Conclusions: Lower socioeconomic status as measured by median household income for a person's home zip code is associated with a higher rate of severe COVID-19 disease both on presentation to the emergency department and during their overall hospital course. For each 1-quintile increase in median household income, the odds of severe disease on presentation decreases by 20% ($p = 0.018$) and the odds of severe disease overall decreases by 26% ($p = 0.009$). Particular strengths of this data set include a large quantity of highly granular clinical data as well as a diverse population in both urban and rural settings. This data can better inform public health officials, medical professionals, and policymakers of the impact of socioeconomic status on vulnerability to disease and encourage progressive policy in providing vaccination and resources for these populations.

40 Facemasks: Perceptions and Use in an Emergency Department Population During COVID-19

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Study Objectives: During the COVID-19 pandemic, the use of facemasks by the general population has become a significant issue despite evidence that shows that facemask use is associated with reduced transmission of SARS-CoV-2, the causative organism of COVID-19. We assessed beliefs, access, and practices of mask wearing across an ED population.

Methods: This was a cross sectional survey of ED patients conducted from 12/14/20 - 2/22/21 at 15 geographically diverse safety net EDs. The survey asked questions regarding COVID-19 vaccine and the use of facemasks. In this analysis, the primary outcome was reporting the responses to survey questions regarding mask wearing practice and patient access to masks.

Results: Of 2513 patients approached, 2239 (89.1%) agreed to participate. The median age of respondents was 48 years (IQR 34 - 62). The race and ethnicity reported for participants were: 40% White, 29% Black, 24% Latinx and 5% Asian. All other categories each accounted for 1% or less of the respondents. 14.8% reported that they had previously been diagnosed with COVID-19. Most respondents (81%) had primary care doctors or clinics. Of those without primary care, 64% used the ED as their usual source of health care. 78% of respondents reported wearing masks "all of the time" and 17% reported wearing masks >50% of the time. Subjects with primary care providers (PCPs) were more likely to report wearing masks at least most of the time as compared to subjects without primary care (97% vs 92%) Those with no PCP reported more difficulties obtaining masks compared to those who have a PCP (13% vs 6%, $p < 0.001$). The primary reasons respondents cited for not wearing masks were that they do not believe that masks work, masks are uncomfortable, and masks make it hard to breathe. Subjects with a PCP and those without a PCP both reported that the most common source of masks was through purchasing at a store or pharmacy. Subjects without a PCP were more likely to get masks from a shelter or food bank as compared to those without a PCP (6.5% vs 2.1%). Surveys were administered exclusively in urban EDs, and there may be response bias towards mask wearing in the hospital setting.

Conclusion: Overall, respondents in the study reported a high rate of facemask wearing. Having a PCP was associated with higher proportion of respondents who reported wearing a mask at least 50% of the time. Respondents without a PCP also reported greater barriers in obtaining masks than those with a PCP. The results of this study inform on the acceptance rate of facemask usage in a large population of ED patients primarily in an urban setting. Having a PCP provides opportunities for education and distribution of facemasks. There is an opportunity to increase facemask usage through increased education and availability.

41 Health Insurance and Duration of Symptoms Prior to Emergency Department Visit: An Analysis of 19,850 Patients With Suspected COVID-19

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Study Objectives: The COVID-19 pandemic has emphasized disparities in health outcomes across social and economic strata. The mechanisms of this relationship are poorly understood, but the length of time patients exhibit symptoms prior to getting tested for COVID-19 increases the opportunity for community transmission. We hypothesized that there is a relationship between insurance coverage and the duration of COVID-19 symptoms prior to seeking care at the emergency department (ED).

Methods: A national, multi-institution (n=45 sites) registry collected information on ED visits in which patients were tested for suspected COVID-19. Demographics and clinical characteristics were summarized for the total cohort. Insurance was categorized into private (private or commercial), public (Medicare, Medicaid, or dual-eligible), worker's compensation or unknown, or no health insurance. Negative binomial regression was used to analyze both the unadjusted and adjusted relationship between insurance and the time from symptom onset to ED presentation. Adjustments included age, sex, race, ethnicity, medical history, smoking status, drug use, and number of COVID symptoms.

