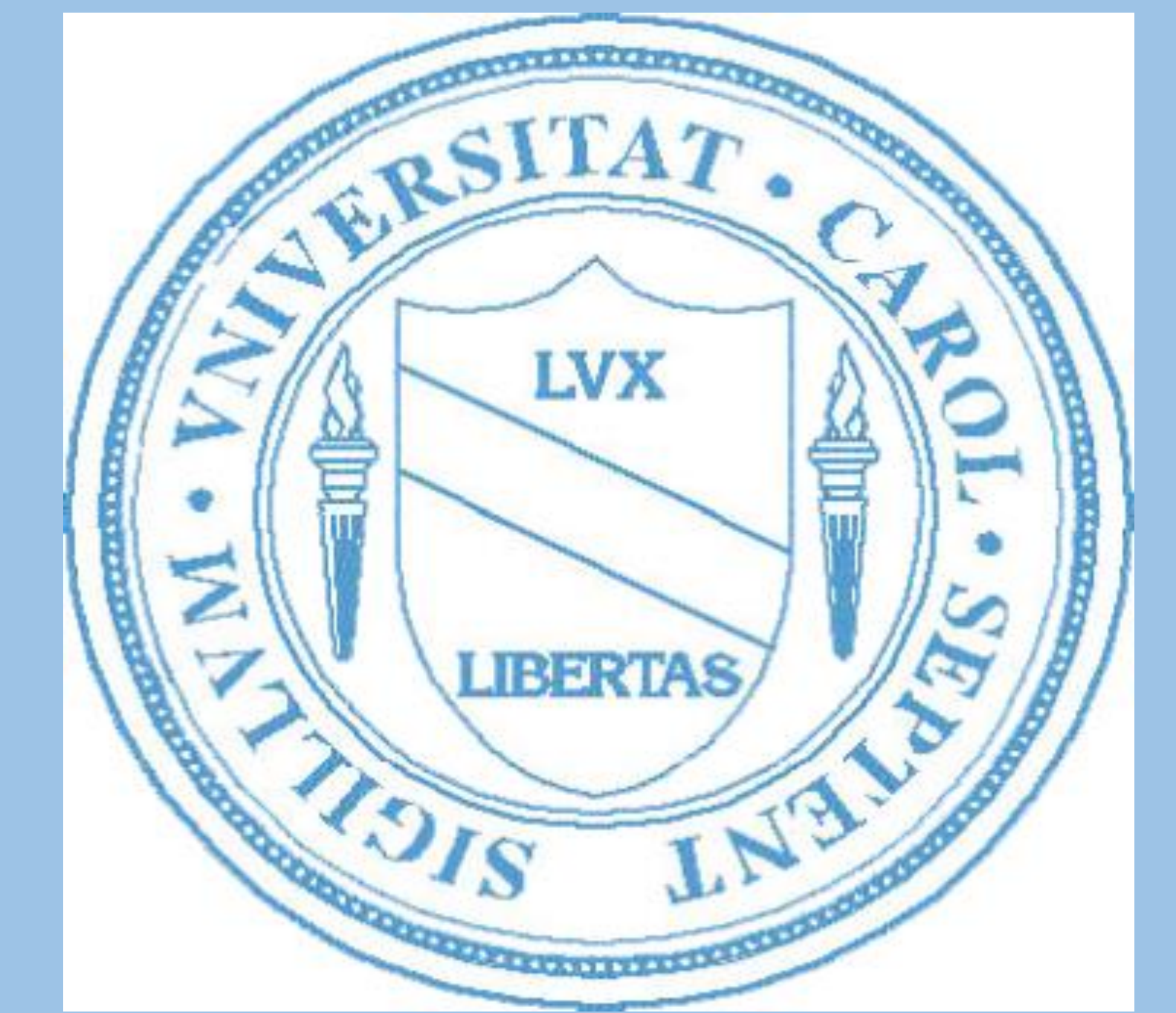


Substance Use and Psychiatric Disorders among admitted burn patients before and after the emergence of the COVID-19 pandemic

