Since January 2020 Elsevier has created a COVID-19 resource centre with free information in English and Mandarin on the novel coronavirus COVID-19. The COVID-19 resource centre is hosted on Elsevier Connect, the company's public news and information website.

Themes	Representative Comments
Education	"I think there are challenges in pretty much every aspect of education and training, challenges in online format for didactics, where you are not learning in person but rather at home, there are challenges in socialization and bonding (which are normally part of training), because our training helps us feel comfortable with working with one another, with our colleagues, this impacts our training." "This conversation will be very different if there is a second wave in September or November and we stopped seeing appendicitis, kidney stones and we start seeing one COVID patient after the other for like a month or two. We stop rotating on other electives where we might have learned more about specialties but end up only learning about COVID. "
Professional Identity Formation	"I hate the healthcare heroes' concept. I hate that we have been shunted and labelled as such, as being forced into this army that is sacrificing their lives and that we didn't ask for this—I don't like the message that is being sent out regarding this." "I think that we are learning about how political our jobs are and that learning that a lot earlier on and that this is a context that we never saw this in before. I originally said that I don't like politics and that's why I went to medicine, but I realize that it's half my job."
Grief related to COVID-19	"We were unable to celebrate the end of our 4th year and our entire medical school experience, which we should have been through Match and graduation. It feels selfish to feel upset about these things, but these events are something we looked forward to the entire 4 years." "We weren't allowed to grieve for the fact that we missed all this stuff, rather we had to suck it up and remember that we signed up for this, and that it's okay we missed graduation. You are going to be doctors and everyone looks up to you, so missing graduation should not be a concern."
Mental Health	"I think a lot of the anxiety I felt about starting intern year, as it might be the hardest thing I have ever done and what if I start going down a dark place mentally." "In normal circumstances, I would be surrounded by people, building relationships, and have support if needed, but now we are in a time and place where we aren't encouraged to reach out or have relationships, but rather be isolated."
Physical Health	"In terms of this, we signed up for the risk, but the people we live with and the people that support us they haven't signed up for this risk." "I don't feel that I need to be better at this point, I just want to be careful."

80 Association Of COVID-19 "Safer-At-Home" Orders With ED-To-ED Interfacility Transfers

Van Schaik G, Self W, Hennessy C, Ward M/Vanderbilt University Medical Center Tennessee

Study Objectives: With the reduction in ED volumes during the COVID-19 pandemic, we sought to examine the association of "Safer at Home" lockdown orders with ED-to-ED interfacility transfers.

Methods: We conducted a retrospective observational analysis using hospital electronic administrative data of all interfacility ED-to-ED transfers to a single, quaternary care adult ED from January 1, 2018 to September 30, 2020 in Middle, Tennessee. "Safer at Home" orders were issued March 23, 2020 in Davidson County, TN in response to the COVID-19 pandemic mandating citizens stay inside their homes unless engaged in "essential activities." We defined the post-lockdown period as March 23, 2020 to September 30, 2020. We sought to identify transfers that may not require in-person evaluation and may be amenable to other modalities (eg, telehealth). Called "potentially avoidable transfers," (PATs), they are defined as ED-to-ED interfacility transfers discharged from the ED or admitted to the hospital for <24 hours without a procedure. To operationalize this definition, we constructed a multivariable logistic regression model to examine whether this lockdown order was associated with higher odds of a transfer being a PAT. We adjusted for seasonality, time since start of the study, patient demographics including age (per 10 years), sex, race, arrival emergency severity index triage acuity, mode of arrival (helicopter vs. ground), timing of arrival (ie, business hours), clinical condition using AHRQ's clinician condition software (CCS), and rurality.

Results: During the study period there were 20,978 ED-to-ED transfers meeting eligibility criteria and, of those, 4,806 (23%) met PAT criteria. In the 7 months post-lockdown PATs were generally down trending when compared month-to-month across years. The first month post-lockdown saw a decrease in transfers and PATs (17% and 28%, respectively) but this was not sustained. In the multivariable model, there was a significant seasonal effect. After adjusting for seasonality, the lockdown was not associated with PATs (adjusted odds ratio [aOR] 0.99, 95% CI 0.2, 5.2). The following were associated with increased odds of being a PAT: lack of insurance and arrival during non-business hours. The following were less likely to be PATs: female sex, increasing age, specific diagnostic categories (digestive, infectious, and circulatory conditions), and arrival by nonambulance.

