

Hospital Initiation of Long-Acting Injectable Buprenorphine

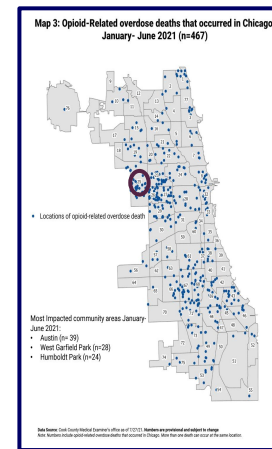
A Retrospective Case Series

Introduction

- Initiation of long-acting injectable buprenorphine (LAIB) has mainly been limited to the outpatient setting, but hospital initiation of LAIB is possible and may increase care engagement for patients with opioid use disorder (OUD).^{1,2,3,4}
- The PCC Addiction Medicine Consult Service (AMCS) at West Suburban Medical Center started a hospital-based LAIB program in August 2022.
- This retrospective case series presents treatment and retention outcomes in patients who started LAIB while hospitalized.

Table 5. Age-Specific Opioid Fatality Rate (per 100,000 capita) by Race/Ethnicity in Illinois, 2022

Race/Ethnicity	Age Group					
	<25	25-34	35-44	45-54	55-64	65+
Non-Hispanic Black	8.6	49.3	76.6	131.3	207.0	69.2
Non-Hispanic White	4.7	36.8	44.9	31.8	20.2	11.1
Hispanic/Latinx	3.6	30.9	26.4	26.7	20.3	7.4
Non-Hispanic Other	2.7	9.7	8.7	4.1	2.2	1.7



Methods

- Study Setting:** 234-bed safety net and community hospital in the Austin neighborhood on the West Side of Chicago, Illinois
- Case Identification:** cases identified using a database maintained by the AMCS team to track LAIB administered in the hospital
- Data Extraction:** manual chart abstraction from inpatient and outpatient medical records of patients who received LAIB while hospitalized between August 4 and December 28, 2022
- Inter-rater reliability calculated using Cohen's Kappa
- Data Analysis:**
- Population characteristics summarized using descriptive statistics
 - Baseline follow-up rate for patients with OUD seen by the AMCS calculated using clinic quality improvement data
 - Follow-up appointment attendance differences compared using Fisher's exact tests for categorical variables and t-tests for continuous variables
 - Associations between socio-demographic variables of interest and follow-up evaluated using simple logistic regression
 - Multivariable logistic regression model constructed including variables with a p-value of 0.20 or less in the univariate analysis and socio-demographic variables of interest regardless of p-value
 - Study approved by WCG IRB

Authors & Disclosures

Clarissa O'Connor, MD,^{1A} Shai Farhi, MD,^{2A} William Ward, MD,^{1A} Ethan Cowan, MD, MS,^{3A} Ruchi Fitzgerald, MD^{4A}

1. West Suburban Medical Center, Chicago, IL, 2. Rush University Medical College, Chicago, IL, 3. Icahn School of Medicine at Mount Sinai, New York, NY, 4. PCC Community Wellness Center, Chicago, IL
A. Nothing to disclose



Results

Demographics

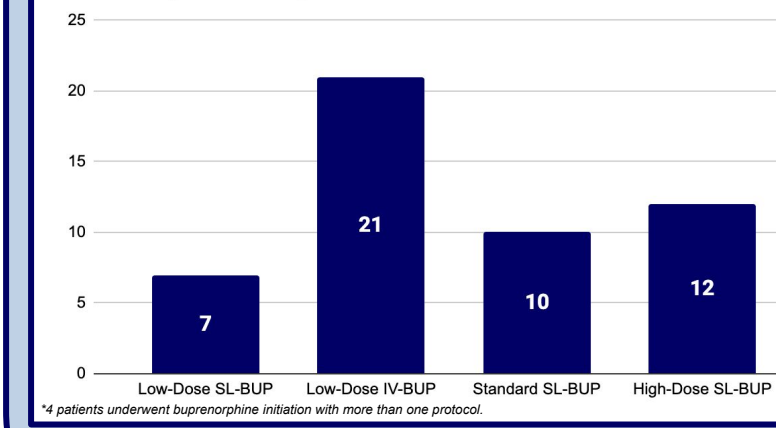
- 46 patients received LAIB while hospitalized, between August 4-December 28, 2022

