



Emergency Medicine

2020

2021



Mount
Sinai



LETTER FROM THE CHAIR



Brendan G. Carr, MD, MS

It is a privilege to reflect on 2020-2021 and the incredible strength and dedication of the Emergency Medicine team here at Mount Sinai. I am grateful that this team warmly welcomed me in February 2020 and am incredibly proud of the way that they stood at the front lines of COVID-19. Under almost unimaginable conditions, our brave team treated patients with dignity and respect, stood up for our beliefs, and ultimately grew stronger together. We grew our research footprint, welcomed new generations of residents while others graduated, optimized our clinical and operational response, and organized ourselves around becoming a unified Emergency Medicine service line. Over the course of the last two years, we supported each other, cried together, and somehow managed to smile through our masks as we were celebrated with applause and cheers each evening as we found strength to face the next day.

As we look forward, our collective voice will develop the future of Emergency Medicine at Mount Sinai. The ideas, energy, knowledge, passion, and well-being of this extraordinary team will fuel our journey. The leadership is here to support this mission, but each one of you steer the ship. I am humbled and grateful to be a part of the extraordinary team that took care of our families, friends, and neighbors across the New York metro region during the greatest health threats of our lives.

C O N T E N T S

2	Emergency Medicine Service Line
4	COVID-19 Response
8	Celebration of the Team
12	EM Diversity, Equity, and Inclusion
14	EM Divisions:
16	Education
17	Center for Emergency Medicine Education and Faculty Development
18	Resident Education: The Mount Sinai Hospital-Elmhurst Hospital
20	Resident Education: Mount Sinai Morningside-West
22	Simulation
24	Global Health
28	EMS and Disaster Preparedness
30	Research
35	Pediatric EM
36	Social Work
37	Toxicology
38	Ultrasound
39	Sports Medicine
40	Informatics
41	Geriatrics
42	Critical Care
43	Welcoming Urgent Care
44	Quality, Safety, and Patient Experience
46	Changing of the Guard
48	Mount Sinai Hospital Emergency Department Redesign

**Produced by the Emergency
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Committee:**

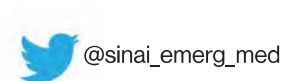
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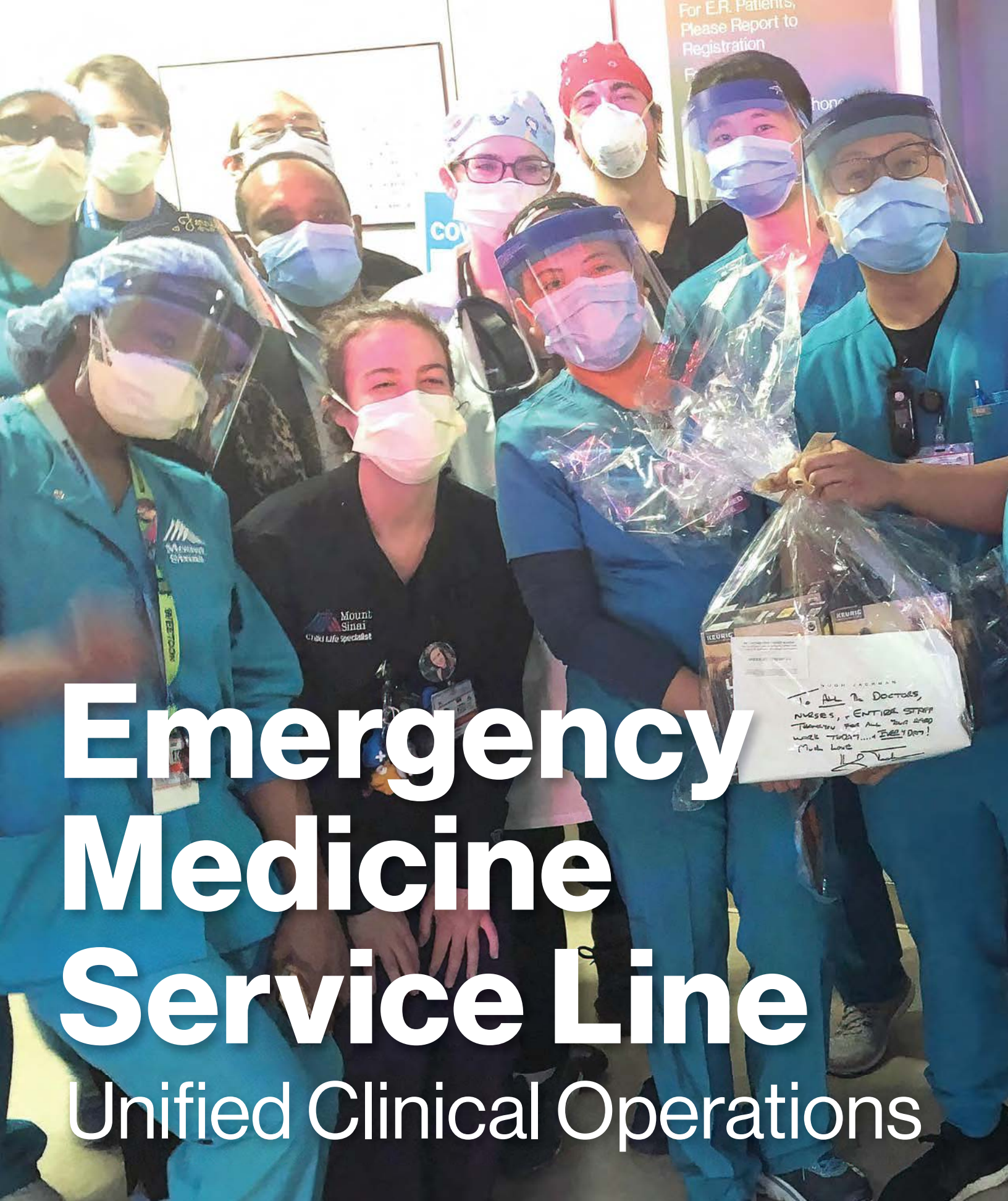
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The safety of our community is our highest priority; some images in this report were taken prior to February 2020.





Emergency Medicine Service Line

Unified Clinical Operations



The Department of Emergency Medicine at the Mount Sinai Health System is a fully integrated network of seven Emergency Departments, six Urgent Cares, and emerging telemedicine platforms. We strive to develop seamless transitions of care for patients and their families, within our Emergency Departments and into the community of care that the Health System provides.

In 2020, a department-wide Emergency Medicine Clinical Operations committee was formed, composed of a multidisciplinary team of administrative, nursing, faculty, informatics, and command center leadership, and population health leadership. Initially focused on sharing best practices for COVID-19 response, the committee has transformed into a robust collaborative platform for sharing key metrics on operational improvement initiatives.

This representation from all of our Emergency Departments and Urgent Cares, as well as HHC affiliate Elmhurst Hospital Center, has proved vital for success. Ultimately this committee, co-led by Jolion McGreevy, MD, MBE, MPH, and Robin Ferrer, RN, MBA, is charting the future for the Mount Sinai Health System as a national model for acute unscheduled care.

COVID-19

Response

Constant creativity, innovation, and an ability to apply novel solutions to daily challenges define the Department of Emergency Medicine. In March 2020, COVID-19 became a global pandemic, and New York City its epicenter. Within a blink of an eye, our Emergency Departments were thrust into an opportunity. Ultimately, COVID-19 would build on the strength of our team and shine a spotlight on the resiliency exhibited by the Mount Sinai front-line staff.

For months on end across the city, our Emergency Departments were filled with patients. Ventilator alarms, cardiac monitors, oxygen hissing, IV pumps, and other medical equipment could constantly be heard in the background. During this time, tents were erected, new floors opened, and every available space was converted into a patient care zone. In the interest of caring for a previously unimaginable number of patients, new processes were created, old ones

modified, and some were discarded altogether in an effort to solve where to put the next patient. We always found room to provide safe and quality care.

As the days progressed, our team cried together. The team was fearful for colleagues and their families who would become ill. Soon, redeployed staff brought much-needed new energy and new challenges. Emergency Medicine worked in partnership with the Transfer Center in an attempt to balance patient volumes.

As quickly as the pandemic numbers spiked, the first wave subsided. Pushed to the limits professionally, personally, and emotionally, we feared for what was to happen next. But the Emergency Department's ability to become a cohesive team, regardless of the challenge, showed that it was possible to rise to the occasion.



Fionnuala Quigley, RN; Known as Nuala, she focused her time during 2020 behind the camera, capturing smiles and moments at Mount Sinai Queens

The epicenter of the epicenter, Queens was one of the more severely affected boroughs during the COVID-19 peak.



Business associates and clerks provided an invaluable connection to patients' loved ones by using FaceTime and handling an unprecedented number of calls.



Mount Sinai Beth Israel developed a School Testing Clinic to support neighborhood schools and families in safely reopening.

Mount Sinai Hospital physicians, nurses, and physician assistants stayed positive and celebrated each other with STARS!



Mount Sinai West and Morningside provided critical access for patients in midtown Manhattan and received patients from across the system allowing other sites the ability to decompress and keep moving.



One day at Mount Sinai South Nassau the Beatles classic, Here Comes the Sun played on the overhead speaker throughout the hospital. Every time a patient was discharged the song would play. The frequency increased and our staff felt the end was in sight.



Mount Sinai Brooklyn built barriers to divide the Emergency Department into "hot zones" and "cold zones," including the use of a care tent.



Mount Sinai West embedded palliative caregivers to improve end of life decision making.



Mount Sinai Queens reflects on an incredible year and how the future can only be bright.



68



Mount Sinai



Mount Sinai

TO THE HEALTH CARE

WORKERS FIGHTING FOR OUR LIVES, THANK YOU

GUGGE

ILION

RN

Celebration of the Team



Indeed, we faced tremendous challenges during the pandemic, but the celebrations of staff helped us to get through them.



Lifesavers were how Mount Sinai South Nassau celebrates!



It is said that darkness is part of this life, but so is light. Indeed, we faced tremendous challenges during the pandemic, but the celebrations of staff helped us to get through them. Our collective bond as health care workers enabled us to find ways to celebrate wins, gains, and moments of joy during what has been described as the greatest health care crisis of our lifetime. The pandemic brought out the best in our community as well as the best in our staff. Through the creativity of our teams, several noteworthy programs were created to help us cope, connect, celebrate, and heal.

We were overcome with the influx of food and beverage donations coming from area restaurants and bakeries. Members of both the FDNY and the community came out at 7 pm every night to clap for our staff. Volunteer Services, in conjunction with Spiritual Care, offered relaxation programs such as Chi Time, which included snacks, aromatherapy, and tea. Community members crafted masks and face shields. In April 2020, military jets flew over

Thank you posters for Environmental Services, Security Officers, and ERTs were drawn by Lisa Thebner, MD, who is a pediatrician, talented artist, and the wife of Eric Legome, MD, Chair of Emergency Departments at Mount Sinai West and Mount Sinai Morningside.

New York City to thank first responders in the COVID-19 effort. 2020 was declared the Year of the Nurse to honor nurses for their vital role in transforming health care around the world.