Conclusions: In this single center study, there was no effect of the COVID-19 lockdown orders on PATs. However, after adjusting for covariates and seasonality, we did identify a considerable seasonal effect and an overall downward trend in PATs over time. These findings do not address the appropriateness of the transfer but whether in-person evaluation may be amenable to telehealth or other potential means. Generalizability of this single center study should be examined in other settings along with reasons for the potential downward trend.

81 Use of Adhesive Tape to Facilitate Optimal Mask Positioning and Use in the Emergency Department: A Randomized Controlled Trial

Pettit N, Doehring M, O'Neill B, Zaidi A/Indiana University, Zionsville, Indiana

Study Objective: We hypothesize that placing a piece of surgical tape at the bridge of the nose over the mask, creating a physical deterrent to mask removal, will improve proper mask use among emergency department (ED) patients.

Methods: 123 patients were enrolled in a randomized controlled trial at Eskenazi Hospital from April 2020 until October 2020. We permitted participants to either use their own mask (due to low resources institutionally) or we provided a surgical/cloth mask (early on relied on donated cloth masks for patients). Participants were randomized to a control (no tape over the mask/nose) or to the intervention (placing tape over the bridge of the nose of the face mask). The primary outcome of this study is the frequency at which participants correctly wear their masks in the intervention and control groups at 60 minutes into their ED visit.

Results: At 60- minutes in the no-tape control group, 31.1% participants were incorrectly wearing the masks, compared to 100% of the intervention group correctly wearing their masks. Subjects who were observed wearing their masks incorrectly (91.1%) exhibited some combination of either their mask removed or their nose and/or mouth exposed.

Conclusions: Applying a piece of tape to the bridge of the nose affords a simple, low-cost, low-risk solution that improved the rate of proper mask usage to 100%.

82 Heparinase-Native Thromboelastometry Detects Hypercoagulability in COVID-19 Disease

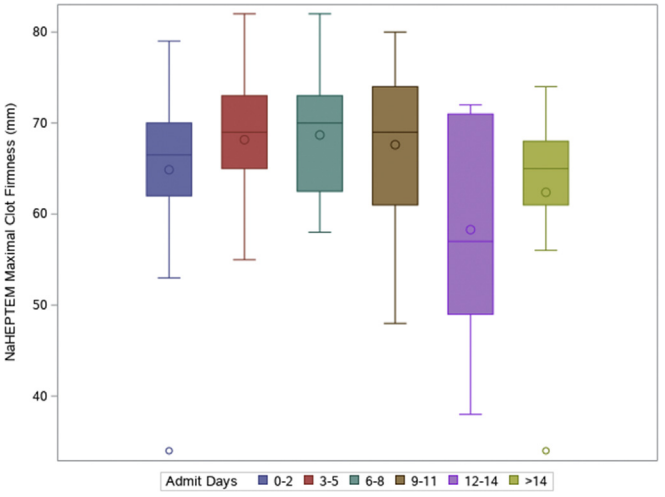
Maher PJ, Getrajdman C, Katz D/Icahn School of Medicine at Mount Sinai, New York

Study Objectives: COVID-19 disease is associated with elevated risk of thrombosis, but lab assessment of hypercoagulability of fibrinolysis using conventional clotting assays is challenging. Rotational thromboelastometry (ROTEM) can detect subtle changes in clotting activity and has been used to demonstrate longitudinal coagulopathy in COVID over time. However, typical ROTEM channels including EXTEM and INTEM are affected by anticoagulant use. Un-activated native ROTEM with addition of heparinase (NaHEPTEM) should be a more accurate marker given the multiple anticoagulant protocols in use during COVID-19 treatment. Our aim is to describe coagulopathy in COVID using NaHEPTEM longitudinally in a group of patients.

Methods: This multi-center prospective cohort study was conducted during the initial COVID-19 disease surge in New York City at an urban hospital system with large infected population. Adult (>18y) patients admitted with new oxygen requirement secondary to COVID-19 disease were recruited either in the emergency department or inpatient floors within 24 hours of admission. Blood samples were collected for ROTEM processing at enrollment then every 72 hours for 21 days unless discharged or deceased. The main study outcome included NaHEPTEM values for clotting time (CT), clot formation time (CFT), maximal clot firmness (MCF) and maximal lysis (ML). Additional data was collected on conventional clotting assays and inflammatory markers, disease severity, and mortality.

