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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; χ² 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 on MOUD system among patients of color, and structural barriers to OUD treatment and retention.

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 6.0% 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 intervention 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.

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

| Race/Ethnicity        | Difference in priority points from reference | 95% CI         |
|-----------------------|---------------------------------------------|----------------|
| White non-Hispanic    | (reference)                                 |                |
| Black non-Hispanic    | 0.30                                        | (-0.20, -0.80) |
| Hispanic              | -0.81                                       | (-1.15, -0.46) |
| Other                 | 0.61                                        | (-0.02, -1.24) |
| Unknown               | -0.74                                       | (-0.99, -0.49) |

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

| Race/Ethnicity        | 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

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 183,452 (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 = 0.051) 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 AA 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.