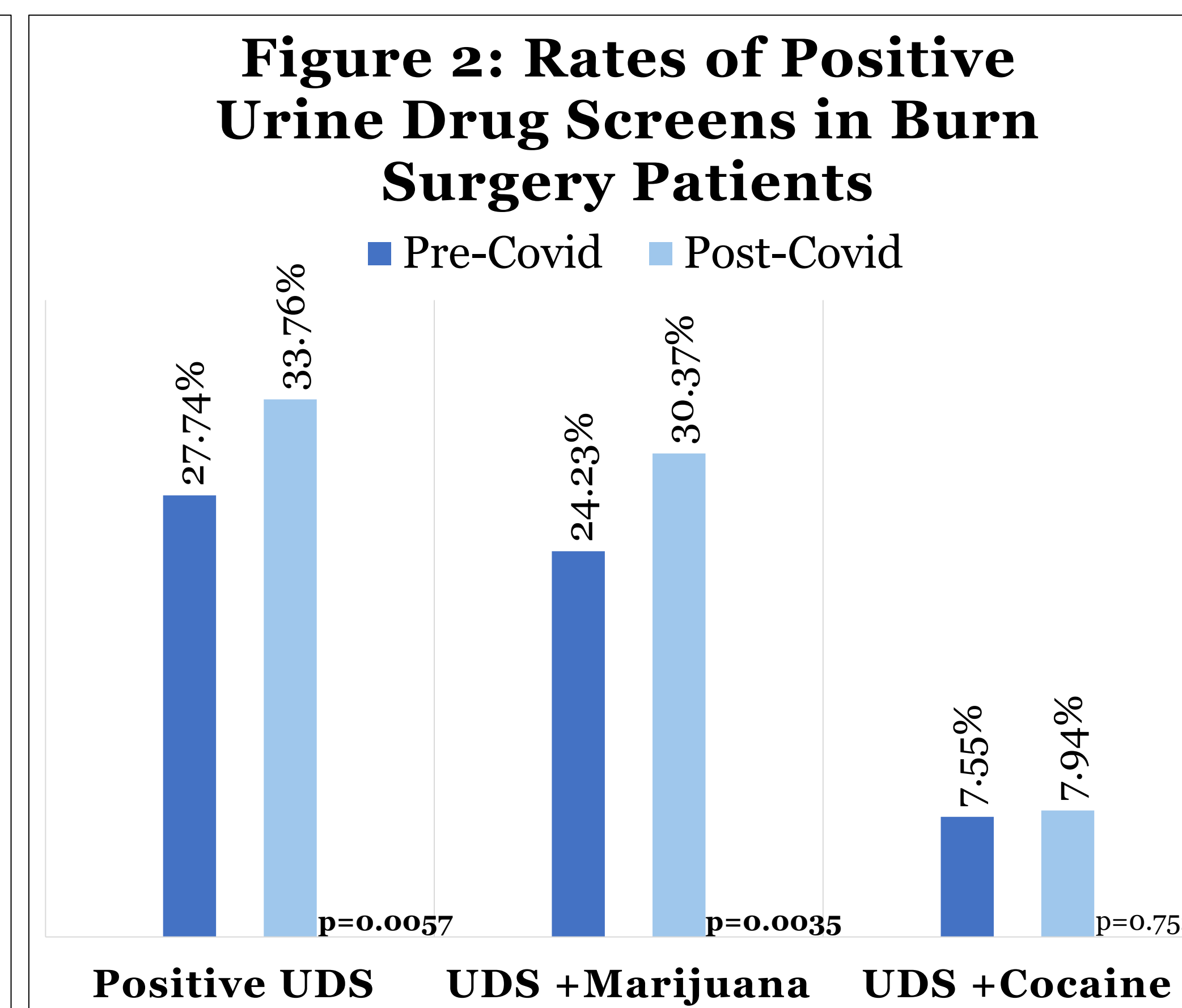