While no amount of food or prizes could make up for the sacrifices of the staff, it was great to know that we had support during the battle. The members of our Emergency Medicine team persevered through what seemed at times like insurmountable conditions. Our teams continue to do so every day as the world continues to adapt and adjust to a new normal. As the number of positive COVID-19 cases continues to decrease and we return to some semblance of normalcy, we must continue to recognize our colleagues for their continued efforts to keep our patients safe and to serve our communities.





Celebrations at Mount Sinai Beth Israel for Emergency Nurses Week 2020.



The "Mystery Writer" wrote inspirational chalk messages to health care workers approaching the Emergency Department entrance of Mount Sinai Morningside.



The Mount Sinai Hospital celebrates its Business Associates on Administrative Professionals Day in April.



Staff and community members design rocks at the Rock Therapy Garden at Mount Sinai Queens.

EM Diversity, Equity,



Emergency Departments across the Mount Sinai Health System stood in support of Black Lives Matter.

The Department of Emergency Medicine showed, distributed, and analyzed a department-wide diversity climate survey. In collaboration with the Mount Sinai Health System Office for Diversity and Inclusion (ODI), a comprehensive strategic plan was developed. In view of the Black Lives Matter movement during the year, a Diversity, Equity, and Inclusion affirmation statement was created for the System. The document has since been codified and is a permanent fixture in the websites of our department and the MSHS United in Solidarity campaign.

A lecture series on health disparities was organized, featuring Patrice Harris, MD, MA (174th president of the American Medical Association),

and Pamela Abner, MPA, CPXP, Vice President and Chief Diversity Officer for Mount Sinai, for the first two sessions. A faculty dashboard was developed to measure equity and retention among existing faculty. Longitudinal trends in the dashboard will be used to drive recruitment and retention efforts. Equity metrics were developed and integrated into our operational and quality dashboards to highlight health disparities in patients with COVID-19 and identify other inequalities in our clinical practice.

The Department of Emergency Medicine is currently working on initiatives to address health disparities by reducing vaccine hesitancy in minority populations through educational outreach and improving access to COVID-19 therapies for

and Inclusion



The Department of Emergency Medicine is currently working on initiatives to address health disparities by reducing vaccine hesitancy in minority populations.

Jonathan Pierre, MD, Class of 2020 Mount Sinai Morningside West Emergency Medicine, at White Coats 4 Black Lives.

DIVISION ■ EM ■ DIVISIONS

The breadth of Emergency Medicine is shown through an organized division structure where faculty across the service line can find synergy in topical expertise.





ions

Education



Jordan Brown, MD, Class of 2021, teaches US-guided nerve blocks via meat.

The pandemic made 2020 a year of reinvention for the Department of Emergency Medicine Education Division. Facing the challenge, we adapted by staying true to our core education mission: Put patients first, provide the best possible care, and build leaders in Emergency Medicine. A truly dedicated group of learners and educators grew collaborations, developed research, and ultimately supported Mount Sinai's front lines in our collective fight against COVID-19.

Almost immediately, we reinvented our morning report into a virtual format. Suddenly a meeting that happened in each site now happened virtually, allowing providers across the system to participate, present, share ideas cross-site, and engage with each other.

Residents across our two Emergency Medicine training programs were right in the fray, confronting medical and operational challenges never seen by even the most senior faculty. Fellows across the Emergency Medicine divisions focused on projects that educated our community on COVID-19. We collectively engaged in remote learning, elevating our grand rounds by inviting speakers from around the world and sharing our speakers with new audiences.

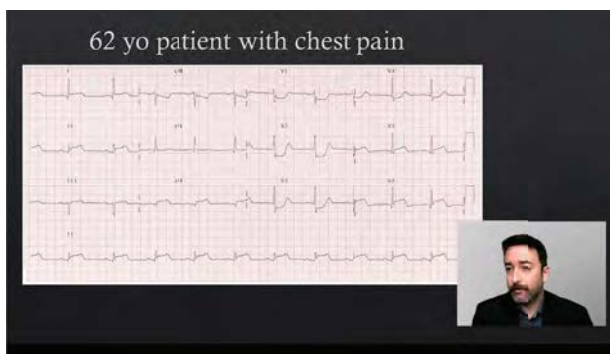
Under the leadership of Andy Jagoda, MD, the Center for Emergency Medicine Education and Faculty Development (CEMED) fully bloomed in 2020. The year forced us to think outside past structures, and web-based teleconferencing became a tool for innovation and delivery.



The cover art of the New Yorker article focused on resident Hashem Zikry, MD.

Challenge become opportunity. Opportunities that are amplified become lasting adaptations. Two unique Emergency Medicine residency training programs at The Mount Sinai Hospital and Mount Sinai Morningside-Mount Sinai West offer variations in patient population, faculty interests, and training philosophy.

Teaching on Zoom, Emergency Medicine faculty are involved in the curriculum of the Icahn School of Medicine at Mount Sinai.



Residents get vaccinated! #MyVax.

Center for Emergency Medicine

Education and Faculty Development



Andy Jagoda, MD, FACEP

The faculty development series was an instant success, consistently drawing more than fifty participants, including alumni, each month.

Conceived in 2017 and directed by Andy Jagoda, MD, the Center for Emergency Medicine Education and Faculty Development (CEMED) exists to facilitate the Department of Emergency Medicine's strong commitment to our educational mission, and to develop the faculty needed to achieve that mission. Educational development and dissemination are CEMED's core values, as evidenced by its active training across multiple disciplines.

CEMED developed a monthly faculty development series, with topics ranging from how to be promoted, to how to deliver a tele-lecture, and how bias impacts education and clinical decision making. The faculty development series was an instant success, consistently drawing more than fifty participants, including alumni, each month; lectures are archived, allowing for asynchronous participation and the creation of a faculty development library. CEMED also developed a teleconference grand rounds series that has brought the best educators in Emergency Medicine to the Mount Sinai Health System on the second and fourth Wednesday of each month. The lectures have been well received by residents and faculty, and consistently draw up to thirty alumni "back to campus." Additionally, CEMED created an inspiring leadership series, bringing leaders to discuss their experience and lessons learned on leading and on problem solving. Building on the success of virtual platforms, CEMED helped to reinvent the morning report experience with biweekly sessions that have been attended by an average of forty residents and faculty, far surpassing the participation at in-person morning reports of the past.

Department of Emergency Medicine's CME programs thrived in 2020. Taking our annual conferences online, we surprised everyone (including ourselves) by the amount of enthusiastic participation we received. Our annual PA conference historically attracted 120-130 participants; in 2020 we had 356 participants. Our 19th annual conference in Ponte Vedra, Florida, historically attracted 180 participants, while the teleconference version brought in 442 registrants, including 48 from international sites. As we look back, 2020 brought a new approach to educating and networking and brought new horizons into view.

Resident Education



Welcoming our incredible interns during their White Coat Ceremony

The Emergency Medicine Residency at The Mount Sinai Hospital spans MSH, Elmhurst Hospital Center, and Mount Sinai Beth Israel. Residents contributed in global ways and revealed themselves to the world as the leaders they are becoming. Providing ideas and insights about the rapidly-evolving situation proved invaluable in improving processes for caring for patients, effectively and safely.

Before the rest of the country saw community spread, pieces by and about our residents appeared in *The New Yorker*, *The Atlantic*, and more. Allison Lockwood, MD, set up a GoFundMe campaign that raised tens of thousands of dollars for the hard-hit low-income community around Elmhurst Hospital, and Alicia Lu, MD, developed a nonprofit for PPE distribution. For her efforts, she was nationally elected to the prestigious Emergency Medicine Residents' Association "20 Under 45" list in 2020.

We welcomed a truly wonderful class of interns from across the country, including thirteen women and seven interns from underrepresented minority groups. Despite an unconventional start to residency, the interns have seamlessly integrated into the Emergency Medicine family. Tim Kelly, MD, became the first intern in the program's history to earn a grant; he will work with mentor Ethan Cowan, MD, on education about drug-addicted populations with funding from the National Institute on Drug Abuse.

We are grateful for the amazing people with whom we work, the communities we serve, and the chance to have been at the center of the action during this devastating year.

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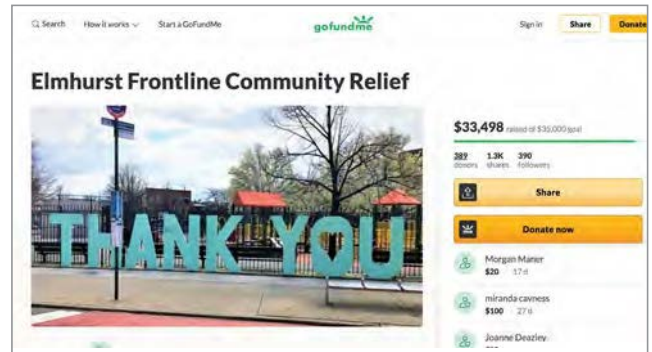
The Mount Sinai Hospital-Elmhurst Hospital



Intern Jason Barba, MD, after snow-shoeing across the park to work.



A congressional surprise from AOC at Elmhurst Hospital



The GoFundMe page set up by resident Allison Lockwood, MD, shows a picture of the big "THANK YOU" sign set up across the street from Elmhurst Hospital during the surge.



Kristen Kelly, MD, article in Time.



Resident Education



The VotER initiative to raise awareness of the importance of voting and civic engagement for every patient in our diverse communities.

The Emergency Medicine Residency at Mount Sinai Morningside–Mount Sinai West underwent incredible growth, resilience, and coming together as a community. On the front lines of the COVID-19 pandemic, our residents faced uncertainty that we have never seen in our lifetimes all while caring for patients. Residents advocated for patients, supported their colleagues, and selflessly showed up every single day—each of them embodying the word “hero.”

On Memorial Day, we witnessed the tipping point of a different crisis that has plagued our country. The death of George Floyd drove home the social injustice that our residents see every day. Residents were spurred to action, partnering with VotER to raise awareness about the importance of civic engagement and forming the JEDI (Justice, Equity, Diversity, and Inclusion) Committee. Already, the JEDI Committee has organized a community vaccination education campaign, outlined a diversity curriculum for our department, and helped us to recruit one of the most diverse intern classes we have ever had.

Through it all, our residents conducted research, presented at national virtual conferences, spearheaded educational innovations, and enhanced our residency community. Socially distanced, they were creative in ways to spend time together—weekly pre-interview trivia Zooms, masked Women in Emergency Medicine events in the park, and riding bikes home together on the evening commute. Perhaps no other year has highlighted as much the importance of the word “community.” The importance of going to work with people who are there for you, who, like you, want to make the world a better place. More than a residency program, we are family.



Mount Sinai Morningside-West



An ED MICU team enjoying a bike ride home together after a day shift!



Residents representing the Wild, Wild (Mount Sinai) West at the CORD 2020 Academic Assembly Trivia.



The Mount Sinai Morningside-West leadership team, Felipe Serrano, Chris Hahn, Jenny Beck-Esmay, Chen He, enjoy a night on the Hudson.

