Table 1. Adverse social determinants of health among patients seen in Emergency Department Fast Track compared to adult primary care clinic

SDOH Category	Odds Ratio	95% CI
Overall	10.0	6.9 - 14.4
Food	8.2	4.7 - 14.1
Housing	13.1	5.2 - 32.7
Transportation	5.1	2.7 - 9.5
Medication	6.8	3.2 - 14.4
Utilities	4.8	2.7 - 8.5
Caregiving	6.0	2.1 - 17.2
Employment	11.1	5.7 - 21.6
Education	14.0	7.4 - 26.4

ED Fast Track patients n=414, Primary care clinic patients n=258.
CI=Confidence Interval

262 An Emergency Department-Based Response to the Hepatitis A Outbreak in Michigan: Improving Hepatitis A Vaccination Rates in High-Risk Populations

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Study Objectives: A non-food-borne hepatitis A outbreak occurred in Michigan between August 2016 and September 2019, resulting in 920 cases, 738 hospitalizations, and 30 deaths. To support the Michigan Department of Health and Human Services' efforts to increase hepatitis A vaccination rates among high-risk individuals, our multicenter health system implemented an electronic medical record (EMR)-based vaccination intervention across its nine emergency departments (ED). The primary objective of this retrospective cohort and survey analysis was to quantitatively determine whether this intervention was successful in increasing vaccination rates. The secondary objective was to qualitatively assess the attitudes towards, and barriers to use of, the computerized vaccine reminder system.

Methods: All patients 18 years or older who arrived to any of the nine EDs between August 2018 and January 2020 were screened using an electronic nursing questionnaire embedded in the EMR (Epic). If a patient was determined to be high-risk based on the questionnaire (homeless, incarceration history, illicit drug use, liver disease, or a man who has sex with men), an electronic best practice advisory (BPA) would trigger and give the patient's physician the option to order the hepatitis A vaccine. If consented, patients would receive a one-time dose of the hepatitis A vaccine in the ED. We also administered a survey to physicians and nurses to evaluate perceptions and barriers to use of the EMR intervention.

Results: During the pre-intervention period from August 2016 to July 2018, 885,344 patients visited the EDs. 49 vaccines were ordered (5.5 per 100,000 patients) and 34 were administered (3.8 per 100,000 patients). During the intervention period from August 2018 to January 2020, 774,034 patients visited the EDs and 574,865 (74.3%) were screened. Of those screened, 11,016 patients were found to be high-risk and triggered the BPA. Among this group of patients, 1,929 vaccines were ordered (249 per 100,000 patients) and 883 were administered (114 per 100,000 patients). We also found that during the intervention period, an additional 565 vaccines were ordered and 322 vaccines were administered without a BPA prompt. Nurses consistently screened 70-80% of patients per month. Physicians were initially more compliant with the BPA's use (301 vaccines in September 2018), but compliance declined over time (67 vaccines in January 2020) (Graph 1). Surveys revealed that two major barriers to consistent BPA use by physicians was lack of time and the perception that vaccinations are low-priority in the ED.

Conclusion: EMR screening tools and BPAs can be utilized in the ED as an effective strategy to vaccinate high-risk individuals. This may be translatable to outbreaks of other vaccine-preventable illnesses like influenza, measles, or SARS-CoV-2. Providing recurrent education about the importance of public health initiatives and eligibility criteria for vaccine administration are needed to sustain compliance. It is essential to frequently audit and provide feedback to physicians on their compliance, and address their concerns about barriers to use.
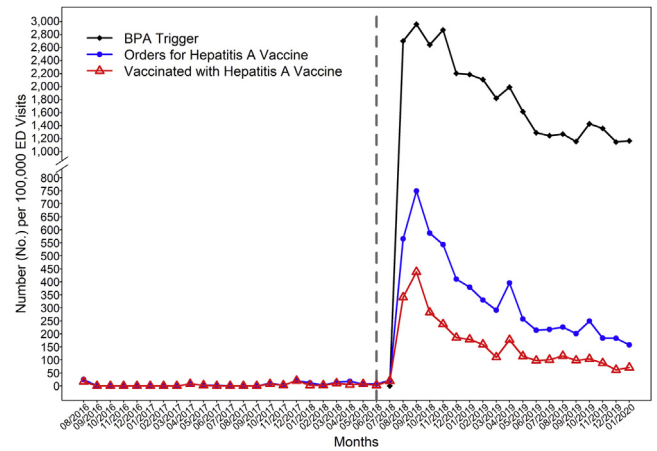
263 UNderstanding EQUity in Crisis Standards of Care (the UNEQUAL Crisis Study)

