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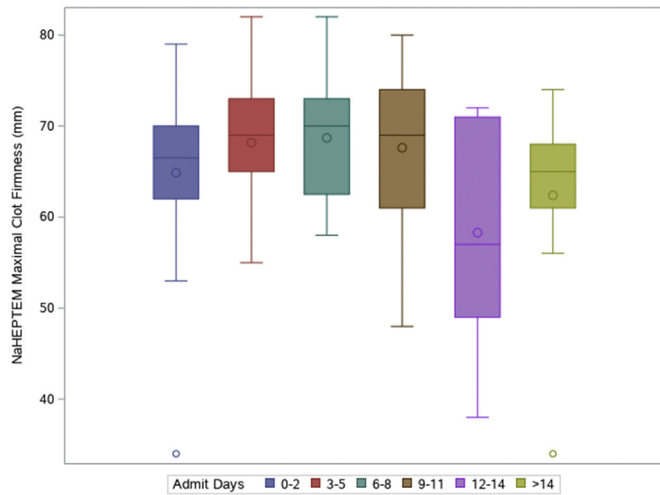
83 The Effect SARS-COVID-19 Had on Disease Distribution in the Emergency Department at a Large Academic Center

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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

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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

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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/

vomiting, patients with history or family history of chronic disease, disorders of lipid metabolism, and myocardial infarction presentations in 2020 compared to 2019. Dispositions also significantly differed in 2020 compared to 2019 with more patients receiving admission or dying in the ED (p<0.001). Patients who presented to the ED often presented with more severe illness in 2020 as reflected in increased length of stay in 2020 (p=0.01) and increased case-medical-index (p<0.001).

Conclusion: The COVID-19 pandemic significantly reduced the total number of ED visits to HMC in Flint, Michigan in 2020, when compared to the same time period in 2019. Notably, patients were more likely to have a longer length-of-stay, present with more severe illness, and more likely to be admitted or pass away in the ED when compared to the same time period in 2019. Analysis also revealed that visits for respiratory diagnoses and other life-threatening conditions like myocardial infarction increased, whereas less life-threatening/acute conditions like sprains, urinary tract infections, and sexually transmitted infections decreased. Interestingly as well, the pandemic drove statistically significant increased visits for mental health and socioeconomic factors. Limitations include analyzing 6 months of data as opposed to the whole calendar year and the use of broad ICD-10 code categories. It is also important to note that diagnosis codes were analyzed versus what the patient subjectively presented for, so there is a gray area between being able to elucidate what motivated the patient to come to the ED and verus what was analyzed in this project as patient's ICD-10 diagnoses.

Table 1: Comparison of Emergency Department Values in 2019 vs 2020

Year	# of ED Visits
2019	33,648
2020	25,697
Study Total	59,345

Table 2: Comparison of Patient Demographics in 2019 vs 2020

Year	2019 (n=33648)		2020 (n=25697)		
Sex	Number	(%)	Number	(%)	P-value
Male	14857	44.2	12067	47	<0.001
Female	18791	55.8	13630	53	
Race	Number	(%)	Number	(%)	P-value
White	15025	44.7	11559	45	
Black	17175	51	12899	50.2	
Hispanic	752	2.2	660	2.6	
American Indian & Alaskan Native	114	0.3	90	0.4	
Native Hawaiian & Other Pacific Islander	8	0.02	9	0.035	0.071
Asian	46	0.1	33	0.1	
Other	363	1.1	298	1.2	
Unknown	165	0.5	149	0.6	

Table 3: Comparison of Severity Markers in 2019 vs 2020

Year	2019	2020	p-value
Length of Stay (Hours)	6.81	6.97	0.01
Case medical index (CMI)	1.65	1.93	<.001

Table 4: Comparison of Disposition in 2019 vs 2020

Year	2019		2020		
Disposition	Number	(%)	Number	(%)	P-value
Discharge	23140	68.8	17721	69	
Admit	7116	21.1	5870	22.8	<.001
SNF	884	2.6	535	2.1	
Death	230	0.7	255	1	

Table 5: Comparison of Diagnoses in 2019 vs 2020

Year	2019		2020		P-value
Diagnoses	Number	(%)	Number	(%)	
Infectious Disease	2682	8	2181	11	<.001
COVID-19	0	0	462	1.8	<.001
General Signs/Symptoms	1089	3.2	942	3.7	<.01
Pneumonia	532	1.6	747	2.9	<.001
Lower Respiratory Disease	137	0.4	115	0.4	0.454
Respiratory Failure/Insufficiency/Arrest	989	2.9	1035	4	<.001
Cardiac Arrest	166	0.5	125	0.5	0.905
Socioeconomic Factors	542	1.6	437	1.8	<.05
Mental Health	1376	4.1	1161	4.5	<.05
Abdominal	4162	12.4	3210	12.5	0.654
Musculoskeletal	3036	9	2238	8.7	0.183
Essential Hypertension	7733	23	19779	23	0.891
Nausea or Vomiting	2320	6.9	2107	8.2	<.001
Upper Respiratory Infection	1322	3.9	1030	4	0.624
Sprain	789	2.3	452	1.8	<.001
Superficial Injury/Contusion	1893	5.6	1496	5.8	0.308
Personal/Family History of Disease	7691	22.9	6373	24.8	<.001
Headache	2021	6	1481	5.8	0.213
Unspecified Injury	567	1.7	378	1.5	<.05
Nonspecific Chest Pain	2934	8.7	2266	8.8	0.674
Tobacco-Related Disorders	13167	39.1	10258	39.9	0.052
Urinary Tract Infection	1491	4.4	995	3.9	<.01
Sexually Transmitted Infection	195	0.6	114	0.4	<.05
Asthma	1542	4.6	1158	4.5	0.658
Disorders of Lipid Metabolism	1941	5.8	1660	6.5	<.001
Skin/Subcutaneous Infection	1146	3.4	836	3.3	0.305
COPD or Bronchiectasis	2494	7.4	1823	7.1	0.14
Myocardial Infarction	457	1.4	414	1.6	<.05
Cerebral Infarction	175	0.5	153	0.6	0.22

86   Sexually Transmitted Infection Testing and Prevalence at a Large, Urban Hospital Before and After the SARS-CoV-19 Pandemic

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Study Objectives: To determine whether behavior changes made during the SARS-CoV-19 pandemic impacted the number of patients being tested and the positivity rate of sexually transmitted infections (STI) at a large, urban hospital in the Bronx to identify how to improve the sexual health services available to our patients.

Methods: A retrospective, cross-sectional study using data from the EMR at a public hospital in the Bronx, New York. Included patients were aged 13 and over that had STI testing from Aug. 1, 2019 to Feb. 1, 2020 (Period 1) and Aug. 1, 2020 to Feb. 1, 2021 (Period 2) in any hospital setting. Periods 1 and 2 are 6 month periods before and after the SARS-CoV-19 pandemic in NYC, respectively. Counts and percents were used to quantify STI tests (HIV point of care, HIV 4th generation serum, Gonorrhea Amplification, Chlamydia Amplification, and Treponema Pallidum Ab screen) and