopulmonary dysplasia, hemodynamically significant congenital heart disease and immunocompromised state. In general, a lower threshold should be had for admission in these special populations. Special attention must be paid to age. Full term children less than eight weeks life or preterm children less than 48 weeks post-conceptual age seem to be at increased risk for apnea; many emergency clinicians will admit very young children for monitoring even in the absence of other indications.

When arriving at a disposition decision it is imperative to consider the current stage of illness; RSV bronchiolitis tends to follow a predictable clinical course with severity of respiratory symptoms peaking on day three to five. Rhinovirus bronchiolitis seems to have a shorter duration. Wheezing may persist for over a week and full resolution may take up to 21-28 days. Understanding of this clinical course is important for formulating a disposition plan. For example, a child who is borderline in terms of severity but on day five of illness and can see their pediatrician in 12 hours may be a more suitable candidate for outpatient management than a child who presents with the same severity of disease on day three of illness leading into a three-day weekend.

> *A careful feeding history reveals the child has been taking smaller bottles, but is doing so more frequently. He feeds once in the ED taking about six ounces of formula. The parents feel his urine output is at baseline. He has a pediatrician he can see in the morning and after a long discussion with the parents you determine he can be managed as an outpatient. The parents tell you another friend of theirs has a child with asthma who frequently wheezes and has to get breathing treatments. They wonder if they need to do the same thing since their child is breathing.*

Asthma and bronchiolitis are characterized by decreased diameter of the small airways, airflow obstruction and wheezing, though the mechanisms are different. In asthma, reversible constriction of the bronchiolar smooth muscle plays a predominant role. In bronchiolitis, the decrease in bronchiolar cross-sectional area is due to edema from infection and collection of cellular debris caused by bronchiolar endothelial sloughing; smooth muscle constriction does not play a large role in the pathogenesis of airflow obstruction.

Studies examining the role of bronchodilators have failed to demonstrate benefits other than transient improvement in severity scores. The AAP strongly recommends against use of bronchodilators or steroids in bronchiolitis. It is important to remember these guidelines do not apply to children with recurrent episodes of wheezing, asthma, or pre-existing

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pulmonary pathology. An approach to children with a history of recurrent wheezing or a high suspicion for reactive airway disease may be individualized based on clinical circumstances and history.

One reasonable therapy to provide in the ED is nasal suctioning. Upper airway secretions can contribute to respiratory distress and lead to difficulty with feeding. A trial of nasal suctioning and observation for improvements in work of breathing and feeding may confer significant benefit, especially in younger patients. If successful, patients can be educated and provided with a bulb suction syringe. Additional nasal aspiration devices can also be obtained at a pharmacy.

Absent a high suspicion for secondary or concomitant bacterial infection, antibiotics are not indicated.

> *After discharging the patient and his family, the patient's nurse comes back to you to ask about what you would have had to do if the child had been more severely ill. "If there's nothing we can really do to treat these kids, what do you do when they're really sick?" he asks.*

Hypoxemia in children with bronchiolitis can generally be managed with supplemental oxygen delivered by nasal cannula, blow-by or tent. In the case of severely increased work of breathing non-invasive ventilatory modalities may be beneficial. Continuous positive airway pressure, bilevel positive airway pressure and heated humidified high-flow nasal cannula have all been studied. While high-quality prospective evidence and definitive guideline recommendations are lacking, most emergency clinicians will attempt non-invasive ventilation for infants with bronchiolitis complicated by hypoxemia and respiratory distress who have adequate mental status and no complications. In general, high-flow is employed as first-line therapy given its ease of use and the fact it is generally well-tolerated.

While well-appearing children can be managed without significant use of ancillary studies, those who are critically ill probably warrant additional studies including blood count and serum chemistries. Blood gasses are commonly checked as well. It is reasonable to obtain a chest x-ray to evaluate for complications such as pneumothorax or evidence of bacterial pneumonia.