Results: There were 39 patients with ROTEM results included in the data analysis (mean age, 66.5 years; female, 50.0%). Admission SOFA score mean was 3.88. Mortality occurred in 10/39 (25.6%) of patients and ICU admission in 13/39 (33.3%). Therapeutic anticoagulation was initiated in 28/39 (71.7%) of patients as inpatients, with the rest receiving prophylactic subcutaneous heparin. ROTEM results were grouped into three-day blocks for analysis using day of enrollment as day 0. NaHEPTEM CT median values were within manufacturer reference range at all time points. CFT median values were below reference range until the period of days 9-11 since admission. MCF median values also were above reference range until days 9-11. ML median values were highest for admission NaHEPTEM tests (4% lysis) but no values were outside the manufacturer reference range of 15% lysis. None of the admission NaHEPTEM values were significantly associated with mortality.

Conclusion: Modification of standard ROTEM channels using un-activated testing with heparinase addition demonstrates the expected reduced clotting times and increased clot firmness in COVID-19 associated hypercoagulability. Use of therapeutic and prophylactic anticoagulation was common in this population, and results of heparinase to ROTEM testing eliminates this confounding effect. Longitudinal assessment shows normalization of multiple hypercoagulable effects in COVID-19 disease around days 9-11 in this moderately ill cohort.



83 The Effect SARS-COVID-19 Had on Disease Distribution in the Emergency Department at a Large Academic Center

Tayyem Z, Wojcik S, Andonian D/Upstate Medical University, Syracuse, New York

Study Objective: To assess the effect SARS-COVID-19 had on the distribution of diseases in the emergency department (ED) of a large academic center located in a region with low SARS-COVID-19 infection rates and deaths during the first peak of the pandemic.

Methods: This is a cross-sectional observational study that collected data from every ED visit from March through June, 2019 and compared it to the same period in 2020. The main ICD-10 code associated with each visit was organized into 1 of 530 disease categories. The top 20 disease categories for 2019 were compared to 2020 to assess for any statistically significant variation in prevalence.

Results: An unpaired T-test showed an increase in mean age from 2019 to 2020 (34.833 vs 37.978, P< .0001). A similar increase in age is noted when the data is divided into minors in 2019 vs 2020 (6.604 vs 6.939 P< .0002) but adults, 18 or older, show no statistically significant change in age. Mean Emergency Severity Index (ESI) decreased from 3.157 to 3.071 (P < .0001) using a T-test. There was a similar statistically significant decrease in ESI when the data was divided into minors in 2019 vs 2020 (3.419 vs 3.23 P< .0001) and adults in 2019 vs 2020 (3.044 vs 3.024 P< .002). A Z-Test showed a disproportionate decrease in the percentage of minorities coming to the ED from 2019 to 2020 (37.5% vs 36.6%, P< .0232). ED volume rates dropped by 52% in 2020. When comparing disease distribution for minors in 2019 vs 2020, a Z-Test found a statistically significant disproportionate decrease (P> .05) in the diseases under these categories: other specified upper respiratory infections, viral infection, abdominal pain and other digestive/abdomen signs and symptoms, otitis media, nausea and vomiting, intestinal infection, asthma, respiratory signs and symptoms, acute bronchitis, allergic reactions, skin and subcutaneous tissue infections. When comparing disease distribution for adults in 2019 vs 2020, a Z-Test found a statistically significant disproportionate decrease (P < .05) in diseases under these categories: Other specified upper respiratory infections, viral infection, abdominal pain and other digestive/abdomen signs and symptoms, otitis media, nausea and vomiting, intestinal infection, asthma, acute bronchitis

Conclusion: National data shows that ED visits decreased significantly in 2020 compared to previous years with certain diseases or disease categories receiving a disproportionate decrease in prevalence. Data from this study shows a similar pattern of certain disease categories having disproportionate decreases in prevalence combined with increased acuity of patients presenting to the ED. While certain disproportionate decreases can be explained by mask mandates, social distancing, stay-at-home orders, and increased access to telemedicine, the authors of this study worry that fears around contracting SARS-COVID-19 kept patients from receiving needed medical care.