UNEQUAL Crisis Study Group, Manchanda EC, Marshall A, Erfani P, Olufadeji A, Otugo O, Nelson E, Jacquet G, Lupez K, Vogel L, Janneck L, Samuels-Kalow M/Boston Medical Center, Boston University School of Medicine, Boston, MA

Study Objectives: High volumes of critically ill patients amidst the COVID19 pandemic prompted the development of crisis standards of care (CSC) to guide resource allocation should demand exceed supply. Racial equity in CSC has been discussed widely. This study explores the utility and racial equity implications of CSC when prioritizing critically ill patients for scarce resources across a major metropolitan area.

Methods: This multi-site retrospective cohort study included patients admitted to an intensive care unit (ICU) within 20 miles of Boston at the height of the first COVID19 surge (April 18-21, 2020). A priority score (1-8) was calculated for each newly admitted patient based on state CSC using the Sequential Organ Failure Assessment (SOFA) or modified SOFA, as well as predicted 1- or 5-year mortality. Attending emergency physicians reviewed charts to determine likely near-term mortality and reported their confidence (0-100) in this decision. Descriptive statistics were used to characterize the study cohort. Fixed effects linear regression was used to model the effect of race on priority score.

Results: Eight hospitals each contributed between 15 and 54 patients for a total cohort size of 257, of whom 130 (50.6%) were white, 52 (20.2%) Black, and 43 (16.7%) Hispanic. Nearly half (47.1%) had a priority score of 1 and 19.8% scored 2, such that 66.9% were in the top priority category for resource allocation. 9.4% had comorbidities indicating likely 5-year mortality, while 14.8% had conditions thought to predict death within 1 year. Reviewers were uncertain about these determinations, with an average confidence of only 48.2-68.0% depending upon the comorbidity. In the fixed effects model, Hispanics had an average priority score 0.81 points lower than whites (95% CI -1.20,-0.45); no difference was found between Black patients (0.3, 95%CI -0.20,0.80) and white patients.

Conclusion: In this diverse, region-wide cohort of critically ill patients, few meaningful racial differences were identified in the prioritization of patients under existing crisis standards of care. Hispanic patients may score slightly better than whites, though this may have little real-world significance. Importantly, physicians who would make CSC-based resource allocation decisions had poor confidence in predicting near-term mortality. This raises concern both for clinician moral injury and the fairness of considering comorbid conditions in CSC.

Table 1: Effect of race/ethnicity on crisis standards of care (CSC) priority score

	Difference in priority points from reference	95% CI
White non-Hispanic (n=130)	(reference)	-
Black non-Hispanic (n=52)	0.30	(-0.20) - 0.80
Hispanic (n=43)	-0.81	(-1.15) - (-0.46)
Other (n=13)	0.61	(-0.02) - 1.24
Unknown (n=19)	-0.74	(-0.99) - (-0.49)

Table 1: Management of OUD during ED visits by race, July 29, 2020-March 12, 2021

	MOUD administered n (%)	No MOUD administered n (%)	p-value
White non-Hispanic*[+]	670 (80.3)	164 (19.7)	<0.001
Black non-Hispanic*	113 (35.9)	202 (64.1)	
Hispanic[+]	121 (59.9)	81 (40.1)	
Other	16 (57.1)	12 (42.9)	
Unknown	25 (34.2)	48 (65.8)	

*p<0.001 for white vs Black patients; [+]p<0.001 for white vs Hispanic patients

264 Racial Inequities in Emergency Department Administration of Buprenorphine and Methadone Among Patients With Opioid Use Disorder

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Study Objectives: The COVID-19 pandemic has exacerbated longstanding inequities in opioid use disorder (OUD) that reflect multiple facets of structural racism. In Massachusetts, opioid overdose deaths in 2020 rose by nearly 70% in Black men compared to just 5% overall. Emergency department (ED) visits in people with OUD may represent key touchpoints for overdose prevention. Although racial inequities in buprenorphine and methadone maintenance initiation, dosing, and retention have been well documented, less is known about the administration of medications for opioid use disorder (MOUD, buprenorphine and methadone), in the ED. ED leadership initiated an internal review to explore racial equity in multiple clinical quality metrics, including frequency of MOUD administration in patients with OUD.