> *Your patient is discharged home and follows up with the pediatrician the next day. When you call to follow up after a few days the parents report the child is doing well and is back to normal except for a mild cough. They thank you for your help and are happy to have had your care!*

Wrap up and key points

1) Bronchiolitis is a clinical syndrome recognized by signs and symptoms of lower respiratory tract involvement that develop after a characteristic prodrome of upper respiratory symptoms in a child less than two years of age.
2) In a typical presentation the diagnosis can be made clinically without routinely obtaining ancillary studies.
3) The differential is broad and care should be made to ensure that there is not another cause of the patient's presentation that would demand specific therapy.
4) Care is primarily supportive. There are no disease-specific treatments. Therapies aimed at reducing airflow obstruction are generally not indicated.
5) Careful attention should be paid to assess for complications including hypoxemia, respiratory insufficiency / failure and dehydration.
6) Assessment for host factors that may increase risk of progression to more severe disease should be made.
7) Disposition decisions should take into account the clinical stage of illness and anticipated clinical course.
8) A trial of non-invasive ventilatory therapy is reasonable for many patients with respiratory insufficiency or failure

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What Workforce Issue - continued from page 14

issue" is not really about a lack of EM jobs; it is simply a lack of imagination about what the applied EM jobs of tomorrow could be.

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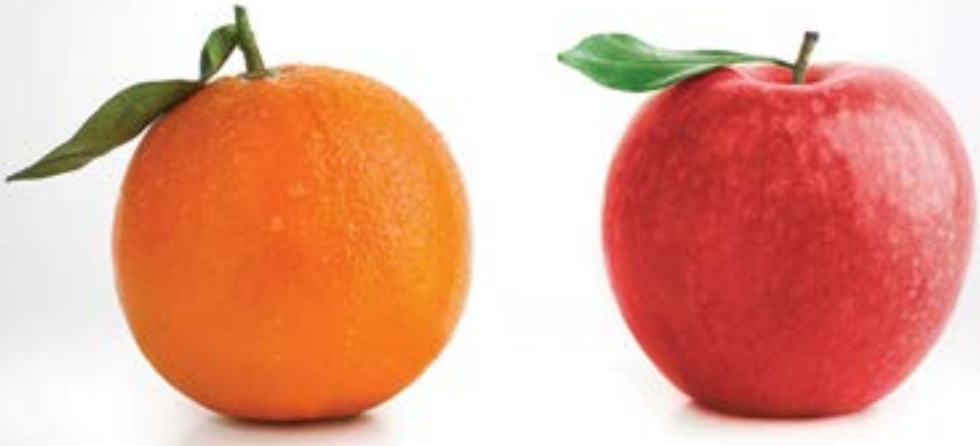

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Calendar

December 2022

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; 12-1:30 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
26-2 Holiday Office Closing

January 2023

11 Education Committee Conference Call, 2:45 pm
11 Professional Development Conference Call, 3:30 pm
11 Academy of Clinical Educators, Zoom Lecture, 4:30 pm
12 Practice Management Conference Call, 1:00 pm
18 Government Affairs Conference Call, 11:00 am
18 Emergency Medicine Resident Committee Conference Call, 2:00 pm
18 Research Committee Conference Call, 3:00 pm
19 EMS Committee Conference Call, 2:30 pm

February 2023

8 Education Committee Conference Call, 2:45 pm
8 Professional Development Conference Call, 3:30 pm
9 Practice Management Conference Call, 1:00 pm
15 Government Affairs Conference Call, 11:00 am
15 Emergency Medicine Resident Committee Conference Call, 2:00 pm
15 Research Committee Conference Call, 3:00 pm
16 EMS Committee Conference Call, 2:30 pm
17 Board of Directors Conference Call; 12 pm-1:30 pm

March 2023

7 Advocacy Day
8 Education Committee Conference Call, 2:45 pm
8 Professional Development Conference Call, 3:30 pm
8 Academy of Clinical Educators Zoom Meeting; 4:30 pm
9 Practice Management Conference Call, 1:00 pm
15 Government Affairs Conference Call, 11:00 am
15 Emergency Medicine Resident Committee Conference Call, 2:00 pm
15 Research Committee Conference Call, 3:00 pm
16 EMS Committee Conference Call, 2:30 pm

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NEW YORK STATE OF MIND

Theodore J. Gaeta, DO MPH FACEP
Residency Program Director
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Using Ultrasound to Determine Optimal Location for Needle Decompression of Tension Pneumothorax: A Pilot Study.