Age, mean (range)	57 (29-71)
Female, n (%)	24 (52%)
Race, Black, n (%)	42 (91%)
Medicaid, n (%)	39 (86.7%)
Route of use, intranasal, n (%)	41 (89%)

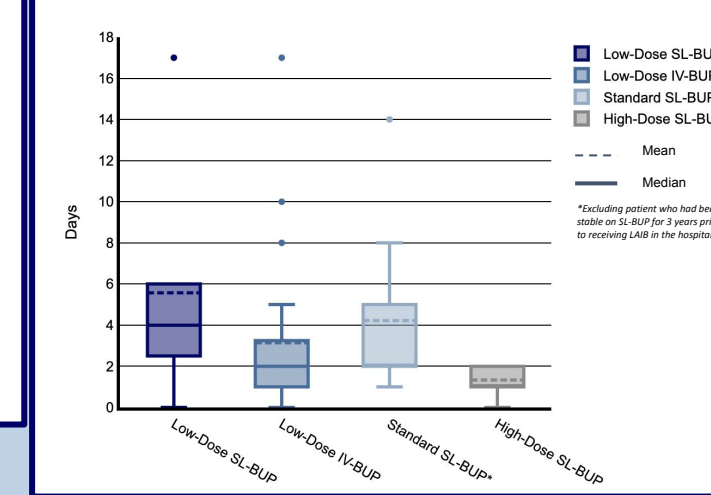
Buprenorphine Initiation

- 4 patients received LAIB on the first day they started buprenorphine, either SL-BUP (sublingual buprenorphine) or IV-BUP (intravenous buprenorphine)
- 2 documented cases of precipitated withdrawal occurred prior to LAIB administration, both after administration of SL-BUP
- No documented cases of precipitated withdrawal occurred after LAIB administration