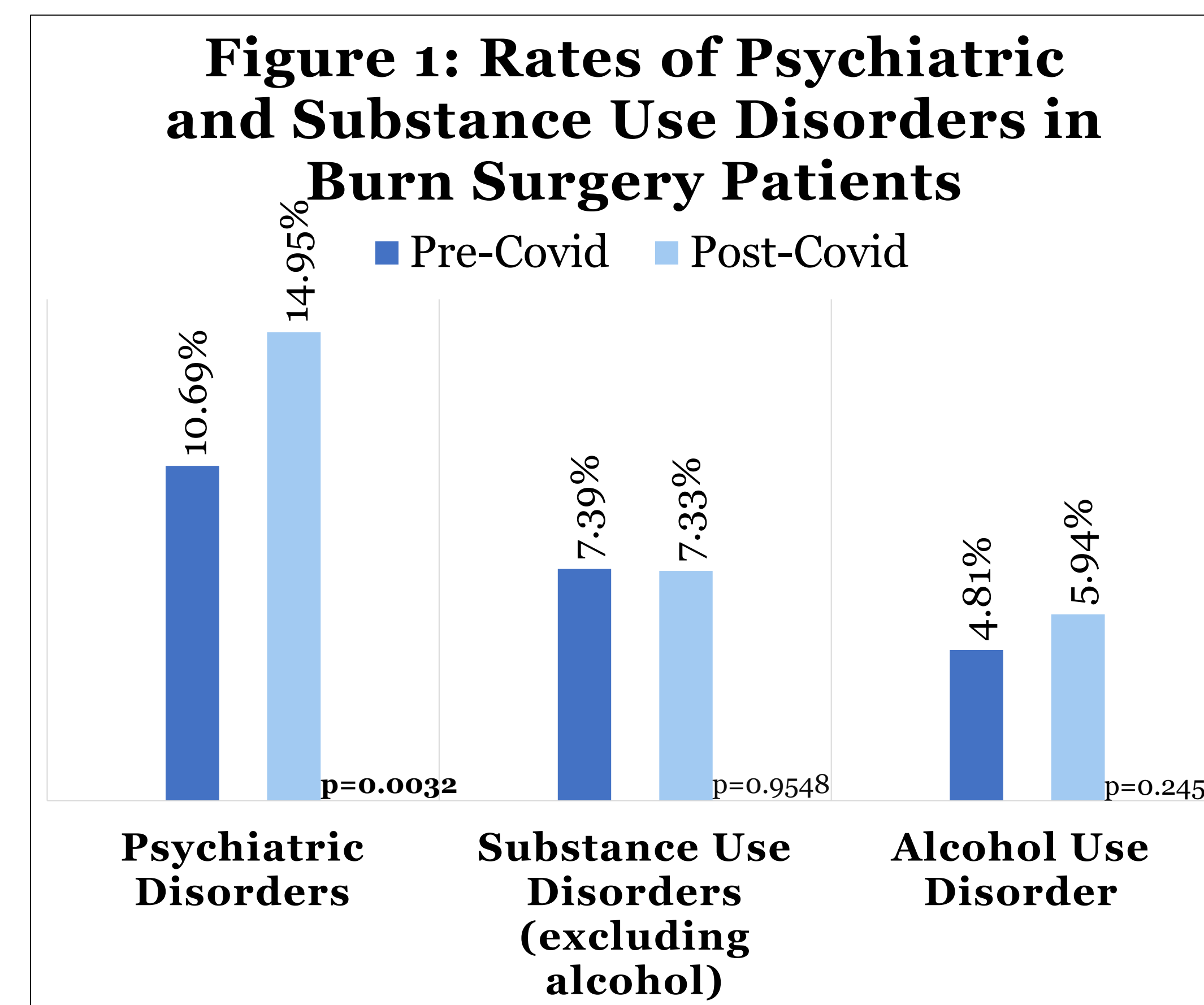


