Optimizing Buprenorphine Initiation for Opioid Use Disorder in the Inpatient Setting: A Retrospective Chart Review

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SCHOOL OF PHARMACY

BACKGROUND

The past decade has seen a shift in the illicit drug supply, which now predominantly contains high-potency synthetic opioids (HPSOs) such as fentanyl. **Opioid use disorder (OUD) treatment must be adjusted to match patient needs.**

The DEA "X" waiver has been eliminated, allowing any provider with DEA registration to prescribe buprenorphine products for OUD. While exciting for expanding access, it is crucial that healthcare teams are prepared to use buprenorphine appropriately. **There is a need for more data to develop effective buprenorphine dosing protocols.**

The OUD treatment guidelines from ASAM and SAMHSA have not been updated since 2020 and 2021, respectively. For initiation/stabilization in the context of OUD withdrawal, these guidelines recommend 2-4 mg/dose of transmucosal buprenorphine (max 24 mg/day). **Recent data suggest higher-than-traditional doses of buprenorphine may be needed for successful treatment, especially considering exposure to HPSOs.** The Medical Stabilization Program at Memorial Hospital in Belleville, IL (MBH), a 200-bed community hospital, offers support for patients with OUD. **This provides an opportunity to characterize and evaluate the effectiveness of transmucosal buprenorphine dosing strategies in the inpatient setting.**

METHODS

SlicerDicer identified patient encounters at MHB between Jan 1 and Dec 18, 2024, that included administration of transmucosal buprenorphine/naloxone or buprenorphine

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Encounters were further assessed via manual chart review for inclusion and data collection; all data recorded in Microsoft Excel

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The present data serve to characterize buprenorphine dosing practices at this institution and can be used as a comparator for assessing the anticipated standard dosing order set, once available

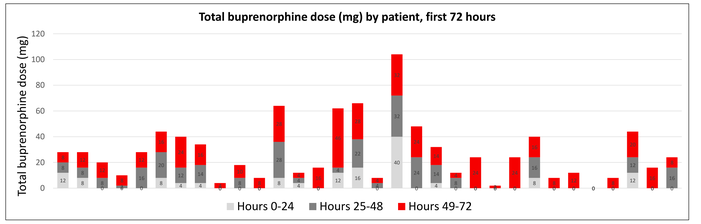
Inclusion Criteria
- 18+ years old
- Presenting in moderate to severe opioid withdrawal: Clinical Opiate Withdrawal Scale (COWS) score >12 or patient stating they are experiencing moderate to severe withdrawal
- Received at least one dose of transmucosal buprenorphine

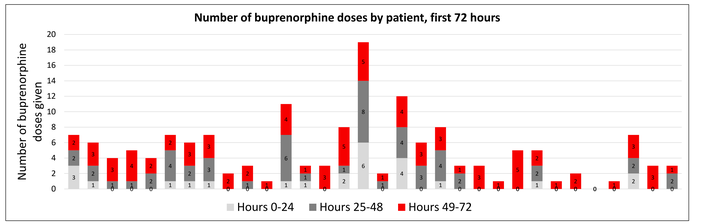
Exclusion Criteria
- Encounter < 72 hours
- Significant comorbid medical or psychiatric illness
- Need substantial amounts of benzodiazepines or barbiturates
- Child-Pugh class C hepatic failure
- Received a buprenorphine transdermal patch
- Exposure to methadone in the last 48 hours

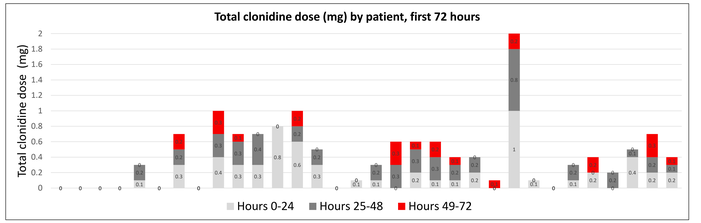
Primary Outcome: COWS score 72 hours following the first dose of buprenorphine

RESULTS

Age (years), median (range)	**39 (30-75)**
Sex, no. (%)	
Female	11 (34)
Male	21 (66)
Race or ethnic group, no. (%)	
White	30 (94)
Black or African American	1 (3)
Other race	1 (3)
Non-Hispanic	32 (100)
Duration of encounter (days), median (range)	4.5 (3-17)
Designation of withdrawal at presentation based on, no. (%)	
Patient-stated withdrawal only	14 (44)
COWS score ≥ 12 and patient-stated withdrawal	18 (56)
First COWS score recorded, no. (%)	
Mild (5-12)	12 (38)
Moderate (13-24)	19 (59)
Moderately severe (25-36)	1 (3)
Buprenorphine product administered, no. (%)	
Buprenorphine/naloxone	30 (94)
Buprenorphine	2 (6)
Initial buprenorphine dose (mg), no. (%)	
2	3 (9)
4	10 (31)
8	19 (59)







Precipitated withdrawal, no. (%)	4 (13)
Naloxone ordered, no. (%)	10 (31)
Naloxone administered (overdose from buprenorphine), no. (%)	0 (0)
COWS score 72 hours after first buprenorphine dose, median (range)	2 (0-9)
Time (hours) after first buprenorphine dose to first COWS score ≤ 12, median (range)	2.4 (0.8-15.9)
Patients receiving ≥ 1 dose of an adjunct medication, no. (%)	32 (100)

CONCLUSIONS

Buprenorphine induction practices at MBH safely and effectively eliminate symptoms of opioid withdrawal in a 72-hour time frame. Variability in dose timing and apparent reliance on PRN doses and adjunct medications, especially early in the encounters. This suggests a role for a standard protocol in optimizing patient care. **Future Impact:** We hope to inform more streamlined buprenorphine initiation protocols and ultimately help optimize and de-stigmatize approaches to OUD treatment at MHB and in the United States. We hope that other facilities can use these results as guidance to implement similar practices.

REFERENCES

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