Buprenorphine Initiation Protocol

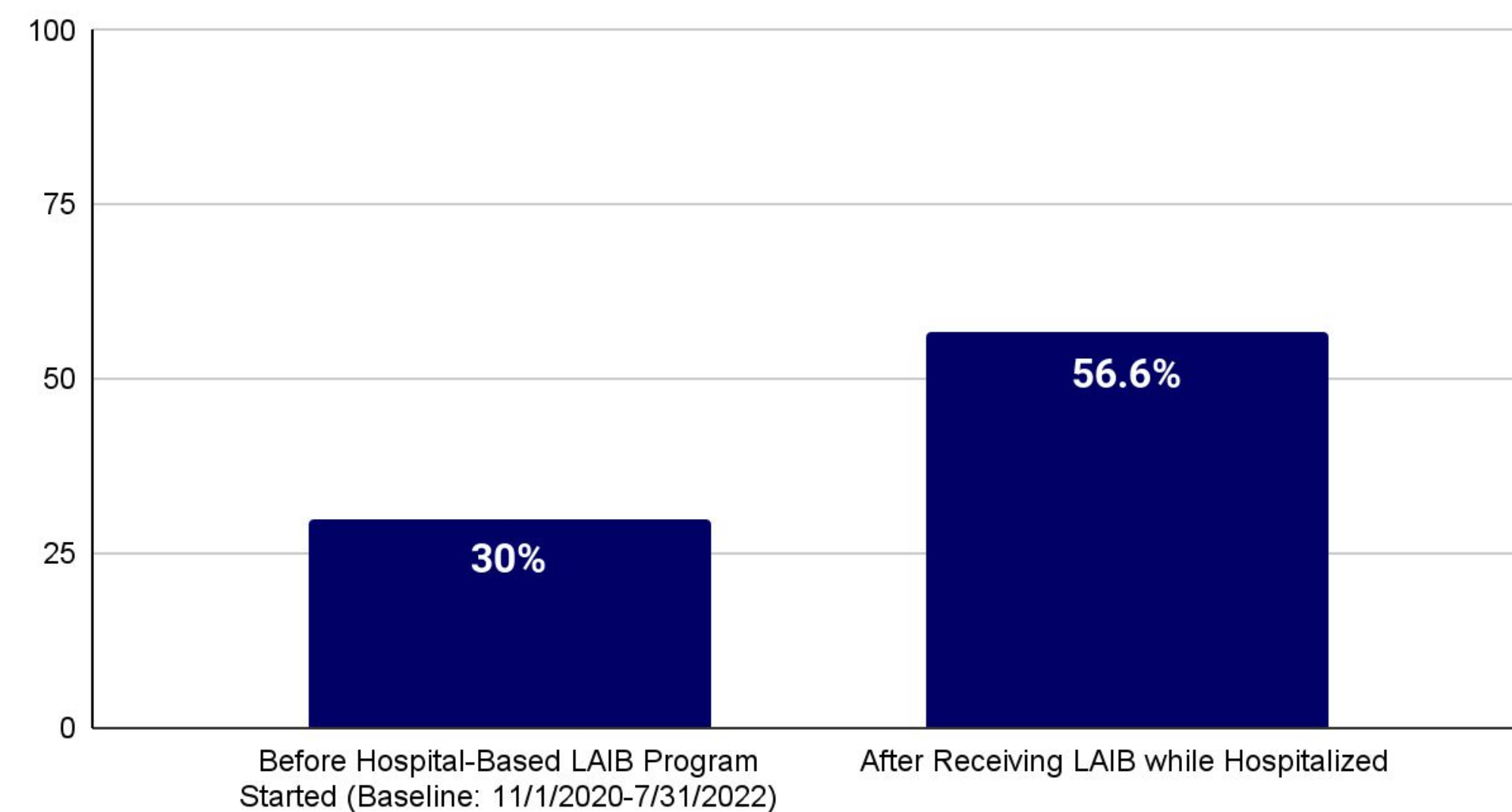


Number of Days Before Receiving LAIB



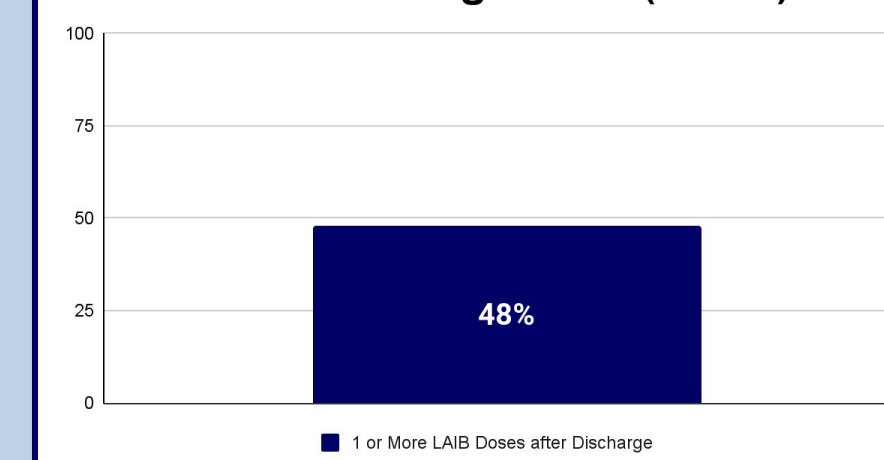
Follow-Up

1-Month Hospital Follow-Up Appointment Attendance (N= 46)



- Univariate analysis: no socio-demographic characteristics or clinical factors were statistically associated with follow-up after discharge
- Variables with p-values <0.2 on univariate analysis: ethnicity, housing status, years of use and overdose
 - None of these variables, in addition to age and gender, were statistically associated with follow-up in the multivariable analysis
- Interrater reliability for the primary follow-up outcome was substantial with a Kappa of 0.67

Post-Discharge LAIB (N= 46)



Conclusions

- Hospital initiation of LAIB is feasible and can be administered within shorter time frames than the recommended 7 days of SL-BUP lead-in.
- Patients who received LAIB while hospitalized were **nearly twice as likely** to attend a follow-up appointment within a month after hospital discharge compared with historical follow-up rates for patients with OUD seen by the AMCS before the hospital-based LAIB program began.
- Further research is needed to investigate hospital-initiated LAIB as a tool to address racial disparities in OUD treatment.
- Our findings should encourage efforts to start and expand hospital-based LAIB programs.