The importance of going to work with people who are there for you, who, like you, want to make the world a better place. More than a residency program, we are family.

Women in Emergency Medicine group discussing the challenges of being a female physician in today's health care world.



Simulation

The Department of Emergency Medicine Simulation Division pivoted quickly to adapt to the challenges presented by the global health pandemic. Spanning all Emergency Departments, the division includes expert faculty focused on providing high-quality immersive educational experiences, improving health outcomes and processes, and conducting innovative research projects.

In Education, the STAR Center created videos that were utilized in nursing education, surgery clerkships, pediatric emergency medicine fellowships, and other programs throughout the Emergency Departments so that educational programs could be offered remotely. These videos provide learners the opportunity to watch clinicians manage a patient and faculty the opportunity to pause and discuss the actions with the learners. Additional partnerships between the STAR Center and the Mount Sinai Hospital Emergency Medicine clerkship program offered a virtual suturing workshop, in which suturing materials and simulation training skins were shipped to students so they could practice along with a facilitator via Zoom.

In Research, the STAR Center collaborated with colleagues from the Department of Environmental Medicine and Public Health to investigate particle dispersion and mechanisms to reduce particle spread using innovative scavenging techniques. This research is ongoing as the implications extend far beyond COVID-19.

The Simulation Division grew, welcoming two fellows. Yasmin Soltanianzadeh, MD, is a graduate of the Mount Sinai Morningside-West Emergency Medicine residency and Steven Bolger, MD, completed his Emergency Medicine Residency at UCLA. Christine Saracino, MD, our newest addition to the Simulation faculty, works clinically at MSH and completed her pediatric residency, including being chief resident, at Maimonides Medical Center in Brooklyn.

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The Simulation Center at Elmhurst Hospital recently continued to offer programs focused on COVID-19 preparedness, proning readiness, and simulation education programs for comprehensive interventional stroke patients with large vessel occlusion (LVO).



Inter-professional Team Training programs were offered at Mount Sinai Morningside and Mount Sinai West, including mock in situ traumas and preparing for events such as perimortem C-sections.



The Simulation Division expanded upon annual disaster preparedness initiatives with division members from Mount Sinai Morningside-Mount Sinai West. This year's Mass Casualty Incident (MCI) drill focused on a surge of patients suffering from COVID-19, necessitating quick evaluation, isolation, and respiratory management.



Global Health



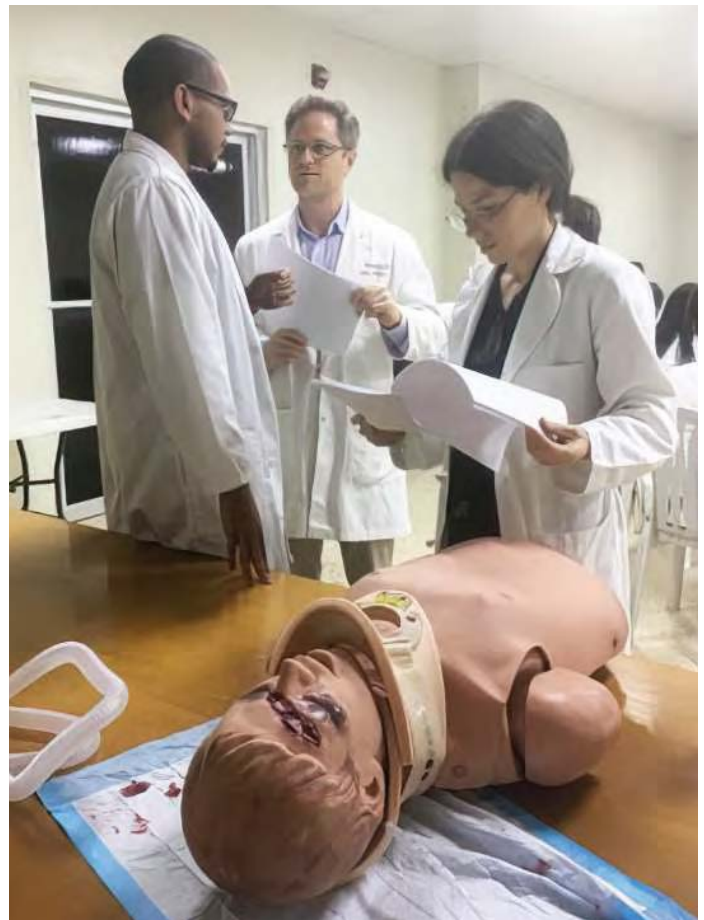
Despite the suspension of most regular international work, the Department of Emergency Medicine's Global Health Division faculty continued to further the mission of education, service, and scholarship. A key feature of the Global Health Division is the collaboration, comradery, and genuine friendships between faculty, partners, and the community that have developed by working on projects together for many years.

For the second year in a row, the Global Health Division took part in the InFocus 2 course at the Icahn School of Medicine at Mount Sinai. Using the Dominican Republic as a case example, the topic of Road Traffic Injuries was explored through lectures and small groups. Dr. Deepti Thomas-Paulose, MD, and Benjamin McVane, MD, led this effort.

Dinali Fernando, MD, MPH, and Dr. McVane co-directed the week-long InFocus 3 Health and Human Rights Course for MS2s at the Icahn School of Medicine at Mount Sinai.

The Global Health Resident Wednesday Curriculum was created in 2020 and is a multi-faculty effort led by Dr. Thomas-Paulose to deliver a series of lectures as a basic core for Global Health within Emergency Medicine. This course is on a two-year cycle, and faculty work with residents to give these lectures regularly.

The Global Health Resident Track, led by Dr. Thomas-Paulose and Dr. McVane, continued to give lectures virtually and in-person for Emergency Medicine residents across the Health System who are interested in pursuing careers in Global Health.



For the second year in a row, the Global Health Division took part in the InFocus 2 course at the Icahn School of Medicine at Mount Sinai.

In March 2020, a team of nurses and physicians led by Nita Avrith, MD, MPH, and Ramona Sunderwirth, MD, from the Global Health Division were invited to the Bugando Medical Center in Mwanza, Tanzania, to train nurses in the delivery of acute and emergency care. With support from the African Federation of Emergency Medicine and the Emergency Medicine Association of Tanzania, the team conducted the World Health Organization Basic Emergency Care (WHO BEC) course with a total of twenty-four local nurses for two weeks. Additionally, five of the participant nurses completed a training-of-trainers session and became qualified to lead future WHO BEC trainings. The course, which consists of didactic lectures, small group discussions, and hands-on procedure labs, was very well received. Dr. Avrith and Dr. Sunderwirth became Master trainers for the WHO course during this time.

Global Health

Benjamin Wyler, MD, gave a lecture at DevelopingEM in Cartagena, Colombia, in March 2020. He also conducted webinars for the United Nations on COVID-19 control and management practices. He continues to work steadfastly on COVID-19 and travel medicine projects alongside Global Health Division Director **John Cahill, MD**.

Arunabha Nandi, MD, continued his work on a collaborative project on Emergency Medicine delivery systems with All India Institute of Medical Sciences Mangalagiri in South India. This project aims to identify systems improvements in prehospital care and the provision of basic emergency care in a rural setting.

Sonya Stokes, MD, harnessed all of her creative efforts on COVID-19 response in New York City and worldwide. Her work with Emergency Medicine All Threats (EMAT) and the Council of Foreign Affairs Independent Task Force has increased advocacy efforts on preparation for future pandemics and disasters, particularly for emergency departments. She has written several essays and articles and organized panels on this topic and remains dedicated to effectively organizing front-line providers to fight the next pandemic.

Ramona Sunderwirth, MD, was an invited speaker and gave a remote lecture on altered level of consciousness in children for Seattle Children's Pediatric Emergency and Critical Care Fellowship in Nairobi, Kenya, in January 2020.

Benjamin McVane, MD, continued his work on human rights and was an invited speaker at New York ACEP and several other organizations this past year on this topic. He has also published two articles and wrote an article in *The New York Times* on his experience as a doctor working on the front lines of the COVID-19 pandemic in Elmhurst, Queens.

Elizabeth Singer, MD, continued her crucial work as the Director of the Mount Sinai Human Rights Program. This year she authored seven publications assessing the experiences and needs of asylum seekers and immigrants. She works closely with medical students at the Icahn School of Medicine and has continued to give them opportunities to work on human rights and vulnerable populations through her program.

Dinali Fernando, MD, MPH, continued her work as the Director of the Libertas Center for Human Rights at Elmhurst Hospital. She served as an advisor for the Office of Refugee Resettlement Survivor of Torture Program's COVID-19 response, including facilitating national biweekly peer-consultation groups, and as faculty on the self-care course offered by the Harvard Program for Refugee Trauma. She was invited to present on the Libertas Center's COVID-19 response (one of five programs selected from 176 grantees) to the board of the United Nations Voluntary Fund to inform its COVID-19 response strategy. She presented on health and human rights at the ISMMS Human Rights and Social Justice Nexus Course for MS1s, NYACEP, and several other venues this year, and had two publications.

The Global Health Division's recent work on trauma in the Dominican Republic led by **Shameeke Taylor, MD**, and **Deepti Thomas-Paulose, MD**, was one of five projects selected out of 78 to win the Blue-Ribbon Award at the 17th annual Education Research Day sponsored by the Institute for Medical Education at Mount Sinai.





The Libertas Center for Human Rights

Under the direction of Dinali Fernando, MD, MPH, the Libertas Center provides integrated medical, mental health, social, and legal services to immigrant patients who have survived human rights violations. Libertas doubled the number of patients served this year to over 400. Libertas received renewed/ increased operational funding from three grants this year, and new emergency funding from five COVID-19 grants. To address escalating pandemic-related gaps in social determinants of health among Libertas patients (40% with food insecurity, 87% with employment affected), Libertas delivered over \$285,000 in emergency cash assistance to 250 patients; 2,000 facemasks; 325 boxes of food; and numerous other emergency supplies; and provided over 8,000 patient visits.

Libertas trained over 1,500 providers this year, including residents and medical students, on working with survivors. Under Dr. Fernando and Dr. McVane's guidance, Libertas conducted research on best practices in caring for torture survivors, and presented at three national conferences. Further, Libertas advocated for policy priorities to meet patients' health needs including at Capitol Hill and at the NYC Council hearing regarding immigrant exclusion in the COVID-19 response.

EMS and



An innovative program, Emergency Triage, Treat, and Transport (ET3) enables treatment in place by utilizing telehealth within the 911 system.



At the height of the first wave of COVID-19, Mount Sinai Health System and Samaritan Purse establish a field hospital in New York City's Central Park to receive patient transfers from the health systems Emergency Departments.

Disaster Preparedness



The Department of Emergency Medicine Division of EMS and Disaster Preparedness was relaunched as an organized, department-wide effort. This coordinated partnership throughout the Emergency Departments has grown with contributions to medical student and resident education, faculty development and research, and mentorship and research opportunities for faculty and residents.

