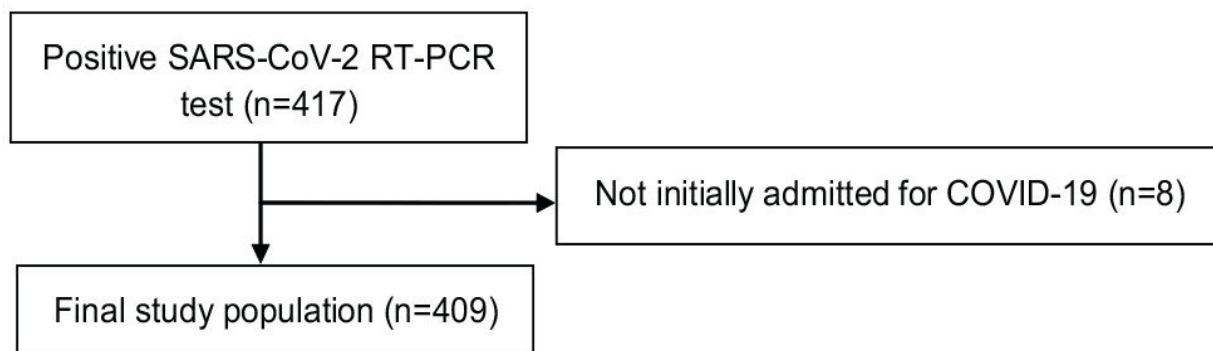


Substance use disorders do not increase the likelihood of COVID-19 deaths, says study

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Study flow. Abbreviations: COVID-19, coronavirus disease 2019; RT-PCR, reverse transcription polymerase chain reaction; SARS-CoV-2, severe acute respiratory syndrome coronavirus 2. Credit: *Substance Abuse: Research and Treatment* (2023). DOI: 10.1177/11782218231160014

New research from Boston Medical Center found that substance use disorders do not increase the likelihood of dying from COVID-19. Published in *Substance Abuse: Research and Treatment*, the study showed that the increased risk for severe COVID-19 in people with SUD that has been seen may be the result of co-occurring medical conditions.

Multiple large cohort studies from early in the pandemic have shown higher rates of hospitalization, intubation, and death from COVID-19 in those with SUD, while other studies found no association between SUD

and COVID-19-related mortality or mixed results depending on substance use pattern.

Given these conflicting data, the Centers for Disease Control and Prevention has classified persons with SUD as suggestive of higher risk for severe COVID-19. The goal of this study was to assess the association between SUD and inpatient COVID-19-related mortality.

"BMC is known for excellent clinical care and innovative research related to substance use disorder. Since the early days of the pandemic, BMC has also been a leader in the treatment of individuals with COVID-19, including persons with complex medical and [social needs](#)," said first author Angela McLaughlin, MD, MPH, an infectious disease fellow at Boston Medical Center.

"These findings showing a similar likelihood of COVID-19-related complications in hospitalized [patients](#) with and without SUD helps expand knowledge of the infectious complications of SUD."

As BMC sees a high proportion of patients who use substances, it was an apt location for the study: almost 14% of the study population had SUD, exceeding the national average of 10.8% in people ages 18 or older. Researchers reviewed medical records of 353 adults without SUD and 56 adults with SUD admitted to Boston Medical Center early into COVID-19 pandemic and compared the likelihood of COVID-19 related complications between individuals with and without [substance use disorders](#).

They compared the relationship between COVID-19 and mortality, clinical complications, and resource utilization.

"Early in the pandemic, BMC developed protocols to closely monitor and quickly manage COVID-19-related complications in all [hospitalized](#)

[patients](#)," said senior author Sabrina Assoumou, MD, MPH, an infectious disease doctor at Boston Medical Center and Assistant Professor of Medicine at Boston University Chobanian & Avedisian School of Medicine.

"The current findings suggest that such an approach might have benefited many patients, including individuals with substance use disorders."

In this retrospective cohort study of patients admitted to a safety net hospital during the early phase of the COVID-19 pandemic, SUD was not associated with the primary outcome of COVID-19-associated inpatient mortality. The secondary analysis showed that those with and without SUD had similar COVID-19-related clinical complications, including secondary infections, renal failure requiring dialysis, acute liver injury, venous thromboembolism, cardiac complications, and the composite "any complications."

Of note, some clinical outcomes such as stroke were very uncommon overall. Likewise, there was no difference in resource utilization secondary outcomes between the two groups. In contrast to other studies, this found similar likelihoods of mechanical ventilation and ICU admission in patients with and without SUD. Although patients with SUD presented to the hospital earlier in their disease course, their total hospital length of stay was ultimately similar to patients without SUD.

Insights such as these into the clinical complications and resource utilization patterns of patients with SUD and COVID-19 can help clinicians anticipate the trajectory of infection and healthcare needs in this vulnerable group.

There were some notable limitations to the study. The results are from a single site, which might limit generalizability of the findings despite the

racial and ethnic diversity of the BMC patient population. Second, the data presented are from the earliest phase of COVID-19 in the United States, so trends may have differed with subsequent waves and as COVID-19 management strategies have evolved over time.

Third, there were no specific controls for socioeconomic factors like medical insurance status or income level, as over 75% of the BMC patient population has public payer insurance (Medicare, Medicaid, or Children's Health Insurance Program) or no insurance. Lastly, differences in COVID-19 outcomes between current versus past SUD could not be detected—this area would benefit from further research.

In conclusion, in this study of hospitalized individuals at an urban safety net hospital with a diverse patient population in the early days of the COVID-19 pandemic, inpatient mortality and morbidity between patients with and without SUD were similar. The findings provide a detailed evaluation of outcomes in a unique patient population that has been disproportionately impacted by COVID-19 and may provide beneficial insights for similar settings across the country.

These results point away from SUD as an independent risk factor for severe COVID-19 and further suggest a focus on medical comorbidities to mitigate the effects of COVID-19. Additional studies are needed to further evaluate for differential outcomes in this high-risk population, particularly in an era of newer COVID-19-directed therapies.

More information: Angela McLaughlin et al, Comparing COVID-19-related Morbidity and Mortality Between Patients With and Without Substance Use Disorders: A Retrospective Cohort Study, *Substance Abuse: Research and Treatment* (2023). [DOI: 10.1177/11782218231160014](https://doi.org/10.1177/11782218231160014)

Provided by Boston Medical Center

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