Nelson M, Chavda Y, Stankard B, McCann-Pineo M, Nello A, Jersey A; Department of Emergency Medicine, North Shore University Hospital, Manhasset; J Emerg Med; 2022 Oct 12.

BACKGROUND: Chest injury can result in life-threatening complications like tension pneumothorax, in which rapid deterioration can occur without decompression. Traditionally, the second intercostal space (ICS) along the mid-clavicular line is taught as the site for decompression. However, this has been questioned due to high rates of treatment failure. The fifth ICS on the mid-axillary line (MAL) is hypothesized to have a shorter distance from skin to pleura based on recent studies.

OBJECTIVE: The purpose of this study was to use point-of-care ultrasound (POCUS) to compare chest wall thickness at these two locations. The primary objective was to evaluate the distance from skin to pleura line at the second ICS along the mid-clavicular line and the fifth ICS along the MAL. Secondarily, we aimed to evaluate inter-rater reliability of the two assessments.

METHODS: This was a single-center, observational, pilot study. POCUS was performed using a linear transducer. Measurements of skin to pleura line were obtained at the right second ICS and fifth ICS. These measurements were then repeated by a blinded second ultrasonographer. Intraclass correlations (ICCs) for each measurement site were calculated to determine the inter-rater reliability.

RESULTS: Ninety-three percent of volunteers had a smaller chest wall distance at the fifth ICS-MAL. The median distance at the second and fifth ICS was 2.28 cm and 1.80 cm. The ICC for second ICS was 0.75 (95% CI 0.54-0.87), and 0.90 for the fifth ICS (95% CI 0.81-0.95), both indicating good reliability.

CONCLUSIONS: The data support that patients have a smaller chest wall distance at the fifth ICS vs. the second ICS. We support performing needle decompression at the fifth ICS and believe POCUS can be used to determine the optimal location for decompression.

Improvement of Procedure Documentation Compliance With the Implementation of a Visual Aid.

Choe B, Mathews K, Kenny J, Podlog M, Ng N, Husain A, Basile J, Hahn B; Department of Emergency Medicine, Staten Island University Hospital, Northwell Health, Staten Island; J Emerg Med; 2022 Oct 12.

BACKGROUND: Emergency department (ED) providers face increasing task burdens and requirements related to documentation and paperwork. To decrease the mental task burden for providers, our institution developed an infographic that illustrates which forms are necessary for complete documentation of nonemergent invasive procedures.

OBJECTIVES: Our study aims to analyze the effect of a nonelectronic health record-based infographic, paired with direct feedback, on compliance with nonemergent invasive procedure documentation performed in the ED.

METHODS: This was a retrospective, observational study of all procedure documentation performed in the ED with a pre-/post-test design. The study included two eight-month study periods, one year apart. The preimplementation period used for comparison was January 1, 2019-August 31, 2019, and the postimplementation period was January 1, 2020-August 31, 2020. All invasive procedures that required documentation in addition to a procedure note were included in the study. The primary outcome was the percentage of compliance with documentation requirements.

RESULTS: During the pre- and postimplementation study periods, 486 and 405 charts with nonemergent procedures were identified, respectively. In the preimplementation period, 278 (57%) procedures were compliant with all documentation, vs. the postimplementation period, where 287 (71%) procedures were compliant ($p < 0.001$).

CONCLUSION: Implementing an invasive procedure documentation infographic and direct feedback improved overall documentation compliance for nonemergent invasive procedures.

WOMen profEssioNal developmenT oUtcome Metrics in Academic Emergency Medicine: Results From the WOMENTUM Modified Delphi Study.