Limitations

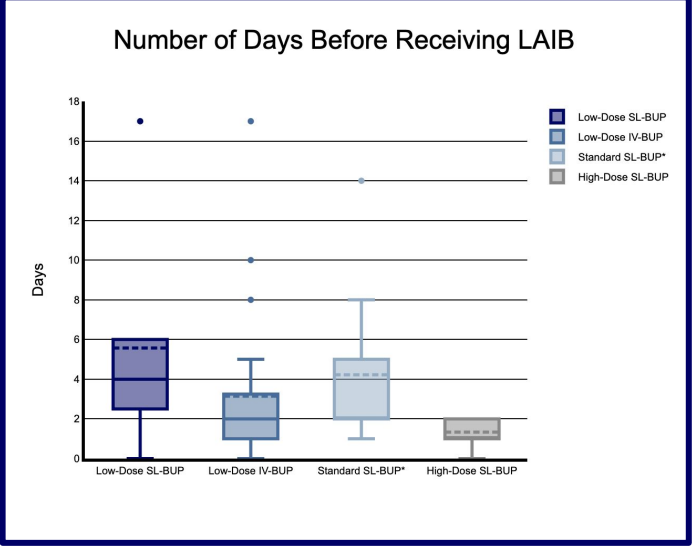
- Small, retrospective sample size
 - Limited ability to evaluate for significant differences between patients who followed up and those who were lost to follow-up
- Majority of patients in our study use heroin via intranasal route, which may limit generalizability to patients who inject heroin or use other opioids.

Acknowledgements

We would like to thank Dorothy Manuel, PCC Wellness Data and Reports Manager, who was instrumental in calculating our baseline follow-up data. We are also grateful to the entire PCC Addiction Medicine Consult Team at West Suburban, whose dedication, expertise and creativity for our patients is always raising the bar.

References

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- Illinois Department of Public Health, Statewide Semiannual Opioid Report, February 2023.



(Brian Cassella/Chicago Tribune)

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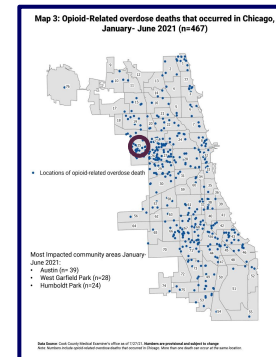
A Retrospective Case Series

Introduction

- Initiation of long-acting injectable buprenorphine (LAIB) has mainly been limited to the outpatient setting.¹
- Hospital initiation of LAIB may increase engagement in care for patients with OUD (opioid use disorder).^{2, 3, 4}
- West Suburban Medical Center (WSMC), located in the Austin neighborhood of Chicago, cares for a predominantly older, majority-Black OUD patient population at increasingly high risk of opioid overdose.⁵
- The Addiction Medicine Consult Service (AMCS) at WSMC began offering LAIB to hospitalized patients in August 2022.
- This retrospective case series aims to report on treatment, initiation and retention outcomes in patients who were started on LAIB while hospitalized.

Table 5. Age-Specific Opioid Fatality Rate (per 100,000 capita) by Race/Ethnicity in Illinois, 2022

Race/Ethnicity	Age Group					
	< 25	25 - 34	35 - 44	45 - 54	55 - 64	65+
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Methods