Erica S. Hatch, MD and Sarah L. Laughon, MD
The University of North Carolina at Chapel Hill School of Medicine,
Department of Psychiatry

BACKGROUND

- In 2020, increased prevalence of psychiatric and substance use disorders were observed in trauma surgery populations, with the Covid-19 pandemic posited as the major contributing factor
- Burn patients, like trauma patients, have increased rates of substance use and psychiatric disorders when compared to the general population
- We compared the prevalence of substance use, substance use disorders and mental illness among burn inpatients before and after the onset of the Covid-19 pandemic

RESULTS



HIGHLIGHTED FINDINGS

- Rate of psychiatric disorders was significantly higher in the year following the onset of Covid-19
- Rate of urine toxicology screens positive for marijuana was significantly higher in the year following the onset of Covid-19
- Rates of alcohol and substance use disorders, positive alcohol screens and positive cocaine screens were not significantly different pre- and post-Covid
- Patients with Burn ICU stays had increased rates of substance use disorders and of positive cocaine and marijuana screens in the year following Covid-19 onset

METHODS

DESIGN and POPULATION

- Retrospective descriptive cohort study
- Data obtained from UNC Burn Registry and medical records
- All patients admitted to the UNC Inpatient Burn Surgical Service
- Divided into two groups:
 - Pre-Covid: March 29, 2019 – March 28, 2020 (n=1123)
 - Post-Covid: March 29, 2020 – March 28, 2021 (n=1010)
 - Stay-at-home order in North Carolina went into effect on March 29, 2020.
- Exclusion Criteria: <15 years of age

VARIABLES

- Substance use disorder (excluding tobacco and alcohol) at time of admission
- Alcohol use disorder at time of admission
- Positive blood alcohol level
- Positive urine toxicology screens (marijuana and cocaine)
- Psychiatric disorder (excluding neurocognitive disorders and ADHD) at time of admission
- Standard sociodemographic measures as well as hospital stay and burn-specific characteristics (LOS, ICU, TBSA, etc)

ANALYSIS

- Counts, proportions, standard deviations, chi-squared tests and t tests were used, as appropriate.