The division grew its membership; enhanced the resident and medical rotation experience; and created an academic monthly forum, including journal clubs, grand rounds, and works in progress. Expanding the scope of the division to include Wilderness Medicine, in addition to Disaster Preparedness and EMS, generated academic collaborations and opportunities to present at regional and national conferences.

Division faculty including Laura Iavacoli, MD, Michael Redlener, MD, and Kevin Chason, DO, played key roles in supporting the Health System's COVID-19 response. Partnerships led by Dr. Redlener, Brendan Carr, MD, MS, and Alexis Zebrowski, PhD, MPH, brought the launch of the Center for Health Care READINESS (Response, Acute Care Delivery, Disaster, Informatics, Education & System Science) to combine research, operations, and policy into a home for innovative care delivery. Adam Hill, MD, Rachel Whitney, MD, and Moira Carroll, MD, led a Wilderness and Environmental Medicine conference day for the residents, with nationally recognized speakers; piloted a resident

elective in wilderness medicine; and created a virtual training experience that was published in *Academic Emergency Medicine – Education & Training*.

The Community Paramedicine (CP) program led by Kevin Munjal, MD, MPH, MSCR, grew rapidly in the spring of 2020 to accommodate the increase in demand for in-home care during the pandemic. The efforts of the program to keep patients safe and secure earned it the Nicholas Rosecrans Award for Excellence in Injury and Illness Prevention by EMS World. Collaborating with Cornell University, the CP program was also the recipient of a large multicenter research grant funded by the Patient Centered Outcomes Research Institute.

An innovative program, Emergency Triage, Treat, and Transport (ET3) enables treatment in place by utilizing telehealth within the 911 system. Members including Drs. Munjal, Chason, and Max Sierra have been leading the effort to integrate these treatments into Mount Sinai. Dr. Iavacoli was honored as a "Healthcare Hero" by NYC Health & Hospitals and made Crain's 2020 List of "Notable in Healthcare" for her dedication and leadership during the crisis. Despite the pandemic, the division hosted the second annual New York Mobile Integrated Healthcare Conference. As part of the EMS Rotation, the division collaborated with the STAR Center to develop a new monthly four-hour simulation training, led by the efforts of Jared Kutzin, DNP, MS, MPH, RN, and Senior Track residents Nathan Louras, MD, and Samantha LeDonne, MD.

Research

The strength and depth of our Department of Emergency Medicine Research Division was demonstrated during the unprecedented challenges of 2020-2021. Unlike many other academic centers, we continued to conduct essential research throughout the pandemic. Our dedicated research staff were trained in the proper use of PPE, and they continued to support more than a half-dozen COVID-19-related studies that were launched over the past year. The arrival of Brendan Carr, MD, as Chair has infused a new level of enthusiasm into the division and attracted talented young researchers. Our current faculty maintained an astounding level of productivity: establishing new partnerships with basic scientists and clinical research colleagues, writing grants and manuscripts, and adopting 'touchless' methods of recruiting and consenting research participants. Our T32 Research Fellows continued to excel. The creation of the Mount Sinai Institute for Health Equity Research with Lynne Richardson, MD, as founding Co-Director, provided an exciting new platform for the Department of Emergency Medicine. Already a top-ranked research division, we are poised to achieve even greater success in the coming year.



Lynne Richardson, MD, System Vice Chair for Research, currently leads the New York City Sickle Cell Implementation Science Consortium, and she is a New York City site PI for the Prevention and Early Treatment of Acute Lung Injury (PETAL) Clinical Trials Research Network, which is conducting several COVID-related trials, including ACTIV-3, an adaptive trial platform currently studying multiple investigational agents to treat COVID-19, and ACTIV-4, which is evaluating thrombolytic management strategies. Dr. Richardson is also leading a longitudinal cohort study of adult emergency department patients, with detailed data on their social determinants of health and serial SARS-CoV-2 serological testing. She currently directs the Mount Sinai Clinician Scientist T32 Program in Emergency Care Research. In May 2020, Dr. Richardson was appointed the founding Co-Chair of the Institute for Health Equity Research, the newest of Mount Sinai's prestigious transdisciplinary research institutes. She is the incoming Chair of the Health Services: Quality and Effectiveness Study Section and was appointed to the New York State COVID-19 Vaccine Equity Task Force.



Alexis Zebrowski, PhD, MPH, joined the Mount Sinai Health System in June 2020. She is an epidemiologist whose research focuses on modeling the health care delivery system for specific conditions, such as trauma, sepsis, or COVID-19, and looking at how delivery of care impacts outcomes. Since her arrival, she has been developing the data and analytics core alongside the incredible team of analysts in Emergency Medicine. She was selected to present her research on optimizing resources for COVID-19 response at the American College of Emergency Physicians (ACEP) annual Brooks F. Bock Lecture, receiving the Best Presentation by a Young Investigator Award at the (ACEP) Research Forum, and the 2020 Young Investigator Research Achievement Award from the Society for Academic Emergency Medicine Annual Meeting.



Nicholas Genes, MD, PhD, Director of Informatics for the Department of Emergency Medicine and Associate Chief Medical Information Officer for the Mount Sinai Health System, is the successor PI for EQUIPPED 2.0, which is evaluating the impact of focused provider feedback, innovative reporting, and informatics tools on prescribing habits at three of Mount Sinai's Emergency Departments. It follows on the heels of EQUIPPED 1.0, which showed that the interventions led to fewer potentially inappropriate prescriptions at The Mount Sinai Hospital Emergency Department. The study wraps up this summer, but the powerful and detailed reports and order sets will live on, and be incorporated into other Emergency Departments and system dashboards.



Brendan Carr, MD, brought his Acute Care Policy/Health Services Research portfolio to the Mount Sinai Health System in February 2020. His team has continued to fine-tune their clustering solution to define out-of-hospital cardiac arrest (OHCA) geographic utilization regions and to compare those with clusters for a combined set of cardiovascular conditions (OHCA, ST-elevation myocardial infarction, and ischemic stroke). An abstract on the development and characteristics of OHCA clusters, "Developing Novel Health Care Geographic Clusters for Cardiovascular Emergency Care Sensitive Conditions," was accepted for presentation at the 2020 Society for Academic Emergency Medicine (SAEM) annual meeting. Findings on the similarities and differences in these utilization patterns were accepted for presentation at the 2020 Resuscitation Science Symposium in an abstract titled "Care Patterns for Out-of-Hospital Cardiac Arrest Differ from Other Emergency Care Sensitive Conditions." The team has also continued to investigate the characteristics associated with high- and low-performing regions; part of that work examined transfer patterns and timing of transfers between hospitals. The results of this work were presented at SAEM: "Frequency and Timing of Interhospital Transfer Following Out-of-Hospital Cardiac Arrest." Additionally, the role of race and racial segregation on patient outcomes was explored in an oral presentation at the Resuscitation Science Symposium in November 2020 in an abstract titled "Survival After Out-of-Hospital Cardiac Arrest: The Role of Urban-Rural Residence and Demographic Factors."



Makini Chisolm-Straker, MD, MPH, who was promoted to Associate Professor in 2020, continued to engage in her invisible populations work, completing data collection for RAFT (Rapid Appraisal for Trafficking) and ETHIC (Examining the Human Impact of the Charge), the focus of her Robert Wood Johnson Foundation-funded Amos Medical Faculty Development Award. She also leads the ongoing multicenter study TRANS ED (TGNB Research Applying Novel Strategies in Education) and served as the Mount Sinai Health System site PI for RECOVER (The Multicenter REgistry of potential COVID-19 in emERgency care) and the Elmhurst Hospital site lead for the CDC-funded public health surveillance project COVERED (COVID Evaluation of Risk for Emergency Departments). Dr. Chisolm-Straker is guest editing a special issue of Academic Emergency Medicine focused on inequities of care in emergency medicine. She is a highly collaborative individual who lifts up her colleagues: Cindy Clesca, George Loo, Lisa Allen, Kim Souffront, Michelle Lin, Sophia Spadafore, Gordon Ngai, Ethan Cowan, Alex Manini, and Lynne D. Richardson.

Research



Ka Ming (Gordon) Ngai, MD, MPH, who was a Mount Sinai K12 Scholar, returned to the Research Division faculty in January 2020. He has joined Dr. Carr's population-based study of Outcomes after Out-of-Hospital Cardiac Arrest and assisted Dr. Chisolm-Straker with the RECOVER Study, a multicenter registry of potential COVID-19 patients presenting to Emergency Departments. Dr. Ngai is the physician lead for EM's collaborations with the laboratory of Viviana Simon, MD, PhD, and the Serological Sciences Network Capacity Building Center, led by Carlos Cordon-Cardo, MD, PhD. He has joined the core faculty of the Institute for Health Equity Research and is supporting the Institute's Disparities Dashboard Project as well as leading an examination of the use of interpreters for patients with a language preference other than English.



Michelle Lin, MD, MPH, MS, published a manuscript in *JAMA Network Open* describing disparities in ambulatory follow-up rates and mortality after Emergency Department discharge among Medicare beneficiaries. She was the first emergency physician to be awarded the Mount Sinai Faculty Council Award for Academic Excellence. She was appointed as Chair of the Clinical Emergency Data Registry Committee for ACEP and reappointed to the Executive Board as Secretary for the Academy for Women in Academic Emergency Medicine. During the spring 2020 COVID-19 surge, she was appointed Associate Director of Telehealth for Mount Sinai Health System to manage the rapid expansion of telehealth and redeployment of providers. She continues to work on her NHLBI/NIH-funded K23 research, examining patient-reported outcomes among adult asthma patients despite a pause in enrollment due to COVID-19. She also gave birth to her first child, Rosalind.



Alex Manini, MD, a senior investigator and toxicologist, expanded his research portfolio in 2020 with an R01 grant totaling more than \$3.3 million from the NIH/NIDA entitled "Predicting Medical Consequences of Novel Fentanyl Analog Overdose Using the Toxicology Investigators Consortium (TOXIC)," as well as a competitive revision from the NIH totaling \$300,000 to study the intersection of opioid use and COVID-19 in Emergency Department patients regionally and nationally. He published eight original research articles, six other peer-reviewed articles, and four abstracts, highlighted by a plenary oral platform presentation at ACEP entitled "Validation of a Prediction Rule for Adverse Cardiovascular Events from Drug Overdose," based on work from his previous R01 grant. His achievements were recognized at the national level with the 2020 SAEM Mid-Career Investigator Award.



Dinali Fernando, MD, is Director of the Libertas Center for Human Rights at Elmhurst, which has had a busy year dealing with the profound impact of the COVID-19 pandemic on the vulnerable population served by Libertas. As the first Emergency Department-based human rights program in the country and the only program in Queens providing integrated medical, mental health, social, and legal services to patients who have survived human rights violations in their home country, Libertas doubled the number of clients served this year to more than 400. In addition to renewal of their core funding from the DHHS/Office of Refugee Resettlement and the United Nations Voluntary Funding for Victims of Torture (UNVFVT), Libertas received emergency grants from the A to Z Foundation, the New York Immigration Coalition, the Robin Hood Foundation the UNVFVT COVID-19 Emergency Response and the International Rehabilitation Council for Torture Victims to provide assistance to their clients.