Love JS, Zeidan AJ, Khatri UG, Samuels-Kalow ME, Mills AM, Hsu CH; Icahn School of Medicine at Mount Sinai, Department of Emergency Medicine, New York; West J Emerg Med; 2022 Sep 12;23(5):660-671.

INTRODUCTION: To address persistent gender inequities in academic medicine, women professional development groups (PDG) have been developed to support the advancement of women in medicine. While these programs have shown promising outcomes, long-term evaluative metrics do not currently exist. The objective of this study was to establish metrics to assess women's PDGs.

METHODS: This was a modified Delphi study that included an expert panel of current and past emergency department (ED) chairs and Academy for Women in Academic Emergency Medicine (AWAEM) presidents. The panel completed three iterative surveys to develop and rank metrics to assess women PDGs. Metrics established by the expert panel were also distributed for member-checking to women EM faculty.

RESULTS: The expert panel ranked 11 metrics with high to moderate consensus ranking with three metrics receiving greater than 90% consensus: gender equity strategy and plan; recruitment; and compensation. Members ranked 12 metrics with high consensus with three metrics receiving greater than 90% consensus: gender equity strategy and plan; compensation; and gender equity in promotion rates among faculty. Participants emphasized that departments should be responsible for leading gender equity efforts with PDGs providing a supportive role.

CONCLUSION: In this study, we identified metrics that can be used to assess academic EDs' gender equity initiatives and the advisory efforts of a departmental women's PDG. These metrics can be tailored to individual departmental/institutional needs, as well as to a PDG's mission. Importantly, PDGs can use metrics to develop and assess programming, acknowledging that many metrics are the

responsibility of the department rather than the PDG.

Traumatic Injuries in Sexual Assault Patients in the Emergency Department.

McCormack D, Subburamu S, Guzman G, Calderon C, Darapaneni R, Lis R, Sima N, Sperling J, Corbo J; Albert Einstein College of Medicine, Department of Emergency Medicine, Bronx; West J Emerg Med; 2022 Aug 19;23(5):672-677.

INTRODUCTION: The emergency department (ED) is at the forefront for treatment of sexual assault patients. Many require treatment for injuries sustained during the assault, ranging from mild to severe. Our objective in this study was to characterize types of injuries associated with sexual assault and identify associated factors.

METHODS: We reviewed ED charts from an inner-city trauma center and nearby community hospital from 2019-2020 for patients age ≥13 years with a chief complaint of sexual assault. We used descriptive statistics, chi square, and logistic regression to characterize demographics and identify factors associated with trauma.

RESULTS: A total of 157 patients met inclusion criteria. The mean age was 27.9 years old (range 13-79 years) and 92.4% were female. Adult patients (age >18 years) comprised 77.5% of assaults vs adolescents (age 13-18 years) at 22.3%. Most patients presented to the trauma center compared to the community hospital (69.4% vs 30.6%). The assailants were reported as 61.2% acquaintance, 22.9% stranger, and 15.9% intimate partner. A forensic rape kit was performed in 92 (58.6%) cases. The patient was intoxicated with alcohol in 39 (24.8%) cases, and 22 (14%) patients reported drug-facilitated assault where an unknown substance was given to them. Alcohol (P = 0.95) and drug-facilitated assault (P = 0.64) did not change the occurrence of injuries. Fifty-seven (36.3%) patients exhibited physical trauma on presentation. Forty-five (28.6%) patients had minor injuries of abrasions, lacerations, or contusions. Major trauma was defined as fracture, brain injury, hemorrhage, strangulation, or injury requiring surgical consultation. There were 12 patients with major trauma consisting of fracture injury or nonfatal strangulation. None of the patients required admission. Sexual assault by an intimate partner (odds ratio [OR] 2.6; 95% CI: 1.1-6.5) and being an adult patient compared to adolescent (OR 3.0; 95% CI, 1.1-7.7) was significantly associated with physical trauma. Sexual assault by an intimate partner was also associated with nonfatal strangulation (OR 4.0; 95% CI, 1.1-15.4).

