

Stimulant use and adverse outcomes in hospitalized people using opioids with infections



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Background

- Combined opioid and methamphetamine use is prevalent in King County, Washington, and associated with worse health outcomes (1,2).
- People who inject drugs (PWID) are at higher risk for severe infections, including bone and joint infections.
- In hospitalized patients who use opioids and have infections, there is limited data to show that coexisting stimulant use is associated with worse treatment outcomes (3).

Methods

- **Study design:** Secondary analysis of a retrospective cohort of adults with recent self-reported injection drug use and clinically diagnosed bone and joint infection who were admitted to a university-affiliated urban teaching hospital in King County, Washington, between 2019-2021 (4).
- **Independent variables:** Combined opioid and stimulant use versus opioid use alone.
- **Outcome measures:** Infection treatment failure at 90 or 180 days, loss to follow-up at 180 days, and patient-directed discharges.
- **Statistical analyses:** T-tests and chi-squared tests were used to compare demographics between groups. Univariate logistic regression was used to assess associations between baseline co-existing stimulant use and outcomes.

Results

Table 1: Baseline demographics and clinical characteristics of hospitalized PWID with bone and joint infections using opioids (n=77).

Characteristic	Opioid Use Only (n=33)	Opioid and Stimulant Use (n=44)	p-value*
Partial Oral Treatment, n (%)	30 (91%)	36 (82%)	0.34
Age in years, mean (SD)	45 (11)	44 (12)	0.62
Female sex, n (%)	13 (39%)	17 (39%)	1.00
White, n (%)	28 (85%)	37 (84%)	0.81
Homeless, n (%)	14 (42%)	24 (55%)	0.36
MOUD in the hospital, n (%)	29 (88%)	34 (77%)	0.37

Table 2: Clinical outcomes of hospitalized PWID with bone and joint infections, by opioid use alone versus opioid plus stimulant use.

Outcome	Opioid Use Only (n=33)	Opioid and Stimulant Use (n=44)	p-value
Treatment failure, 90 days, n (%)	8 (24%)	16 (36%)	0.26
Treatment failure, 180 days, n (%)	9 (27%)	17 (39%)	0.30
Loss to follow-up, n (%)	10 (30%)	17 (39%)	0.45
Patient-directed discharge, n (%)	1 (3%)	11 (25%)	0.01

Table 3: Associations between stimulant use and adverse treatment outcomes among PWID with opioid use who are hospitalized for bone and joint infections.

Outcome	OR (95% CI)	p-value
Treatment failure, 90 days	1.79 (0.65-4.88)	0.26
Treatment failure, 180 days	1.68 (0.63-4.46)	0.30
Loss to follow-up	0.69 (0.26-1.80)	0.45
Patient-directed discharge	10.67 (1.30-87.46)	0.03

Conclusions

- In this sample of PWID hospitalized for bone and joint infections with opioid use, the majority of patients (57%) used both opioids and stimulants.
- Combined opioid and stimulant use was associated with higher risk of patient-directed discharge.
- There was no statistically significant association between combined opioid and stimulant use and failure of treatment for infection or loss to follow-up. However, interpretation limited in context of small sample size.
- These findings suggest the need for interventions to address stimulant use for hospitalized patients with opioid use and severe infections to improve outcomes of infection treatment.

References

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