Dr. Fernando served as an advisor for the COVID-19 response of the Office of Refugee Resettlement Survivor of Torture (SOT), including as a facilitator for biweekly peer-consultation groups using a community-of-practice model to support SOT program staff across the country through the pandemic, and as faculty on the "Beyond Burnout" self-care course offered by the Harvard Program for Refugee Trauma and the National Capacity Building Project for staff working with torture survivors. Additionally, Libertas trained more than 1,500 providers over this past year and conducted research on best practices for caring for torture survivors.



Jonathan Schimmel, MD, is a toxicologist whose recent publications focused on liver injury from kratom and imidacloprid, COVID-19 in opioid use disorder, and a centipede bite rare complication. He has been working with Dr. Manini, the principal investigator, on a NIDA-funded supplement on COVID-19 and opioid use disorder and was appointed site PI for an FDA COVID-19 pharmacovigilance project. Dr. Schimmel is now pivoting toward industry-sponsored clinical trials in the acute care setting. He was named to the Department's Red Carpet Team Award and as Attending Physician of the Year.



Siri Shastry, MD, a third-year Research fellow, continued her research examining management of opioid use disorder and drug overdose in the Emergency Department. Her published manuscripts examined observation unit management of patients with drug overdose, national trends in use of medications for opioid use disorder, and Emergency Department revisits in patients transported home by ambulance, and she presented her work on Emergency Department utilization in patients with opioid use disorder at several national conferences.



Jeffrey Glassberg, MD, continues his important research on patients with sickle cell disease. His portfolio includes an R01 from NIH/NHLBI to test the efficacy of inhaled steroids on decreasing sickle cell morbidity and a Doris Duke award to study "Quantitative Modulation of an Erythroid Regulator as a Novel Genetic Target for Sickle Cell Disease," He is a site PI for the Bone Marrow Transplantation network and the Red Cell Exchange Trial. He also leads the Sickle Cell Registry funded by the SCD Implementation Research Consortium.



Saadiyah Bilal, MD, entered the T32 Research Fellowship in July 2020. She has authored papers, based on her global health work, examining the epidemiology, treatments, and outcomes of injured adults in Kigali, Rwanda, as well as one paper on her new focus on racial and ethnic disparities in treatment of COVID-19. She submitted grant applications to the Emergency Medicine Foundation and to the CURE-19 program, all while acing her courses in the first year of Master's in Clinical Research Program.



Kevin Munjal, MD, MPH, MSCR, is a board-certified Emergency Medical Services physician who is Director of EMS Research and Education for the Department and Medical Director for Mount Sinai Community Paramedicine and Online Medical Control. He is site PI on a study funded by the Patient-Centered Outcomes Research Institute to evaluate the use of mobile integrated health and telehealth to support transitions of care among hospitalized heart failure patients.

Research



Ethan Cowan, MD, MS, is an Associate Professor of Emergency Medicine and Director of Emergency Medicine Research at Mount Sinai Beth Israel. His focus area is the development, implementation, and evaluation of public health programs surrounding HIV, HCV, and substance use disorder in the Emergency Department setting. In 2020, Dr. Cowan received awards from the Fund for Public Health for New York and the Addiction Institute at Mount Sinai as well as the National Institute of Drug Abuse, and the Centers for Disease Control and Prevention. He was also named to the Medical Care Criteria Committee (MCCC) for the New York State AIDS Institute.



C. Anthony Lim, MD, Director of Pediatric Emergency Medicine, conducts research on pediatric asthma, prehospital care, and health care delivery, as demonstrated through numerous publications. His approach to developing collaborations with stakeholders in clinical, academic, community, and industry settings has resulted in successful grant applications that support innovative programs. In 2020, he was elected as a Fellow in the New York Academy of Medicine and as a Fellow Educator in the Institute for Medical Education.



William Bonadio, MD, Research Director for Emergency Medicine at Mount Sinai West, has published on serum lactate levels in children with status asthmaticus; impact of RSV presentation of bronchiolitis; utility of serum creatinine measurement in adults receiving contrast-enhanced CT scan; impact of time to appendectomy on outcomes for pediatric appendicitis; risk of serious bacterial infection in infants; use of post-reduction radiographs in pediatric forearm fractures; and pediatric diabetic ketoacidosis. In 2020, Dr. Bonadio was appointed to the Editorial Board of the *Journal of Pediatrics*.



Patrick Maher, MD, a graduate of the Mount Sinai Clinician Scientist Research Training Program in Emergency Care Research, was awarded an internal grant of \$15,000 for the study of coagulation abnormalities in COVID-19 disease. Research arising from this grant has included a case study and ongoing series describing longitudinal changes in coagulopathy of COVID-19 using rotational thromboelastometry (ROTEM) technology. Dr. Richardson is also a co-Investigator on the department's five NHLBI-funded studies of critically ill patients (Dr. Richardson is principal investigator).



Kimberly Souffront, PhD, RN, FNP-BCA, in her role as Associate Director of the Mount Sinai Center for Nursing Research and Innovation, continues to oversee nurse-led research and evidence-based practice activities across the Mount Sinai Health System. She was recently awarded a three-year UC Davis Betty Irene Moore Fellowship for Nurse Leaders and Innovators to continue her work exploring the utility of brain natriuretic peptide (BNP) testing as a surrogate for detecting subclinical heart disease in Emergency Department patients with uncontrolled hypertension. She is also principal investigator of an industry sponsored (AT&T/Vital Tech) study evaluating the impact of virtual nurse encounters after Emergency Department discharge for patients with uncontrolled hypertension, as well as leading other impactful studies within the emergency division. Dr. Souffront was selected as the 2020 Nurse Researcher of the Year by the New York Black Nurses Association.

Pediatric EM

The Department of Emergency Medicine's Division of Pediatric Emergency Medicine was one of the first groups in the United States to recognize the presence of Multi-Inflammatory Syndrome in Children (MIS-C), a dangerous COVID-19 related disease. Researchers published the first multi-patient case report in the United States about the disease, before it had an official name. Working in a unique collaboration with Pediatric Emergency Medicine (PEM) leaders across New York City, Christopher Strother, MD, and C. Anthony Lim, MD, have helped develop guidelines and research surrounding MIS-C.

The division welcomed two new members, Christine Saracino, MD, and Mehrin Islam, MD. Dr. Saracino joins the MSH faculty from Maimonides Hospital after she completed PEM and simulation training, and will be an integral part of pediatric and simulation education in the coming years. Dr. Islam, the newest PEM Fellow, joins from the Brody School of Medicine at East Carolina University and completed her pediatric residency at UT Southwestern. Her academic interests are global health, health disparities, ultrasound, and advocacy.

Supported by a multiyear \$284,000 grant from the Mount Sinai Performing Provider System, the division developed the concept for the High Utilizer Asthma Clinic (HUAC). In New York City, approximately 1 in 14 children has asthma. Patients with multiple emergency department visits and hospitalizations were invited to participate in a pediatrics based clinic that provides education and facilitated linkage to subspecialty evaluation and community-based resources. Seventy percent of patients were linked with pediatric pulmonary or allergy subspecialties. Two-thirds received their flu vaccine, and two-thirds of households with smokers in the home accepted cessation resources. After just six months, patients have demonstrated reduced symptoms, and emergency department visits and hospitalizations have decreased by 50 percent among families enrolled in HUAC. This coming year, the program continues its dedication to improving the health and outcomes of children with asthma. Using a \$289,000 grant from Genentech to develop the Asthma Linkage to Care (AL2C) Program, the program will identify patients with poorly controlled asthma and provide acute care, multidisciplinary education, and linkage to subspecialty evaluation and community-based programs.

Supported by a multiyear \$284,000 grant from the Mount Sinai Performing Provider System, the division developed the concept for the High Utilizer Asthma Clinic (HUAC).



Pediatric Emergency Division welcomes its 17th Fellow, Mehrin Islam, MD.



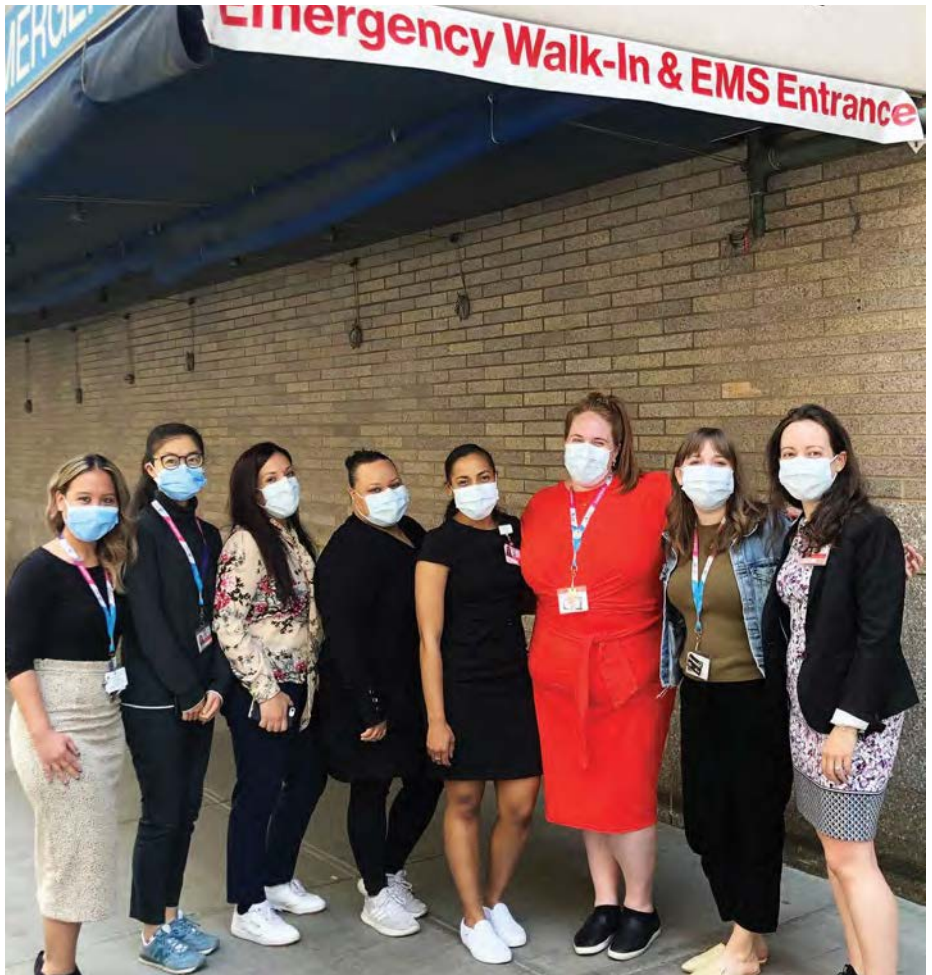
Mount Sinai Beth Israel PEM Team! From left to right: Ty-kisha Kirkland, Registrar; Hope Kronman, Medical Student; Beata Niedzielski, RN; C. Anthony Lim, MD; Miriam Jean, RN; Jeranil Nunez, MD; Ilana Ortiz, PCA

Social Work

In January 2020, the Department of Emergency Medicine Social Work and Care Coordination team shifted from an on-call model to providing 24/7 in-person social work coverage for all Emergency Department sites and patients. Social Workers are integral to the Emergency Department, responding to the needs of a wide range of patients and families in crisis and in transition. These cases range in severity and level of response, and include expirations, abuse and neglect, and transitions of care for patients returning to their homes with home care and new durable medical equipment, subacute rehabilitation, and substance abuse facilities.