CONCLUSION: Physical injuries that resulted from sexual assault were mostly minor and occurred in 36% of rape victims. Intimate partner violence was found to be associated with physical trauma as well as nonfatal strangulation. Overall, this study helps us to understand key factors associated with sexual violence.

Racial and Ethnic Disparities in Hospitalization and Clinical Outcomes Among Patients with COVID-19.

Serrano F, Blutinger EJ, Vargas-Torres C, Bilal S, Counts C, Straight M, Lin MP; Icahn School of Medicine at Mount Sinai, Department of Emergency Medicine, New York; West J Emerg Med; 2022 Aug 11;23(5):601-612.

INTRODUCTION: The recent spread of coronavirus disease 2019 (COVID-19) has disproportionately impacted racial and ethnic minority groups; however, the impact of healthcare utilization on outcome disparities remains unexplored. Our study examines racial and ethnic disparities in hospitalization, medication usage, intensive care unit (ICU) admission and in-hospital mortality for COVID-19 patients.

METHODS: In this retrospective cohort study, we analyzed data for adult patients within an integrated healthcare system in New York City between February 28-August 28, 2020, who had a lab-confirmed COVID-19 diagnosis. Primary outcome was likelihood of inpatient admission. Secondary outcomes were differences in medication administration, ICU admission, and in-hospital mortality.

RESULTS: Of 4,717 adult patients evaluated in the emergency department (ED), 3,219 (68.2%) were admitted to an inpatient setting. Black patients were the largest group (29.1%), followed by Hispanic/Latinx (29.0%), White (22.9%), Asian (3.86%), and patients who reported "other" race-ethnicity (19.0%). After adjusting for demographic, clinical factors, time, and hospital site, Hispanic/Latinx patients had a significantly lower adjusted rate of admission compared to White patients (odds ratio [OR] 0.51; 95% confidence interval [CI] 0.34-0.76). Black (OR 0.60; 95% CI 0.43-0.84) and Asian patients (OR 0.47; 95% CI 0.25 - 0.89) were less likely to be admitted to the ICU. We observed higher rates of ICU admission (OR 2.96; 95% CI 1.43-6.15, and OR 1.83; 95% CI 1.26-2.65) and in-hospital mortality (OR 4.38; 95% CI 2.66-7.24; and OR 2.96; 95% CI 2.12-4.14) at two community-based academic affiliate sites relative to the primary academic site.

CONCLUSION: Non-White patients accounted for a disproportionate share of COVID-19 patients seeking care in the ED but were less likely to be admitted. Hospitals serving the highest proportion of minority patients experienced the worst outcomes, even within an integrated health system with shared resources. Limited capacity during the COVID-19 pandemic likely exacerbated pre-existing health disparities across racial and ethnic minority groups.

COVID-19 and Serious Bacterial Infection in Febrile Infants Less Than 60 Days Old.

Guernsey D, Pfeffer M, Kimpo J, Vazquez H, Zerzan J; Maimonides Medical Center, Department of Emergency Medicine, Brooklyn; West J Emerg Med; 2022 Aug 10;23(5):754-759.

INTRODUCTION: The pandemic caused by severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) led to the coronavirus disease 2019 (COVID-19) pandemic that drastically impacted the United States. The evidence was not clear on how SARS-CoV-2 infection impacted children, given the high prevalence of SAR-CoV-2 infection. Febrile infants less than 60 days old are an ongoing challenge to risk-stratify for serious bacterial infection (SBI), including urinary tract infection (UTI), bacteremia, and meningitis. We hypothesized there would be a lower rate of SBI in SARS-CoV-2 positive febrile infants compared to those SARS-CoV-2 negative.

METHODS: This was a retrospective chart review with a nested, age-matched, case-control study performed from March 2020-June 2021. Infants less than 60 days old presenting with fever were assigned groups based on SARS-CoV-2 infection. Blood, urine, and cerebrospinal fluid cultures were used as the gold standard to diagnose SBI. We compared overall rate of SBI as well as individual rates of SBI between each group. We performed a subgroup analysis evaluating the age group 29-60 days old.