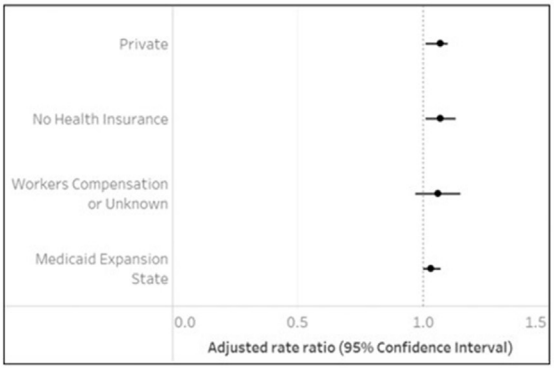
Results: Baseline demographic and clinical characteristics of included patients (n=19,850) are displayed in Table 1. The average time from symptom onset to ED presentation among patients with suspected COVID-19 was 5.4 days. In unadjusted analysis, patients with private insurance had significantly longer time of symptom onset prior to ED presentation than patients with public insurance (5.6 vs. 5.3 days, p=0.007). After multivariate adjustment, increased duration of symptoms prior to ED presentation was significantly associated with private insurance [rate ratio (RR) 1.07, 95% confidence interval (CI): 1.03 – 1.10] and no health insurance (RR 1.06, 95% CI: 1.07 – 1.13) compared to public insurance (Figure 1). Patients residing in states with Medicaid expansion were not independently associated with the increased time to ED presentation (RR 1.03, 95% CI: 1.00 – 1.07).

Conclusion: Patients with private insurance or no insurance waited significantly longer to present to the ED. The extended duration of symptoms prior to presentation increases the opportunities for community transmission. The results from this study can be used by health systems to target the patients at increased risk for delayed ED presentation.

Table 1. Demographics and Clinical Characteristics

	No Health Insurance (N=1753)	Private (N=7528)	Public (N=9750)	Workers Comp or Unknown (N=819)	Total (N=19850)
Age					
Mean (SD)	41.2 (14.3)	44.5 (17.6)	57.3 (21.4)	46.2 (18.5)	50.5 (20.5)
Sex					
Female	793 (45.2%)	4083 (54.2%)	5141 (52.7%)	410 (50.1%)	10427 (52.5%)
Male	960 (54.8%)	3445 (45.8%)	4609 (47.3%)	409 (49.9%)	9423 (47.5%)
Race					
White	569 (32.5%)	4295 (57.1%)	5177 (53.1%)	419 (51.2%)	10460 (52.7%)
Black	506 (28.9%)	1837 (24.4%)	2765 (28.4%)	197 (24.1%)	5305 (26.7%)
Other	668 (38.1%)	1396 (18.5%)	1808 (18.5%)	203 (24.8%)	4075 (20.5%)
State Medicaid expansion status					
No	446 (25.4%)	1360 (18.1%)	1906 (19.5%)	251 (30.6%)	3963 (20.0%)
Yes	1307 (74.6%)	6168 (81.9%)	7844 (80.5%)	568 (69.4%)	15887 (80.0%)
Number of COVID-19 symptoms					
Mean (SD)	2.8 (1.6)	2.7 (1.6)	2.4 (1.5)	2.3 (1.6)	2.6 (1.6)

Figure 1. Multivariate negative binomial regression for time to ED presentation



42 First Year of COVID-19: Stay at Home Decreased Accidents, but Increased Assaults

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Study Objective: Early articles published during the first few months of the COVID-19 pandemic indicated declines in traumatic injuries in the U.S. and internationally. Throughout 2020, there were numerous governmental stay-home orders and policies, health care responses, and COVID-19 vaccine development; all of which may have had unintended consequences beyond illness prevention. Here we investigate the longer-term impact over the first year of the pandemic on the incidence of traumatic injuries.

Methods: This retrospective analysis was performed with all records of trauma activations from an urban level 1 trauma center's trauma registry. Mean weekly, monthly, and total yearly patient counts from 2017-2019 and total from 2020 were compared using independent samples t-test or Mann-Whitney U test. Shapiro-Wilk and Levene's tests were used to assess normality and variances, respectively. Differences were considered significant when two-sided p-value < 0.05.