This transition to 24/7 in-person coverage supported the development of multiple new programs within the last year, the first of which was an embedded palliative care model (replacing a consult driven model) as a response to COVID-19. The Emergency Department social workers, residents, and clinicians received in-service training to enable them to play a significant role in the initiation of next-of-kin and goals-of-care conversations. This training helped identify how these cases were stratified with the help of existing health informatics tools to identify patients who might benefit from palliative care discussions. This model demonstrated (1) how with appropriate training, palliative care values can be integrated in the Emergency Department context and (2) how Emergency Department social workers are uniquely positioned to identify patients who would benefit from these conversations, in partnership with the clinical teams and palliative care, as they have a consistent presence and are frequently consulted for patients who are not coping well in the community due to inadequate symptom management, significant caregiver burden, or a change in their prognosis.

The Social Work team also launched a population health initiative in partnership with The Institute for Family Health, Family Medicine, and Emergency Medicine Physician Leadership, to engage patients who frequent the Emergency Department and have a history of recurrent admissions, but are also actively engaged in outpatient primary care at Institute for Family Health Outpatient Clinic. These shared patients are now flagged in Epic, to prompt the Social Work team, outpatient care management, and Family Medicine



to engage in early collaborative conversations with clinicians around disposition, to identify the driver of Emergency Department and inpatient utilization, and to create a community link to encourage continuous patient-centered care. Family Medicine, Institute for Family Health, and ED Social Work are in process of collecting data to measure proof of concept and programmatic effectiveness.

In the last year, the Emergency Department Social Work team has played a pivotal role forming partnerships with the Toxicology Division and the Department of Health's RELAY Program. This has been vital in connecting patients who have experienced an opioid overdose with a wellness advocate, who provides ongoing harm-reduction services post-discharge.

Toxicology

With the devastating rise in mortality rates due to the COVID-19 pandemic, the Department of Emergency Medicine Toxicology Division faced many challenges in 2020. The need to engage and collaborate to find new ways to reach and improve the care for poisoned patients, particularly those with substance use disorder (SUD), was more important than ever. The division led clinical initiatives at different sites that directly aimed to effect changes in this population while engaging in research to further understand and improve their care. The division found ways to develop pedagogical programs for residents, and continue its academic goals by engaging in mentorship programs and participating in conferences.

Initiatives in improving the care of patients with opioid use disorder (OUD) targeted decreasing overdose deaths, applying harm reduction and education, initiating opioid agonist therapy, directing patients to MTP Clinics, and advancing the research on this topic. At Elmhurst Hospital Center, the Toxicology Division oversees the LEADS program, which since 2018 assists in the treatment of patients with OUD. In February, the RELAY program, sponsored by the New York City Department of Health and Mental Hygiene, was launched at The Mount Sinai Hospital in collaboration with the

Social Work Department. This program provides a support system for patients with non-fatal opioid overdoses through the deployment of Wellness Advocates, who assess patients' drug use and risk history, provide overdose prevention education and distribute naloxone and support, and identify the need for subsequent linkage to SUD treatment, and harm reduction over 90 days.

As the toxicology residency rotation became virtual, the division took this opportunity to rethink the goals of the toxicology rotation, as well as its content. A toxicology curriculum for both the MSH and MSMW residencies was created with the belief that toxicology is best learned when there is interaction with the faculty in a year-round practice. Synchronous (via simulation) and asynchronous components of the curriculum became the springboard for discussion among individual residents and the toxicology faculty. Residents applied their knowledge and teaching skills by presenting toxicological cases in VMR at local and national conferences.

As it advances into 2021, the Toxicology Division continues to lead in resident education, professional development opportunities, treatment of the SUD patient, and toxicological research.

This program provides a support system for patients with non-fatal opioid overdoses through the deployment of Wellness Advocates.



In partnership with Social Work, Pharmacy Departments, and REACH, the Toxicology Division wrote guidelines for the use of naloxone in patients with opioid overdose and established 24/7 naloxone kit distribution and a rescue education initiative led by Emergency Department Health Educators.

Ultrasound

The mission of the Department of Emergency Medicine Ultrasound Division is to support clinicians in making rapid diagnostic decisions and making procedures safer. As patient care and educational techniques evolved in 2020, the Division leaned into these core principles.

Across all Emergency Departments, ultrasound was used at the point of care to differentiate patients with significant lung pathology due to COVID-19, and some clinicians found that ultrasound saved time, facilitated infection control, and allowed for more judicious use of X-ray or CT scan. Ultrasound supervisor Megan Lukas, RDMS, worked to ensure all equipment was ready and optimized for easy use.

Jim Tsung, MD, and Amanda Bates, MD, assisted the care teams at the Samaritan's Purse COVID-19 field hospital by performing point-of-care ultrasound examinations on patients. Bringing diagnostic imaging to the bedside in the field greatly enhanced the care of patients there.

The Division's educational mission, training faculty and residents in ultrasound, was continued with social distancing and virtual webinars. Faculty took part in panels viewed all around the world, as clinicians struggled internationally to learn from each other and improve patient care.

Ultrasound Division faculty were actively engaged in research, so that Mount Sinai's experiences at the epicenter of the pandemic could serve other clinicians and patients around the world. Bret Nelson, MD, contributed to international consensus guidelines on lung ultrasound in COVID-19, and Dr. Tsung was co-author on a manuscript on post-infectious complications of COVID-19.



The Division's educational mission, training faculty and residents in ultrasound, was continued with social distancing and virtual webinars.



Sports Medicine



Amie Kim, MD, provides players coverage for NBA and FIBA in Basketball Without Borders Asia week in Tokyo.

The Department of Emergency Medicine Sports Medicine Division is active in the academic field of sports medicine, and sports team and event coverage, both locally and nationally. Led by several sports fellowship-trained Emergency Medicine physicians, the division maintains a hands-on approach within Emergency Department sites, providing orthopedic education at all levels, as well as a sports medicine patient follow-up program. This service coordinates timely follow-up with specialists, integrated care, and helpful feedback to all emergency clinicians.

Extensive educational opportunities are offered within the Sports Medicine Division, with a resident rotation including both Emergency Medicine residency programs. A combined Emergency Medicine and Sports Medicine elective gives medical students exposure to the division.

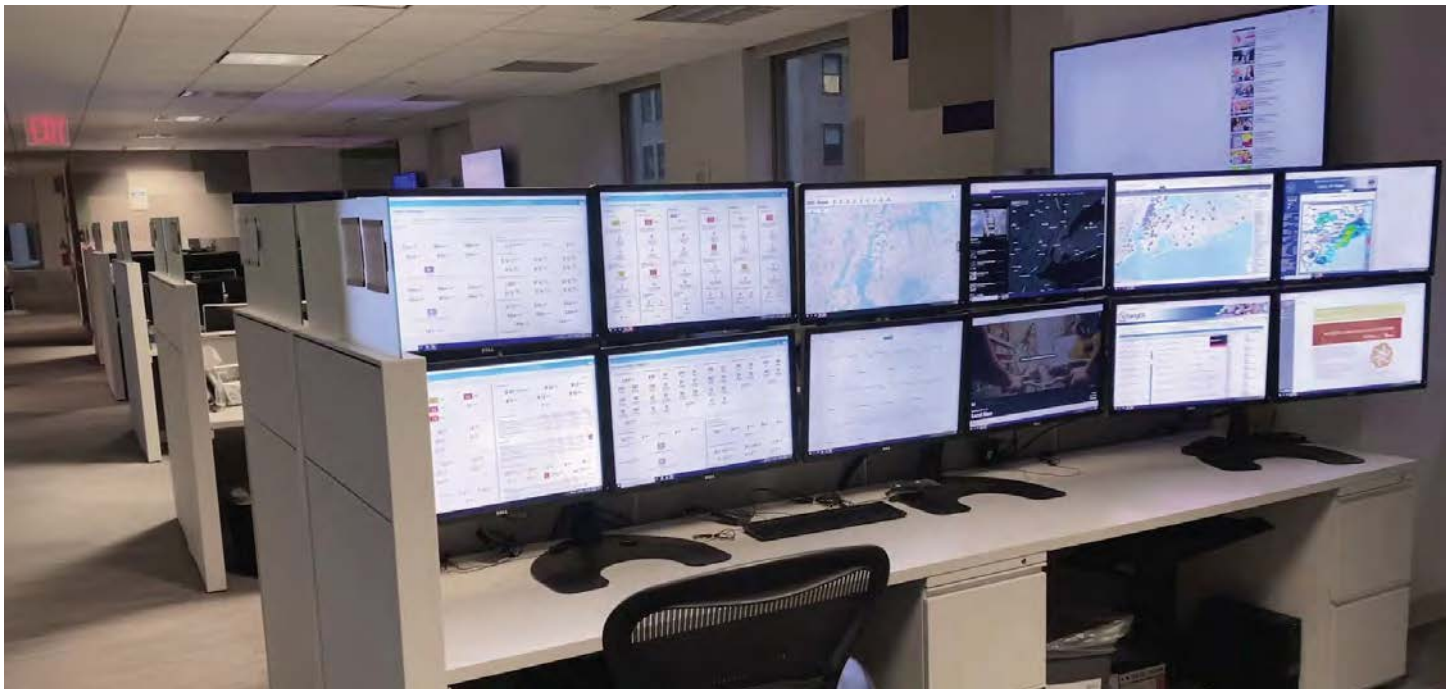
Adapting to the pandemic, the Sports Medicine Division continued support for sports events in 2020, including high school, collegiate and elite level athletics. Division faculty and fellows performed as player physicians for the NFL, NBA, US Open, Red Bull athletics, Australian Rugby, USA Fencing, USA Boxing, USTA, Medgar Evers College, and the NYC Public School Athletic League.



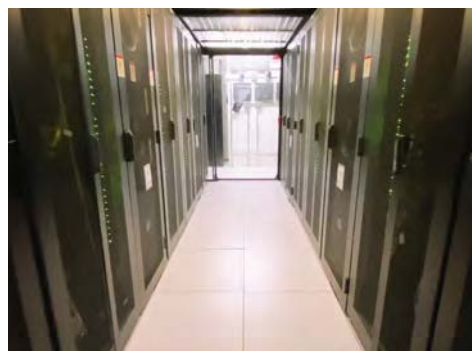
Derek Jeter thanks front-line health care hero Melissa Leber, MD.



Informatics



Faculty are leading efforts to deliver virtual care and remote patient monitoring after discharge.



