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.

Results: Black patients were the most represented race (74%) in our study. 399 patients were admitted with COVID-19 in April 2020. In Black patients, 306 were admitted (76.692%) compared to 79 White patients (19.799%). There were also significant differences on the basis of race between both the number of "typical" symptoms (Black=2.925 +- 2.067, White=2.367 +- 2.014, p=0.0330) and the more general "collapsed" categories of atypical symptoms (Black=1.036 +- 0.765, White=0.823 +- 0.844, p=0.026), but not concerning the number of atypical symptoms more specifically associated with COVID-19 (Black=0.428 +- 0.770, White=0.468 +- 0.749, p=0.589). This is concordant with our association rule mining results, which indicated that in Black patients, fever was frequently associated with myalgias, cough, and shortness of breath (lift=1.897)

Conclusion: While evaluating the racial distribution of COVID-19 as it pertained to symptoms, Black patients were statistically more affected by COVID-19 in North Louisiana. Blacks make up 38% of the region's population but were 74% of the region's COVID-19 cases. This was not observed in South Louisiana. Additionally, Black patients were more likely to be admitted than their White counterparts and were likely to have both more typical and atypical symptoms at presentation. Further investigation into the corresponding factors such as issues like weight, comorbid conditions, and genetic polymorphisms for ACE-I tropism should be explored to illuminate the proposed racial selection that SARS2-COVID-19 demonstrates for those of African descent.

78 COVID-19 Pandemic Did Not Exacerbate Racial Disparity in Incidence of Emergency Department Visits For Asthma Exacerbations

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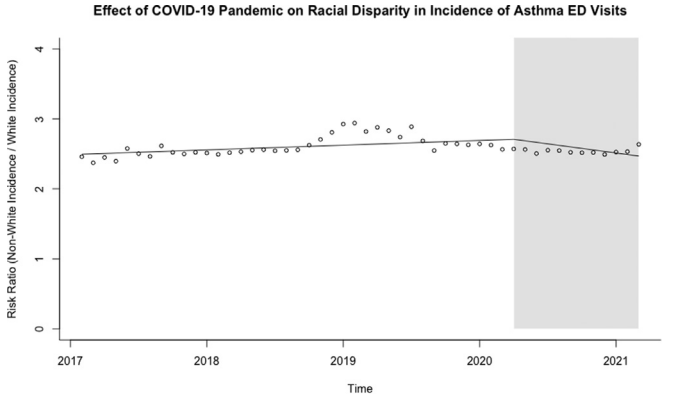
Study Objectives: Racial disparities between White and minority (non-White) asthmatics in the United States have long been documented before the COVID-19 pandemic. During the COVID-19 pandemic, minorities were also found to disproportionately bear the burden of COVID-19-related severe outcomes. The pandemic hastened the adoption of several health care system and societal changes, including expansion of telemedicine via video or phone visits, mask usage, social distancing, and remote work and schooling. These could be seen as protective to asthmatics via decreased exposure to respiratory pathogens, and increased provider access. However, it is unclear how the pandemic affected racial disparities for asthmatics. In this study, we employ the Epic Corporation's Aggregate Data Program (ADP) to examine how the pandemic affected emergency department (ED) utilization between White and minority asthmatics.

Methods: Epic's ADP General Asthma Data Set collects national level data across all Epic customers and reports asthma prevalence, cumulative incidence of asthma exacerbation ED visits, and proportion of ED visits that comprise asthma exacerbations. This de-identified aggregate data is broken down by race, ethnicity, age groups, sex, and location (ie, state). We examined data from January 1, 2017 to February 1, 2021. We defined the start of the pandemic as March 11, 2020, when the World Health Organization officially declared a pandemic. We determined the monthly incidence of asthma ED visits for non-White and White asthmatics separately, and then calculated the risk ratio by dividing incidence for minority asthmatics by incidence for White asthmatics. This risk ratio served as our measure for racial disparity. We compared the pre-pandemic and pandemic risk ratio with an unpaired t-test. We then performed an interrupted time series (ITS) analysis to compare the trends of pre-pandemic and pandemic risk ratio.

Results: Our data included 15.4e6 asthma ED visits, with 59.0% of visits comprised by minority asthmatics. The number of asthma ED visits per month on average were 3.1e5 +/- 1.2e5. Pandemic risk ratio was statistically significantly lower than pre-pandemic risk ratio (pre-pandemic mean 2.61, pandemic mean 2.54, 95% CI [0.024, 0.128], $p < 0.01$). ITS analysis demonstrated pre-pandemic risk ratio trend of 0.006/month, (95% CI 0.003, 0.009, $p < 0.01$). During the pandemic, the change in the risk ratio trend was -0.027/month, (95% CI -0.043, -0.012, $p < 0.01$). Pre-pandemic and pandemic trends in risk ratio are demonstrated in the figure.

Conclusion: Our study demonstrates that during the pandemic, known racial disparities in asthmatic ED utilization (ie, risk ratio between minority and White asthmatics) did not worsen. In fact, the pandemic reversed a marginally positive trend pre-pandemic, although this trend appeared to begin normalizing. It is possible that any one of the changes during the pandemic caused this shift in trend, but the limitations of our dataset prevent further investigation. More research is needed to investigate the factors underlying this trend change to learn how we may address racial disparities going forward.



79 A Qualitative Needs Assessment of COVID-19's Impact on Emergency Medicine Interns

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Study Objective: The COVID-19 pandemic posed an unprecedented challenge to our learners. Emergency medicine interns this year began their training during a time of great need for skilled medical professionals and with less clinical experience than those of prior years.

Methods: We conducted a 60-minute semi-structured focus group with 18 EM interns at a single residency program in July 2020. A recording of the interview was transcribed and de-identified. Using qualitative methods, initial coding was performed independently using an inductive and iterative process by two study authors with experience in qualitative methodology. Once saturation was achieved, final codes were re-applied by an initial coder and a third author. After consensus discussion, agreement reached 100%, and codes were grouped for thematic analysis.

Results: We identified two major themes: education and professional identity formation. Interns expressed concerns about the quality and breadth of their medical training during the COVID pandemic. Interns also voiced frustration with the politicization of medicine and uncertainty about their roles as physicians and public health advocates during the pandemic. Minor themes included physical health, mental health, and grief related to COVID-19. Interns reported experiencing several unique challenges to their emotional and mental health, including socially distancing during a period in their training when they traditionally rely on additional support systems and build new relationships.

Conclusions: Our analysis suggests that new EM interns have significant concerns about their medical knowledge and the quality of their education as well as their identity as emergency physicians and public health advocates during the COVID pandemic. EM interns also reported unique challenges to their physical and mental health. These results may inform future decisions regarding dedicated support and training necessary for this unique group of learners.

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

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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

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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

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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.