RESULTS: A total of 164 subjects met

criteria for analysis: 30 COVID-19 positive and 134 COVID-19 negative subjects. Rate of SBI was 17.9% (95% confidence interval [CI]: 11.8-25.5%) in the COVID-19 negative group compared to 0% (95% CI: 0.0%-11.1%) in the COVID-19 group, which demonstrated statistical significance (p = 0.008). In the age-matched data, we found statistical significance for any SBI (p = <0.001). For individual rates of SBI, we found statistical significance for UTI (p = <0.001) and bacteremia (p = <0.001). The 29-60 days-old subgroup analysis did not achieve statistical significance (p = 0.11).

CONCLUSION: This study demonstrated the utility of including SARS-CoV-2 infection as part of the risk stratification of febrile infants less than 60 days old. While overall there is a low incidence of bacteremia and meningitis in this age group, these results can contribute to existing literature and potentially help decrease invasive testing and exposure to broad-spectrum antibiotics.

Racial/Ethnic Differences in Non-Discretionary Risk Factors for COVID-19 Among Patients in an Early COVID-19 Hotspot.

Newton EH, Valenzuela RG, Cruz-Menoyo PM, Feliberti K, Shub TD, Trapini CZM, Espinosa de Los Reyes S, Melian CM, Peralta LD, Alcalá HE; Department of Emergency Medicine, Renaissance School of Medicine at Stony Brook University, Stony Brook; J Racial Ethn Health Disparities; 2022 Sep 30:1-11.

BACKGROUND: Baseline disparities in non-discretionary risk factors, i.e., those not readily altered, like family size and work environment, appear to underlie the disproportionate COVID-19 infection rates seen among Hispanic persons and, at surge onsets, Black persons. No study has systematically compared such risk factors by race/ethnicity among infected individuals.

METHODS: Using a cross-sectional survey, we compared household, job, and socioeconomic characteristics among 260 Hispanic, non-Hispanic Black, and non-Hispanic White adults with confirmed or probable COVID-19 in New York from March to May 2020. We used logistic regression to identify independent relationships.

RESULTS: In bivariate analysis, we found significant differences by race/ethnicity in the following: (1) rates of household crowding (p < 0.001), which were highest for Hispanic patients (45.1%) and lowest for White patients (0.9%); (2) rates of non-healthcare frontline work (p < 0.001), which were highest for Hispanic patients (71.0% of those employed) and lowest for White patients (31.4%); (3) rates of working close to people (p < 0.001), which were highest for Black patients (69.4%) and lowest for Hispanic patients (32.3%); and (4) rates of frontline healthcare work (p = 0.004), which were higher for Black (44.9%) and White (44.3%) patients than Hispanic patients (19.4%). Adjusting for covariates eliminated most differences but not that for household crowding.

CONCLUSIONS: Non-discretionary COVID-19 risk factors among patients in the initial surge differed substantially by race/ethnicity. Socioeconomic factors explained most differences, but household crowding was independently associated with Hispanic ethnicity. Our findings highlight the ongoing need for universal safeguards for US frontline workers, including mandated paid sick leave and expanded affordable housing options.

8. doi: 10.1002/jum.16095. Online ahead of print.

Development and Validation of a Point-of-Care-Ultrasound Image Quality Assessment Tool: The POCUS IQ Scale.

Dessie AS, Calhoun AW, Kanjanauptom P, Gilbert GE, Ekpenyong A, Lewiss RE, Rabiner JE, Tsze DS, Kessler DO; Department of Emergency Medicine, Columbia University Vagelos College of Physicians & Surgeons, New York; J Ultrasound Med; 2022 Sep 27.

OBJECTIVES: We aimed to develop a standardized scoring tool to measure point-of-care ultrasound (POCUS) image quality and to determine validity evidence for its use to assess lung ultrasound image quality.

METHODS: The POCUS Image Quality (POCUS IQ) scale was developed by POCUS-trained physicians to assess sonographers' image acquisition skills by evaluating image quality for any POCUS application. The scale was piloted using lung images of healthy standardized patients acquired by three expert sonographers compared to three novices before and after training. All images (experts, novices pre-training, novices post-training) were scored on the POCUS IQ scale by three blinded POCUS-trained physicians. Reliability was assessed with fully-crossed generalizability and decision studies. Validity was assessed using Messick's framework.