The Department of Emergency Medicine's Informatics Division aims to bring the best information to the point of care. Nick Genes, MD, PhD, Brendan Connell, MD, and DJ Apakama, MD, are on the forefront of informatics research and efforts to improve patient care, both inside the EDs and beyond our walls. Partnering with industry and regulatory agencies, the Division improves clinical workflows, and the EHR experience.

Faculty members hold leadership positions in ACEP and EMRA, and in Mount Sinai's ACGME-accredited Informatics Fellowship. Notably, Dr. Genes chairs ACEP's Health IT Committee, helping to shape the national agenda for EM Informatics. In 2020 at ACEP's Scientific Assembly, Dr. Genes lectured on EHR usability and the

potential of AI in Emergency Medicine, and recently spoke on the consequences of the 21st Century Cures Act. Dr. Apakama's forthcoming vendor-agnostic dot-phrase repository will improve clinical documentation while speeding care. Dr. Connell has launched a research project on the impact of dictation tools on charge capture and throughput in Emergency Departments.

The Division offers many opportunities to get involved with projects, including NIH-funded research that leverages mobile apps and EHR clinical decision support. System-wide EHR implementations and optimizations help the Division study interventions to improve quality and efficiency. Faculty are also leading efforts to deliver virtual care and remote patient monitoring after discharge.

Geriatrics

In the last year, the Mount Sinai Geriatric Emergency Interdisciplinary Program, an ACEP Gold Level 1 accredited program, continued to implement and refine the Advanced Care Model for Geriatric Emergency Medicine. The interdisciplinary team, which is composed of physicians, emergency nurses and nurse educators, social workers, nurse case managers, pharmacists, and physical therapists, has continued to provide bedside geriatric assessments and interventions to high-risk older adults, enhance transitional care and discharge planning, and identify patients that might benefit from palliative care conversations.

Our streamlined focus continues to be centered on implementing geriatric clinical protocols and features throughout the expanded Emergency Department to reduce falls, delirium, restraints, dehydration, and decubiti. Clinical protocols were restructured to increase the use of sitters and visitors for high-risk older adults, limit pharmacological and physical restraints or tethering, and decrease the use of urinary catheters. Structural enhancement projects such as non-skid flooring to prevent falls; diurnal lighting and acoustic sound-reducing curtains to prevent delirium; and access to food, drink to prevent dehydration, and special mattresses for prolonged admissions to prevent decubiti are provided in all zones of the Emergency Department. All interventions are aimed at improving clinical outcomes as well as maintaining or regaining orientation and functional capacity.

Similarly, Emergency Department Nursing leadership, Social Work, and Inpatient Geriatric Medicine participated in piloting a change package toolkit developed by the Marcus Institute for Aging Research and West Health, building on previous efforts to screen and prevent delirium in older adults in the Emergency Department. Efforts to improve processes and prevent the development of delirium in the Emergency Department are ongoing through staff training and optimized clinical decision support from the EMR. Additionally, Emergency Department Social Work maintains strong collaborative efforts with the Acute Life Interventions Goals and Needs (ALIGN) Program, a high-risk ambulatory care geriatrics program that identifies and expedites outpatient management for patients with new or poorly managed neurocognitive conditions, including dementia.

Future directions include expanding the Advanced Care Model for Geriatric Emergency Medicine to enhance outpatient community collaborations with teams of physicians, nurses, social workers, case managers, pharmacists, physical therapists, support staff, and volunteers united in improving outcomes for older adults during their time in the emergency department and upon discharge. This holistic approach is based on Mount Sinai's philosophy that older adult patients' clinical outcomes and long-term quality of life are enhanced with interdisciplinary Geriatric Emergency Care. These efforts are critical as the U.S. population of older adults continues to grow.

Future directions include expanding the Advanced Care Model for Geriatric Emergency Medicine to enhance outpatient community collaborations with teams of physicians, nurses, social workers, case managers, pharmacists, physical therapists, support staff, and volunteers.

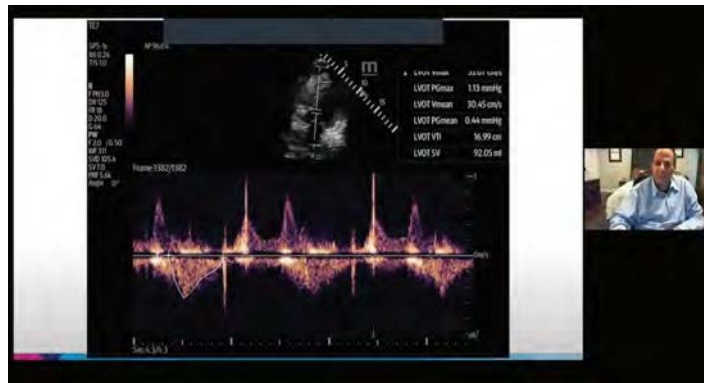
Critical Care

The Department of Emergency Medicine Critical Care Division was integral to the COVID-19 response throughout the health system. The division helped design, implement, and fine tune curriculum, education, protocols to support the Emergency Departments, physicians across the health system and throughout the nation.

At MSH, the division expanded the Resus unit into twelve bays, four of which were negative pressure. The zone was equipped with all needed supplies and equipment to handle the surge of critically ill patients requiring respiratory support and resuscitation. This work was published in a paper via CEEM Journal to share our process.

At Elmhurst Hospital, the volume of critically ill COVID-19 patients rapidly outstripped inpatient ICU capacity requiring the boarding of complex patients with advanced respiratory failure for often-long periods in the ED. The division was a hospital leader

in advocating the early use of non-invasive respiratory support as well as rescue strategies such as airway pressure release ventilation for refractory hypoxemia. In addition, the division developed online training resources, in-person ventilator workshops and provided real-time telesupport to assist emergency and inpatient colleagues manage and troubleshoot ventilator related issues. Ultimately, many of these resources were folded into a Health and Hospitals corporation wide online curriculum to provide the non-intensivist with advanced ventilator training.



Dr. Evan Leibner facilitates a virtual lecture on Critical Care across Mount Sinai Health System.

Using consolidated learnings and data, the division's dual trained Emergency Medicine and Critical Care physicians helped bridge the content and curriculum with the nature of emergency medicine. We gave lectures, taught online courses and made learning modules for residents, physicians and other non-intensivists. Many of these learnings can be found in our protocols published in EB Medicine.



Welcoming Urgent Care



Urgent Care teams on the Upper West Side shared a dance and a masked smile as a "Burning Man" bus came to honor front-line workers.

Throughout the city and during the height of the pandemic, our teams at Urgent Care played a critical role providing patient access to urgent ambulatory care. While many ambulatory clinics faced closures to support the Health System, Urgent Care remained open and continued to be a community presence, connecting patients with acute needs to emergent care and opening the front door to Mount Sinai.

As New Yorkers stayed home, a robust telemedicine program was developed with Mount Sinai NOW, Click4Care, and the innovative chat function of 4Sinai. While our colleagues in the Emergency Department provided critical care to those in need, Urgent Care teams worked to staff telemedicine platforms 24/7, encouraged patients to stay home, and developed access to out-of-hospital care.

As we look forward, the Department of Emergency Medicine welcomes the full scope of the Urgent Care program serving the communities in Brooklyn Heights, Dumbo, Union Square, the Upper East Side, the Upper West Side, and Inwood. This collaborative effort and shared use of resources has birthed efforts for a central patient communication hub handling test results and clinical screenings.



The Urgent Care team in Inwood shared a donated meal from a local pizzeria.



Vladimir Volokh, DO, a full-time physician at Mount Sinai Doctors-Urgent Care and a lieutenant commander in the US Navy, volunteered on short notice for active-duty training to support the Navy's COVID-19 response.

Quality, Safety, and Patient Experience

The Quality, Safety, and Patient Experience (QSPX) committee formed in 2020 as an interdisciplinary team of leaders with a passion for quality, safety, and patient experience. The objective is to align the Emergency Department (ED) sites to improve patient outcomes by standardizing practices and optimizing care across the Health System. Collaboration among physician, nursing, and operations staff creates a cohesive, patient-centered perspective.

The committee's goal is for the System to become a national leader in Emergency Medicine by improving the health of our patients and communities through compassion, quality, equity, and innovation while achieving competitive performance and optimizing our strengths.

The Regulatory Subcommittee recently adjusted the System's maternal hemorrhage policy through collaboration with the OB/GYN department to comply with a new Joint Commission mandate. This subcommittee is currently creating the structure to create new policies and update existing policies in collaboration with the Unified Operations Committee.

The Clinical System Initiatives subcommittee examines care management that improves patient outcomes through sepsis, stroke, CHF, et al. During Q1 2021, this subcommittee compared each site's process map for stroke care from triage to thrombolytic administration, highlighting opportunities for making improvements and learning from each other's practices.

The Dashboard and Epic subcommittee is the glue that helps track performance and monitor improvement. A Department of Emergency Medicine dashboard has been created to track throughput, sepsis, stroke, and diversity metrics. Additionally, a RedCap case repository tool was created and customized for EDs to facilitate case capture for quality case reviews. A root cause analysis (RCA) from one site should be considered a potential near miss at another. The Peer Review and RCA subcommittee reviews cases from alternating sites to identify quality issues and share lessons learned from cases at other sites. Recently, several EDs experienced simultaneous



Kinga Iskra, RN

elopement cases, sparking an investigation into ED policy and best practice recommendations for elopement prevention and after-action protocols.

The Clinical Practice Guidelines subcommittee looks at common ED diagnoses, practices, and variability in practice with a goal of creating evidence-based clinical statements and recommendations with focus on patient experience, operations, and finance. This committee recently examined the disparate performance of paracentesis across sites and began



The Press Ganey scores for all sites outperformed their 2020 targets, and this momentum continues through 2021.

toward recommending and centralizing staff recognition programs across the EDs. In light of the ongoing hard work and commitment of our staff during this pandemic, staff recognition is of utmost importance.

The Press Ganey (PG) scores for all sites outperformed their 2020 targets, and this momentum continues through 2021. Facing the immense demands of COVID-19, our EDs have effectively translated their commitment to providing excellent care with sincere compassion and dedication.

Kata boards, a lean improvement tool, were used to help sites identify their key drivers, establish targets, and track PG performance as ideas for improvement were implemented.

The patient experience is bolstered by strong teamwork and effective communication. Live, small group communication coaching sessions will improve patient-centered communication. Jonathan Nover, RN, MBA, Senior Nursing Director at MSQ, and Sabrina Segui from the Cullman Institute found that the millennial population represents a significant portion of their low scores. They created a fun, engaging group exercise to teach effective patient-centered communication strategies, improving PG scores for this group. Similar exercises are planned for all sites, with the expectation that scores will improve as we target specific populations.

Additional activities executed in collaboration with the Unified Clinical Operations committee include tailoring a COVID-19 visitor policy and creating visitor posters with appropriate scripting for waiting rooms. The committee was also helpful in sharing insights for the new 21st Century Cures Act, ensuring clinicians were advised of enhanced patient access to charts and the importance of chart verbiage and timely completion to keep patients informed of their visit.