84 Racial/Ethnic Disparities in Hospitalization And Clinical Outcomes Among COVID-19 Patients in an Integrated Health Care System In New York City

Bilal S, Serrano F, Blutinger EJ, Vargas-Torres C, Counts C, Straight M, Lin MP/Icahn School of Medicine at Mount Sinai, New York, NY

Study Objectives: During the COVID-19 pandemic Black, Indigenous, Hispanic and Asian (BIPOC) populations were nearly three times more likely to have died of COVID-19 than White patients. These disparate outcomes compound existing health disparities which result in BIPOC patients experiencing larger burdens of disease and decreased life expectancy. The objective of our study was to examine racial and ethnic disparities in hospitalization, medication usage, ICU admission and in-hospital mortality for COVID-19 patients within an integrated health care system in New York City (NYC).

Methods: In this retrospective cohort study, we analyzed adult patients with lab-confirmed COVID-19 diagnosis within a large urban health system in NYC between February 28, 2020 and August 28, 2020. Primary outcome was the rate of admission from the ED. Secondary outcomes were differences in medication administration, admission to an intensive care unit (ICU), and in-hospital mortality. We utilized multivariable logistic regression to test for differences by race/ethnicity in the odds of our primary and secondary outcomes accounting for hospital-level clustering.

Results: A total of 4,717 adult patients with a positive SARS-CoV-2 test in the ED or inpatient setting were included in the primary analysis; 3,219 (68.2%) were admitted to an inpatient setting. Black patients were the largest group (29.1%), followed by Hispanic (29.0%), White (22.9%), Asian (3.86%) and patients of other race-ethnicity (19.0%). Black patients were overrepresented at the community site in Brooklyn, while Asian and Hispanic patients were overrepresented at the community site in Queens. Overall, White patients (24.3%) were disproportionately overrepresented among admitted patients. Hispanic patients had an overall significantly lower adjusted rate of inpatient admission compared to White patients (OR= 0.51, 95% 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 overall less likely to be admitted to an ICU setting. There were lower odds of inpatient admission (OR=0.68, 95% CI 0.46-0.99) at the community site located in Queens, where Asian and Hispanic patients were over-represented. There was significantly higher mortality at the community-based sites in Brooklyn (OR=4.38, 95% CI 2.66 - 7.24) and Queens (OR= 2.96, 95% CI 2.12 - 4.14), where Black, Asian, and Hispanic patients were over represented.

Conclusion: BIPOC patients accounted for a larger proportion of COVID patients seeking care in the ED compared to the demographic composition of NYC, but were less likely to be admitted to the ICU or hospitalized. Hospitals serving a high proportion of BIPOC patients had significantly higher mortality even within an integrated health system with shared resources. Limited capacity during the COVID-19 pandemic likely exacerbated preexisting health disparities among racial and ethnic minority groups.

85 Impact of COVID-19 on Patient Populations in the Emergency Department in Flint, Michigan

Eurick-Bering K, Chowdhury N, Hjaige M, Kenerson R, Revere T, Reece RJ/Michigan State University College of Human Medicine, Flint

Study Objectives: As the COVID-19 pandemic continues, it is necessary to elucidate its impact on services in the emergency department (ED). The research project aims to identify and analyze changes in medical presentations and disease severity within the ED at Hurley Medical Center (HMC) in Flint, Michigan due to the COVID-19 pandemic.

Methods: The present study is a retrospective chart review on HMC's ED encounters focusing on adults 18 years and above in Flint/Genesee County in Michigan. Data collected for the study was obtained from patient charts from February 1, 2019 to July 31, 2019 and from February 1, 2020 to July 31, 2020. Data from 2019 versus 2020 was analyzed using a combination of independent t-test, chi-square analysis, and regression modeling.

Results: There were a total of 59,345 visits analyzed within the study; 33,648 ED visits within the study were in 2019 compared to 25,697 visits in 2020. There was a significant difference in patient sex between 2019 and 2020 with a larger percentage of males presenting in 2020 vs 2019 (p<0.001). Furthermore, the ICD-10 diagnosis differed between 2019 and 2020 with significant increase in the percentage of infectious disease, COVID-19, generalized symptoms, pneumonia, respiratory failure/insufficiency/arrest, patients with socioeconomic factors, mental health, nausea/