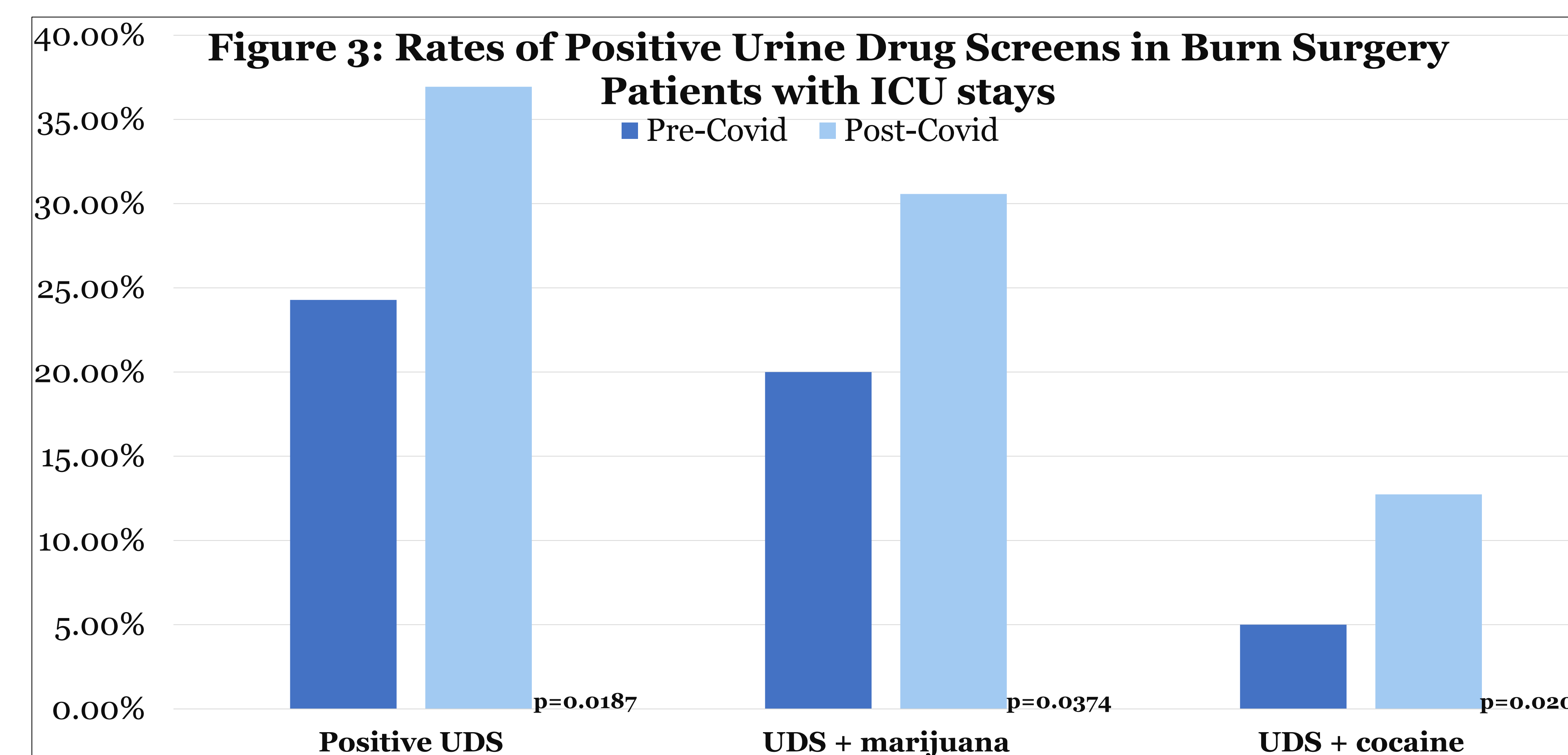


Table 1: Demographics and hospital characteristics among burn patients during defined Pre-Covid and Post-Covid periods

Variable	Pre-COVID (%)	Post-COVID (%)	p-value
Age >65	16.03	17.03	0.5346
Female	35.71	33.37	0.2568
Black	30.37	34.65	0.0350
White	56.01	50.69	0.0319
Hispanic	6.5	6.83	0.7602
Inhalation injury	2.23	2.77	0.4239
Commercial insurance	34.82	20.69	<0.0001
Need for ICU	13.18	17.13	0.0109
Psychiatry consulted	14.16	14.95	0.6053
Required surgery	48.53	53.56	0.0204
Non-burn/skin disease	12.2	9.01	0.0173
Burn	87.36	90.2	0.0386
	Pre-COVID	Post-COVID	p-value
Mean TBSA ± SD	4.03% ± 8.0	5.51% ± 9.9	0.0001
Mean TBSA in ICU pts ± SD	15.90% ± 16.1	15% ± 19.9	0.6599
Mean ICU LOS ± SD	9.04 days ± 15.4	11.13 days ± 18.1	0.0040

CONCLUSION

- Consult psychiatrists and burn surgery teams need to be prepared to manage more patients with marijuana use and mental illness following mass trauma events such as the Covid-19 pandemic
- Clinicians working in Burn ICUs should prepare for increased illicit substance use in their patients following similar events
- Future research is needed to determine whether the differences noted between the pre- and post-Covid groups are part of larger trends of increasing substance use and mental illness

REFERENCES

- Logsetty S et al. Mental health outcomes of burn: A longitudinal population-based study of adults hospitalized for burns. *Burns*. 2016 Jun;42(4):738-44.
- Ohliger E et al. Mental health of orthopaedic trauma patients during the 2020 COVID-19 pandemic. *Int Orthop*. 2020 Oct;44(10):1921-1925.
- McGraw C et al. Patterns of alcohol and drug utilization in trauma patients during the COVID-19 pandemic at six trauma centers. *Inj Epidemiol*. 2021 Mar 22;8(1):24.

ACKNOWLEDGEMENTS

We would like to acknowledge the following people for their help and support: Caitlin Michel, Gary Gala, MD.

DISCLOSURES

Research Support: No financial relationships or conflicts of interest.