Results: Of 4157 trauma patients in 2020, 73% were male and average age was 39 years old. There were more trauma patients in 2020 than the 2017-2019 average (n = 3869). No demographic differences were present comparing patients seen in 2020 and those of previous years. In 2020, there were significantly higher weekly counts of penetrating injuries versus the 2017-2019 average (mean [SD]) (22.5 [7.2] vs 17.5 [3.1], $p > 0.000$), specifically gunshot wounds (GSWs) (15.8 [6.0] vs. 11.3 [2.7], $p > 0.0000$) and more assaults (23.3 [6.7] vs 19.4 [3.2], $p > 0.0003$). In 2020, fewer falls (11.9 [4.3] vs. 13.4 [2.5], $p > 0.03$), pedestrian/bicycle accidents (5.5 [3.1] vs 7.5 [2.1], $p > 0.0002$) and accidents in general (45.9 [17.1] vs 50.9 [5.6], $p > 0.0003$) presented to our hospital compared to 2017-2019 average. Monthly totals in 2020 were higher than average in every month except those with strictest stay home mandates in place (March-May). Overall, weekly totals were higher than average in 2020 (79 vs 73) and decreased during the strictest shut-downs from March 18 through the beginning of June (Fig. 1A & B).

Conclusion: A decreased number of traumatic injuries presented to our level 1 trauma center during the first six weeks of the pandemic, which coincided with closure of most non-essential businesses and the strictest government-instituted stay home orders. The week that our state and city moved into re-opening of businesses to 50% capacity and opened bars, there were more traumatic injuries than previous years on average. After that initial week of increased patient volume, weekly counts of trauma patients were above average in most (25 / 31, 80%) weeks through the end of the year. Increased GSWs and assaults this year may suggest increased interpersonal conflict due to external stressors caused by the pandemic. Conversely, decreased falls, pedestrian/bike accidents and other causes of accidents may suggest that staying at home decreases activities and associated accident risk.

43 COVID-19 in Patients With Cancer

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Study Objective: The COVID-19 pandemic caused by the severe acute respiratory coronavirus 2 (SARS-CoV-2) has significantly affected the provision of routine and acute medical care. The aim of this report is to characterize patients with cancer presenting to EDs in the United States and COVID-19 mortality risk according to tumor subtype.

Methods: The RECOVER registry represents a collaboration between 45 EDs spanning 27 states. This retrospective registry enrolled patients from each study site who received molecular diagnostic testing as part of ED care due to clinical suspicion for COVID-19 disease. Clinical characteristics pertaining to a patient's cancer status were obtained from medical record review, specifically cancer type, active versus remission status, metastatic versus isolated tumor, and hematologic versus solid tumor status. Cancer type was further classified as solid/hematologic tumor localized or metastatic based on documented diagnoses and/or past medical history.

Results: There are a total of 2865 patients who have a reported history of cancer, 1899 (66.3%) were negative for COVID-19 and 33.7% were positive on COVID-19 testing. There are higher percentages of minority-identifying patients in the COVID-19 positive cohort as compared to the negative cohort, namely Black or African American (33.9% vs 13.5%, respectively, $p<0.001$), and unknown/other (20.5% vs. 7.1%, $p<0.001$). Breast cancer was the most common solid tumor presenting in this cohort, with 19.6% of the COVID-positive cohort compared to 9.6% of the COVID-negative cohort ($p=0.099$). The next most common cancers in the cohort were colorectal (7.5%) and prostate (6.9%), however there were no statistical differences between the cohorts. The mortality rate for COVID-19 positive patients was 24.2% versus 9.9% for the COVID-19 negative rate ($p<0.001$, OR 1.96). Patients with breast cancer had a much higher mortality rate when associated with a COVID-19 positive test (26.4% versus 10.2%, $p<0.001$, OR 3.27). Similarly, colorectal cancer, prostate cancer, and leukemias experienced higher mortality rates for COVID-19 positive patients, 31.4% versus 13.2%, 31% versus 12.4%, and 30.8% versus 16.4% (all $p<001$). For patients with a documented history of cancer in remission, they also experienced higher mortality rates when associated with a positive COVID-19 test, namely 21.3% versus 7.2%.

Conclusion: This study represents one of the largest COVID-19 cancer-related studies with 966 patients with a history of active cancer and SARS-CoV-2 infection. Patients with cancer present to the ED with diverse symptoms, treatment regimens, and having a diagnosis of COVID-19 is associated with higher mortality rates. Because of the high mortality rates observed for several of the cancer types in this study, initial evaluation of patients in the ED, subsequent ED therapies, and close communication with treating oncologists is of the utmost importance.