

Effect of Substance Use Disorder on Detection and Treatment of COVID-19 in Large County Jail

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BACKGROUND:

- Jails provide ideal conditions for COVID-19 transmission: high population density, unsanitary conditions, inability to socially distance, and limited health care resources.
- Symptoms of withdrawal from substances like opiates can mimic symptoms of COVID-19 and may be either written off by jail staff or underreported by incarcerated people who do not wish to disclose their substance use.
- In Minnesota, the Department of Corrections reported in 2019 that 90% of people incarcerated in their facilities are diagnosed with substance use disorders (SUD).

STUDY AIM:

- Our study aims to describe the presentation and outcomes related in those with COVID-19 and substance use disorder in a large county jail while examining the impact of withdrawal symptoms and buprenorphine administration on detection of COVID-19.

METHODS:

- We retrospectively identified of 289 adults who tested positive via PCR for COVID-19 in 2020 while incarcerated at Hennepin County Adult Detention Center. Data was collected from the jail electronic medical record

COVID symptoms did not significantly differ in those in jail with concomitant SUD compared to those with no SUD.

Characteristic	Active SUD n=37	Non-SUD n=77	p-value	
Symptoms , n (%)	Cough	12 (32%)	31 (40%)	0.42
	Muscle Aches	16 (43%)	18 (23%)	0.03*
	Headache	10 (27%)	15 (19%)	0.36
	Fever	6 (16%)	14 (29%)	0.80
	Chills	11 (30%)	17 (22%)	0.37
	Sore Throat	8 (22%)	22 (29%)	0.43
	Nasal Congestion	10 (27%)	16 (21%)	0.46
	Shortness of Breath	10 (27%)	20 (26%)	0.90
	Loss of Taste or Smell	6 (16%)	17 (22%)	0.47
	Diarrhea	7 (19%)	12 (16%)	0.65
	Nausea	7 (19%)	7 (9%)	0.13
	Fatigue	3 (8%)	0 (0)	0.01*
	Vomiting	4 (11%)	3 (4%)	0.15
Severity, n (%)	Mild	14 (38%)	30 (39%)	0.91
	Moderate	10 (27%)	16 (21%)	0.46
	Severe	0 (0)	0 (0)	1
	Asymptomatic	13 (35%)	31 (40%)	0.60
Isolation Completed in Jail, n (%)	11 (30%)	11 (14%)	0.05	

Table 1: Symptoms and outcomes in people who tested positive for COVID-19 while incarcerated at large county jail with a sub-analysis of those who tested positive within 7 days of becoming incarcerated and who did or did not use illicit substances within 30 days of testing positive for COVID-19.

RESULTS

- The average age was 33 and 82% were male. About one quarter (22%) were identified as experiencing homelessness at the time of incarceration. The most common comorbidities were hypertension (20%), asthma (20%), diabetes mellitus (8%), obesity (6%), chronic kidney disease (4%), and coronary artery disease (2%).
- Of the 289 identified, 114 tested positive within 7 days of incarceration and 175 tested positive more than 7 days after incarceration.
- Of the 114, 37 had identified SUD and 77 had no active SUD. Twenty-three were actively using opioids and 65% of those were started on buprenorphine while in jail.
- In those with covid and SUD, we did not find a difference in reports of withdrawal symptoms (chills, fatigue, body aches, headache, congestion, nausea, vomiting, diarrhea, seizures) in those with and with out SUD (p=0.56).
- 81% of participants with COVID were released prior to completing isolation, increasing the risk for community spread.

FUTURE DIRECTIONS

- Additional studies should continue to examine the overlap of COVID-19 and substance use in carceral settings to improve detection and care.



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