- IRB-approved retrospective case series of hospitalized patients who received LAIB between August 4 and December 28, 2022
- Manual chart abstraction from inpatient and outpatient medical records
 - Inter-rater reliability calculated using Cohen's Kappa
- Population characteristics summarized using descriptive statistics
- Baseline follow-up rate for patients with OUD seen by the AMCS calculated using clinic quality improvement data
- Follow-up appointment attendance differences compared using Fisher's exact tests for categorical variables and t-tests for continuous variables
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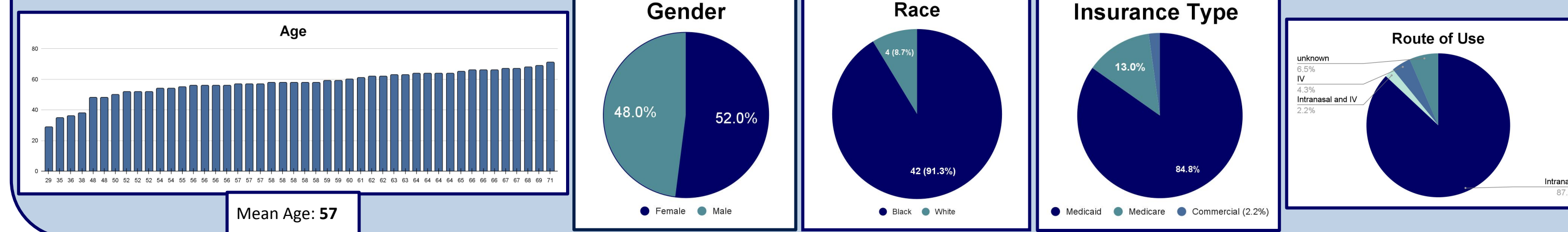
1. West Suburban Medical Center, Chicago, IL, 2. Rush University Medical College, Chicago, IL, 3. PCC Community Wellness Center, Chicago, IL, 4. Icahn School of Medicine at Mount Sinai, New York, NY
A. Nothing to disclose



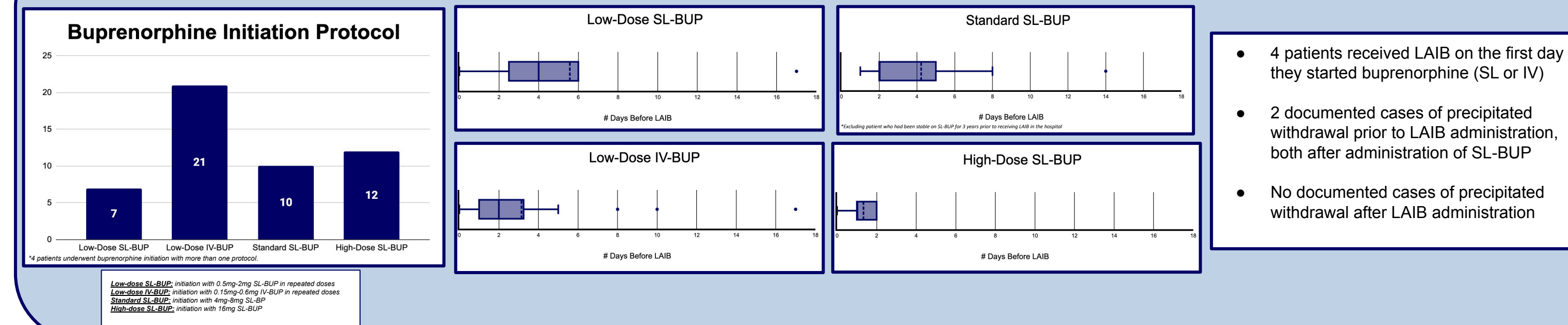
Results

Demographics

- 46 patients received LAIB while hospitalized, between August 4-December 28, 2022



