

Infectious Disease Complications in Hospitalized Patients with Opioid Use Disorder at a Southern County Hospital

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Background

Injection drug-use (IDU) has increased over the past two decades and contributes towards the morbidity and mortality of opioid use disorder (OUD).

The southern United States (US) is not currently well-represented in the literature, though this region presents greater barriers to healthcare funding and harm reduction services for patients with OUD seeking care.

This study aims to describe the burden of IDU-associated infections amongst patients with OUD referred to addiction psychiatry at a southern county hospital.

Methods

A retrospective electronic health record review was conducted for patients admitted to a large urban county hospital from February 2018 to February 2020.

Inclusion criteria: active OUD within the last 12 months and an addiction psychiatry consultation.

283 charts were reviewed, and 249 individuals met inclusion criteria.

Objectives

- 1) To compare frequency of baseline patient characteristics between those with and without IDU-associated infections.
- 2) To characterize IDU-associated infections.
- 3) To describe medication for opioid use disorder (MOUD) uptake in this group.

Limitations

Single-site descriptive study.

Lack of conclusive cultures for identification of microorganisms associated with skin and soft tissue infections (SSTIs).

Characteristic	All Patients (N = 249)	IDU-Associated Infection (N = 131)	No IDU-Associated Infection (N = 118)
Age – yr	40.0 ± 13.1	38.8 ± 12.1	41.4 ± 13.9
Gender (Male) – no. (%)	160 (64.3)	86 (65.6)	74 (62.7)
Race/Ethnicity – no. (%)			
Non-Hispanic White	120 (48.2)	61 (46.6)	59 (50.0)
Non-Hispanic Black	43 (17.3)	23 (17.6)	20 (16.9)
Hispanic	85 (34.1)	46 (35.1)	39 (33.1)
Housing (Stable) – no. (%)	113 (45.4)	47 (35.9)	66 (55.9)
Insurance Status – no. (%)			
Private	10 (4.0)	3 (2.3)	7 (5.9)
Medicaid	44 (17.7)	14 (10.7)	30 (25.4)
Medicare	19 (7.6)	9 (6.9)	10 (8.5)
Self-Pay/Charity	174 (69.9)	105 (80.2)	69 (58.5)
Substance Use – no. (%)			
Stimulants	175 (70.3)	100 (76.3)	75 (63.6)
Tobacco	193 (77.5)	107 (81.7)	86 (72.9)
Alcohol	67 (26.9)	31 (23.7)	36 (30.5)
Cannabis	74 (29.7)	36 (27.5)	38 (32.2)
Sedatives	73 (29.3)	36 (27.5)	37 (31.4)

	All Patients (N = 249)	IDU-Associated Infection (N = 131)	No IDU-Associated Infection (N = 118)
Acute Infection – no. (%)			
Skin and Soft Tissue Infection	121 (48.6)	106 (80.9)	13 (11.0)
Pneumonia	21 (8.4)	12 (9.2)	9 (7.6)
Osteomyelitis	18 (7.2)	15 (11.5)	3 (2.5)
Endocarditis	13 (5.2)	9 (6.9)	4 (3.4)
Bacteremia	41 (16.5)	33 (25.2)	8 (6.8)
Epidural Abscess	1 (0.4)	1 (0.8)	0 (0)
Necrotizing fasciitis/myositis	4 (1.6)	4 (3.1)	0 (0)
Fungemia	5 (2.0)	3 (2.3)	2 (1.7)
≥ 1 infection	160 (64.3)	131 (100)	29 (24.6)
Chronic Infection – no. (%)			
Hepatitis C	82 (32.9)	45 (34.4)	37 (31.4)
HIV	24 (9.6)	14 (10.7)	10 (8.5)

Findings

In contrast to other regions of the US, SSTIs were the most common type of IDU-associated infection among hospitalized patients with OUD, which may reflect greater black tar heroin availability in the southern US.

Those with IDU-associated infections were less likely to be taking MOUD before hospitalization (7.6% vs 32.2%), however, new MOUD uptake was higher among patients with IDU-associated infections (81.7% vs 50.8%) suggesting that hospitalization can be an effective context in which to initiate substance use treatment.

Microorganism	Count (Percentage)
Gram-positive cultures	
Methicillin-Resistant Staphylococcus aureus	31 (23.7)
Methicillin-Susceptible Staphylococcus aureus	28 (21.4)
Coagulase-negative Staphylococcus spp.	7 (5.3)
Other Streptococcus spp.	39 (29.8)
Clostridium spp.	7 (5.3)
Enterococcus spp.	4 (3.1)
Other Gram-positives	18 (13.7)
Gram-negative cultures	
Klebsiella pneumoniae	6 (4.6)
Pseudomonas aeruginosa	3 (2.3)
Proteus spp.	3 (2.3)
Other Gram-negatives	14 (10.7)
Other	
Candida spp.	7 (5.3)
Culture positivity	
Monomicrobial infections	52 (39.7)
Polymicrobial infections	30 (22.9)
Culture negative infection	49 (37.4)

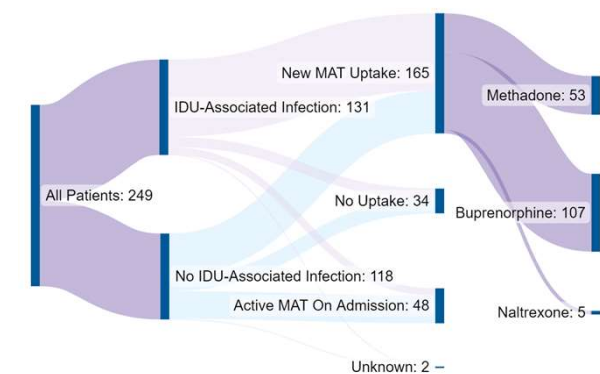


Figure 1: MOUD Uptake