RESULTS: Content validity was supported by the tool's development process of literature review, expert consensus, and pilot testing. Response process was supported by reviewer training and the blinded scoring process. Relation to other variables was supported by scores relating to sonographer experience: median expert score = 10.5/14 (IQR: 4), median novice pre-training score = 6/14 (IQR: 2.25), and novices' improvement after training (median post-training score = 12/14, IQR: 3.25). Internal structure was supported by internal consistency data (coefficient alpha = 0.84, omega coefficient = 0.91) and the generalizability study showing the main contributor to score variability was the sonographer (51%). The G-coefficient was 0.89, suggesting very good internal structure, however, Gwet's AC2 was 0.5, indicating moderate interrater reliability. The D study projected a minimum of one reviewer and two patients are needed for good psychometric reliability.

CONCLUSIONS: The POCUS (PoIQ (Point-of-care ultrasound image quality) scale has good preliminary validity evidence as an assessment tool for lung POCUS image acquisition skills. Further studies are needed to demonstrate its utility for other POCUS applications and as a feedback tool for POCUS learners.

NEW YORK ACEP
American College of Emergency Physicians
ADVANCING EMERGENCY CARE

Every year New York ACEP honors individuals for their contributions to the advancement of emergency care in New York State.

Nomination Deadline: January 2, 2023

- Advancing Emergency Care
- Edward W. Gilmore Lifetime Achievement
- Legislative Achievement Award
- Michael G. Guttenberg Outstanding Contribution to EMS
- National Leadership
- Outstanding Contribution to Emergency Medicine in New York
- Outstanding Researcher Award
- Physician of the Year

Award recipients will be recognized at New York ACEP's Annual Meeting Wednesday, July 12, 2023 at the Sagamore Resort.

Read More **Nomination Form**

New York EM Residency Spotlight

SUNY Downstate Health Sciences University

Demographics

Hospital/Institution: SUNY Downstate Health Sciences University / Kings County Hospital Center

Program Director: James Willis, MD

Program Coordinator: Chelsea Cole MPH (chelsea.col@downstate.edu)

Hospital Capabilities: STEMI, Stroke, Trauma

Total Number of EM Residents: 97

Residents Train Each Year: 20-25

Inagural Resident Class Year: 1995

Fellowships Offered: Ultrasound, Education, Simulation, Disaster, Forensics, Administration, Global Health, Pediatric Emergency Medicine

Benefits Offered: Membership Dues Coverage, Lab Coat(s), Dental Insurance, Health Insurance, Vision Insurance

Other Benefits: ACEP/EMRA Membership, EM Coach, Travel Reimbursement

Website Link: www.clinicalmonster.com

Twitter Link: https://twitter.com/kingsofcounty

Instagram Link: kingscountyem

Most Unique Program Feature: Dedication to the community, patient population and Social EM. Our program's primary site is one of the busiest public, city run hospitals in the country- Kings County with our sponsoring Academic institution being a State run institution, SUNY Downstate. So through and through our mission is to serve the public and community first and foremost.

Favorite Program Aspect: Dedicated faculty, residents and staff. It's not the easiest place to work but the people who choose to be a part of the department and institution are dedicated to resident/student education and our patient population. The program does a great job getting faculty and residents involved in areas that interest and excite them.

Program is Known For: Producing excellent Clinicians, Leaders and Educators. On average 70% of our graduates go into academic positions. Greater than 15% end up in leadership positions within 5 years, 25% within 10 years and half during their career. Dedication to diversity in our residents and faculty.

We are most proud of the dedication to patient care and the accomplishments of our residents and grads in and outside of the hospital

What Makes Your Program an Excellent Place to Complete a Residency? County Clinical Training with a University Hospital Academic Experience with dedication to diversity in medicine and focus on social emergency medicine.