Methods: Retrospective data were analyzed for quality improvement (QI) purposes. Patients presenting to the ED with OUD July 29, 2020-March 12, 2021 were identified via ICD-10 codes. Patient demographics and MOUD administration were explored using descriptive statistics; c^2 tests compared the frequency of MOUD administration by race. An intensive QI intervention to improve MOUD utilization will be delivered to all ED prescribers in June 2021. The intervention includes content on racial inequities in OUD treatment and factors that drive them, including provider bias, reasons for mistrust of the medical system among patients of color, and structural barriers to OUD treatment and retention. Through educational sessions for providers, transparency of data of current MOUD trends in the ED, and structured on-shift reminders by ED pharmacists, we plan to improve provider-patient communication and MOUD utilization in the ED. The QI initiative will be followed by a three-month monitoring period (July-September 2021) to evaluate for changes in MOUD administration.

Results: A total of 998 unique patients with OUD were seen for 1452 ED visits. Documented race was 56.7% White, 21.5% Black, 13.5% Hispanic, 1.7% Other, and 6.6% unknown. MOUD were administered during 945/1452 visits (65.1%). The likelihood of administration varied significantly by race: 80.3% of White patients received MOUD compared to 35.9% of Black patients, and 59.9% of Hispanic patients (p<0.001, Table 1). Significant differences in treatment were also observed when comparing white and Black patients (p<0.001) and white and Hispanic patients (p<0.001) directly.

Conclusion: Renewed attention to ensuring racial equity in clinical practice prompted an exploration of ED data at our institution, including equitable administration of buprenorphine and methadone in patients with OUD. This QI analysis identified a racial inequity, prompting the development of a QI initiative to improve overall utilization of MOUD, with a specific focus on mitigating observed racial inequities. Data analysis from the post-QI intervention period will be completed prior to presentation at ACEP.

265 A Multi-state Study of Racial Disparities During the United States COVID-19 Pandemic: Opportunities for Prevention and Intervention

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Study Objective: To determine if COVID-19 markers of severity, positive test, and hospitalization, differ among racial groups. Additionally, to examine whether these differences are associated with mortality and to identify predictive variables for potential prevention and intervention.

Methods: This is a retrospective cohort design studying those tested for COVID-19. A multistate model was created using Trinity Health electronic health records in the US (January 1 - June 30, 2020). The primary outcome variable was mortality and secondary outcomes were COVID-19 positivity and hospitalization. Predictive variables included age, sex, race, insurance, income status, BMI, zip code population density and measures of comorbidities using the Charlson Comorbidity Index (CCI). Adjusted treatment effects were estimated using logistic regression.

Results: The data included 181,199 patients of which 18,083 patients (9.95%) were Black and 133,452 (73.2%) were White. COVID-19 testing was positive in 13.7% of African Americans (AA) and 4.97% of Whites. AA patients had higher rates of comorbidities (p < 0.001), lower rates of commercial insurance (p < 0.001) and higher population densities (p < 0.001) as compared to White patients. Unadjusted logistic regression shows that AA patients have higher odds of infection (OR = 3.033, p < 0.001), mortality (1.3% vs 0.8%, OR = 1.656, p < 0.001), and hospitalization (OR = 1.165, p = 0.031) compared to white patients. After adjusting for predictors, the odds of SARS-CoV-2 infection are higher for AA (OR = 1.744, p < 0.001). There is no significant difference in the odds of mortality between AA patients and White patients who were COVID positive (OR = 0.740, p = 0.09), after adjusting for the other predictive variables.

Conclusion: In this large multi-state study of COVID-19 tested patients, African Americans were infected much more often and had greater mortality than Whites before adjusting for covariates. The rate of hospitalization was lower for COVID positive AAs than Whites, and mortality was nearly the same as Whites after adjusting for predictors such as comorbidities. Our study identifies variables associated with COVID-19 morbidity and mortality, highlighting the disproportionate impact of COVID-19 on the African American community. This analysis may provide opportunities to employ preventive medicine approaches and mitigate systemic inequities to improve the health of vulnerable populations.