Deborah Dean, MD, and Kaedrea Jackson, MD, as Co-Vice Chairs, together with Terry Hunte, RN, Clinical Quality Specialist at Mount Sinai West, and Patricia Regan, Administrative Director at Mount Sinai Morningside, lead the Quality, Safety, and Patient Experience Committee.

discussion with the Gastroenterology departments at each site to standardize evidence-based care.

The Patient Experience Subcommittee was tasked with choosing Press Ganey (PG) or Q-Reviews as the primary patient experience survey tool for the ED. While Q-Reviews provided real-time information from patient text responses, the team chose the gold standard PG, which upgraded their service to incorporate real-time feedback via text and an upgraded online site. Also, the Patient Experience Subcommittee works

Changing of the Guard

The Department of Emergency Medicine is pleased to welcome new faculty and staff joining our department in 2020-2021. We also acknowledge those who have assumed new roles and responsibilities within the Icahn School of Medicine at Mount Sinai and the Mount Sinai Health System and wish them luck in these new endeavors. They include but are not limited to:



Yvette Calderon, MD, MS

Professor of Emergency Medicine; Professor of Medical Education, Icahn School of Medicine; Chair, Emergency Medicine, Mount Sinai Beth Israel
NEW: Co-Chair, Faculty Diversity Council, Icahn School of Medicine, Mount Sinai Health System



Brendan G. Carr, MD, MS

NEW: Professor, Emergency Medicine; Professor, Population Health Science and Policy, Icahn School of Medicine; System Chair, Emergency Medicine, Mount Sinai Health System, Chair, Emergency Medicine, Mount Sinai Hospital



Deborah A. Dean, MD

Assistant Professor of Emergency Medicine, Icahn School of Medicine; Medical Director, Emergency Medicine, Mount Sinai Brooklyn;
NEW: System Co-Vice Chair of Quality, Safety, and Patient Experience



Erick A. Eiting, MD, MPH, MMM

Associate Professor of Emergency Medicine, Icahn School of Medicine; Vice Chair of Operations for Emergency Medicine, Mount Sinai Downtown
NEW: Medical Director for Quality Center for Transgender Medicine and Surgery, Mount Sinai Health System



Ugo Ezenkwele, MD

Associate Professor of Emergency Medicine, Icahn School of Medicine; Medical Director, Emergency Medicine, Mount Sinai Queens;
NEW: System Vice Chair of Diversity, Equity, and Inclusion



Robin Ferrer, MBA, MSN, RN

NEW: Vice President, Emergency Services, Mount Sinai Health System



Jill Frick, RN

NEW: Director of Nursing, Emergency Medicine, Mount Sinai West



Kaedrea A. Jackson, MD

Associate Professor of Emergency Medicine, Icahn School of Medicine; Medical Director, Mount Sinai Morningside
NEW: System Co-Vice Chair of Quality, Safety, and Patient Experience



Roland "Clay" Merchant, MD, MPH, ScD

NEW: Professor of Emergency Medicine, Icahn School of Medicine; System Associate Vice-Chair, Research, Emergency Medicine; Incoming System Vice-Chair, Research



Eric Legome, MD

Professor of Emergency Medicine, Icahn School of Medicine; Chair, Emergency Medicine, Mount Sinai Morningside and Mount Sinai West;
NEW: System Vice Chair, Academics, Emergency Medicine



Bret P. Nelson, MD
 Professor of Emergency Medicine, Icahn School of Medicine; System Director of Ultrasound;
NEW: System Vice Chair, Education, Emergency Medicine



Jenna Meyer, MBA, BSN, RN, CEN
NEW: Senior Director of Nursing, Emergency Medicine, Mount Sinai Hospital



Lynne D. Richardson, MD
 Professor of Emergency Medicine and Professor of Health Science and Policy, Icahn School of Medicine; System Vice Chair, Research, Emergency Medicine;
NEW: Co-Director, Institute for Health Equity Research



Michael Redlener, MD
 Associate Professor of Emergency Medicine, Icahn School of Medicine;
NEW: Medical Director, Emergency Medicine, Mount Sinai West



Allison Dempsey, MPH, CPHQ
NEW: Emergency Medicine, System Director of Quality, Safety, and Patient Experience



Beth Yagoda, MBA
NEW: System Vice Chair, Administration and Finance, Emergency Medicine, Mount Sinai Health System



Jay Itzkowitz, MD
NEW: Chair, Emergency Medicine, Mount Sinai South Nassau



Daniel Leinweber
NEW: Manager, Communications and Marketing, Department of Emergency Medicine



Anthony Duncan, MBA, RN
NEW: Director of Emergency Medicine Nursing, Mount Sinai Morningside



Amanda Klager
NEW: Assistant Director, Administrative Operations, Mount Sinai Hospital

Additionally, some members of our Department of Emergency Medicine family have retired or moved on to assume new challenges and opportunities outside of our department or the Mount Sinai Health System. We wish each of these individuals well and the best of luck in all their future endeavors.
Of special note are >>>

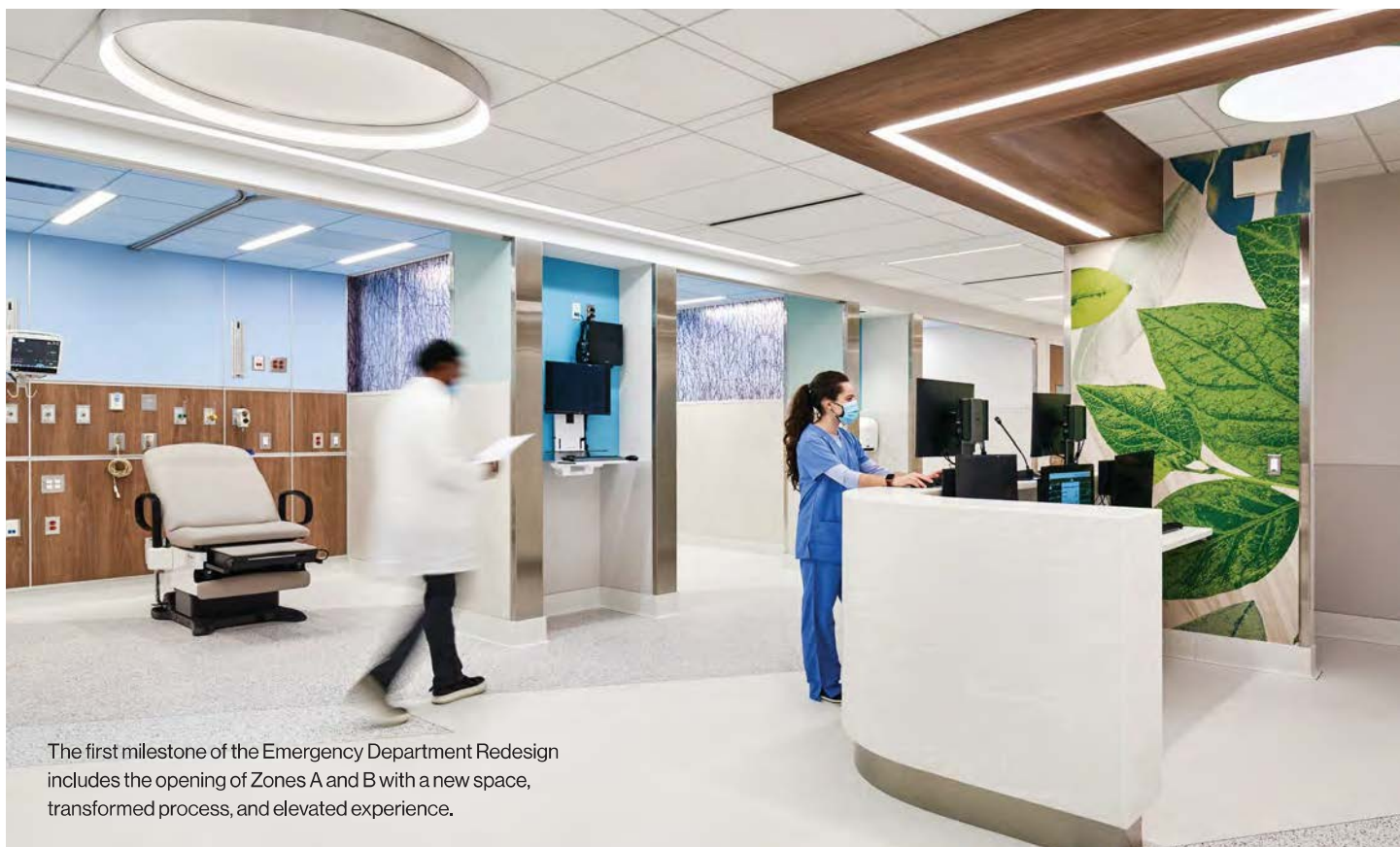


Jill Zaheer, MPH
 Former System Vice Chair of Administration and Finance, who retired after more than thirty years of service.



Andy S. Jagoda, MD
 Chair Emeritus of the Department of Emergency Medicine, who over the last 20 years shaped the course of emergency services at Mount Sinai. Congratulations to Andy on his Lifetime Achievement Award from Mount Sinai.

Mount Sinai Hospital Emergency Department Redesign



The first milestone of the Emergency Department Redesign includes the opening of Zones A and B with a new space, transformed process, and elevated experience.

Starting in early 2020, in the midst of the COVID-19 pandemic, Saul Family Emergency Department at The Mount Sinai Hospital began an extensive construction and redesign project, which spans a total of five years. On March 29, 2021, the first milestone of that plan opened, representing the future of Emergency Medicine and Patient Care in the Mount Sinai Health System.

The Emergency Department Redesign Team, comprising many Emergency Department peers, analyzed current processes and conceived new ways of providing care to Mount Sinai's patients. In parallel, construction teams worked to achieve the flexibility to allow for these new goals. Mount Sinai leadership is grateful for their dedication in fully understanding current operations and the opportunities to continue to lead the way in emergency care.

Specific themes emerged as the team reviewed, reimagined, and constructed the new processes and space. Themes include empowering staff with the training and resources to make critical decisions, working as a team, elevating each other's talents, and supporting learning. Mount Sinai intends to promote spaces for honest conversations, where staff can share feedback, ask questions, and also practice at the top of their license.

"Thank you for taking this leap with us; we may not currently have all the answers, but together we will learn, grow, and elevate patient care. We have redesigned the way we will care for patients. We know this change will not be easy, but we are confident that through collaboration, training, and feedback, we will succeed," stated Brendan Carr, MD, MS, and Robin Ferrer, MBA, MSN, RN.



Emergency Department Redesign Team



Interdisciplinary teams conducted trainings with members of the Emergency Department team. Each training included group development and simulation role-playing.

The Mount Sinai Hospital Emergency Department team shared celebrations for the opening of the first phase.



Behind the scenes of a Simulation training the Emergency Department Redesign Team held in advance of the opening of the new space.



As we look forward, our collective voice will develop the future of Emergency Medicine at Mount Sinai. The ideas, energy, knowledge, passion, and well-being of this extraordinary team will fuel our journey.

—Brendan G. Carr, MD, MS