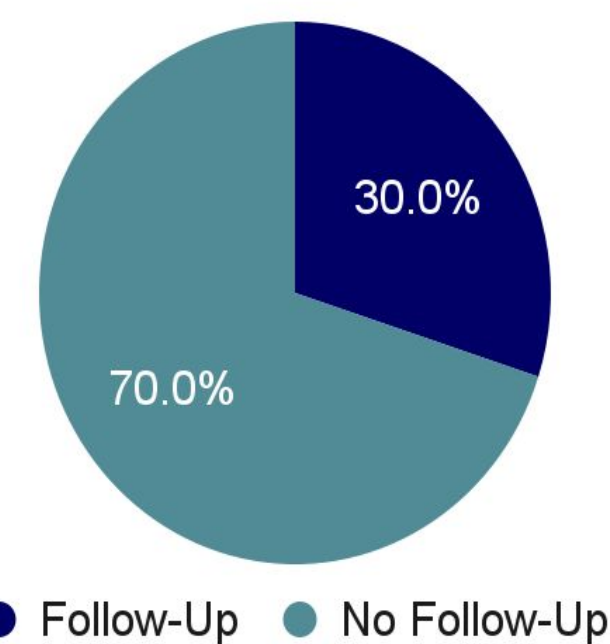
Buprenorphine Initiation



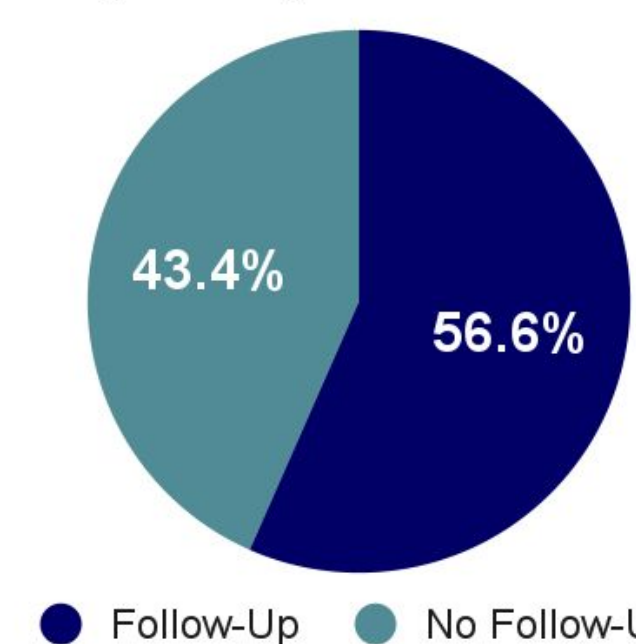
- 4 patients received LAIB on the first day they started buprenorphine (SL or IV)
- 2 documented cases of precipitated withdrawal prior to LAIB administration, both after administration of SL-BUP
- No documented cases of precipitated withdrawal after LAIB administration

Follow-Up

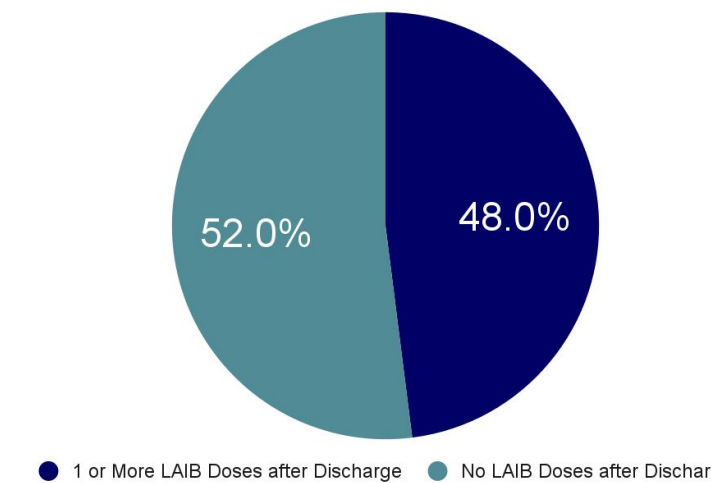
Baseline 1-Month Hospital Follow-Up



Study Hospital Follow-Up



Post-Discharge LAIB



- Univariate analysis: no socio-demographic characteristics or clinical factors were statistically associated with follow-up after discharge
- Variables with p-values <0.2 on univariate analysis: ethnicity, housing status, years of use and overdose
 - None of these variables, in addition to age and gender, were statistically associated with follow-up in the multivariable analysis
- Interrater reliability for the primary follow-up outcome was substantial with a Kappa of 0.67

Conclusions

- Hospital initiation of LAIB is feasible and can be done in shorter time frames than the recommended 7 days of SL-BUP lead-in.
- Patients who received LAIB while hospitalized were **almost twice as likely** to attend a follow-up appointment after hospital discharge compared to patients with OUD seen by the AMCS who did not receive LAIB.
- Further research is needed to investigate the use of hospital-initiated LAIB as a tool to address racial disparities in OUD treatment.
- Our research should encourage efforts to provide LAIB to hospitalized patients.

Limitations

- Small, retrospective sample size
 - Limited ability to evaluate for significant differences between patients who followed up and those who were lost to follow-up
- Majority of patients in our study use heroin exclusively via intranasal route, which may limit generalizability to patients who inject heroin or use other opioids

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References

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