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POSTSURGICAL RETURN TO HOSPITAL AMONG PATIENTS ON LONG-TERM OPIOID THERAPY: A COMPARISON OF INSURANCE STATUS

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Introduction

Patients on long-term opioid therapy prior to surgery face higher postoperative healthcare costs, longer hospital lengths of stay, and complications following surgery compared to those who are opioid-naïve.1 However, the implications of insurance type on surgical outcomes in this patient population remain unclear. Thus, among patients on long-term opioid therapy, this study aims to examine whether patients with Medicaid insurance face increased rates of emergency department (ED) visits and readmissions following surgery compared to those with private insurance.

Materials and Methods

This study was approved by the University of Michigan Institutional Review Board (Ann Arbor, MI). We used the Michigan Surgical Quality Collaborative database to generate a state-wide cohort across 69 hospitals in the state of Michigan. These data were combined with the state's prescription drug monitoring program (PDMP) data with permission for the licensing board. Patients ages 18-64 on long-term opioid therapy who underwent abdominopelvic surgery from November 2016-February 2021 and had Medicaid of Private insurance were included. Long-term opioid therapy was defined as >120 total days of opioids supplied or ≥ 10 prescriptions in the 365 to 1 days prior to surgery.2 Exclusion criteria included death within 30 days, discharge location other than home, and non-Michigan residence. Additionally, given that patients with postoperative complications are more likely to experience ED visits and readmissions, patients meeting this criteria were excluded.3,4 Patients on buprenorphine for treatment of opioid use disorder were also excluded. The primary outcome defined a priori was a composite outcome of either an ED visit and/or readmission within 30 days of discharge from surgery. Multivariable logistic regression and average marginal effect were used to analyze the composite outcome. An additional logistic regression was used to analyze the odds of an ED visit within 30 days of discharge.

Results/Case Report

1212 patients on long-term opioid therapy met inclusion criteria. Overall, 45.6% (n = 553) of patients had Medicaid insurance and 54.4% (n = 659) of patients had private insurance. Across all patients, 12.5% (n = 151) of patients had an ED visit and/or readmission within 30 days of discharge (primary outcome) and 10.1% (n = 122) of patients had an

ED visit. Patients with Medicaid insurance were more likely to be Black or Hispanic and ASA class 3 or higher when compared to those patients with private insurance. After adjustment for baseline characteristics, patients with Medicaid insurance had greater odds of an ED visit and/or readmission (OR: 1.52, 95% CI: 1.05, 2.20) when compared to patients with private insurance. When only ED visits were analyzed, ED visits were more common in those with Medicaid insurance (OR: 1.81, 95% CI: 1.20, 2.72). Compared to privately insured patients, the composite outcome was an average of 4.1 percentage points higher (95% CI: 1.6%-8.8%) in patients with public insurance.

Discussion

Among patients on long-term opioid therapy prior to surgery, patients who are publicly insured had higher odds of experiencing an ED visit or readmission within 30 days of discharge compared to patients with private insurance. This highlights disparities related to insurance coverage in patients on long-term opioid therapy and may suggest differential access to healthcare resources in the postoperative period. Given that patients on long-term opioids are a vulnerable population, this emphasizes the need for further research on the intersection of long-term opioid therapy and insurance status in the postsurgical population and provides opportunities for future policy interventions.

References

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Disclosures

No

Tables / Images

Table 1: Patient Demographics

Patient Characteristics	Total N=1,212	Private N=659	Medicaid N=553	P value
White, non-Hispanic	935 (77.1%)	564 (85.6%)	371 (67.1%)	<0.001
Female	745 (61.5%)	402 (61.0%)	343 (62.0%)	0.715
Tobacco use	477 (39.4%)	201 (30.5%)	276 (49.9%)	<0.001
Cancer	60 (5.0%)	29 (4.4%)	31 (5.6%)	0.335
Obese	646 (53.3%)	356 (54.0%)	290 (52.4%)	0.583
ASA Class				
1 or 2	652 (53.8%)	388 (58.9%)	264 (47.7%)	<0.001
3 or 4 or 5	560 (46.2%)	271 (41.1%)	289 (52.3%)	
90-day preop daily OME (Median, IQR)	27.0 (24.7)	30.0 (24.6)	24.4 (22.8)	0.026

Table 2: Odds of Composite Outcome (Emergency Department Visit and/or Readmission within 30 Days)

	Odds ratio	P value	95% CI	
Medicaid (ref group: Private)	1.521	0.026	1.052	2.200
White, non-Hispanic	0.848	0.432	0.562	1.279
Female	1.471	0.068	0.971	2.228
Tobacco use	1.160	0.422	0.807	1.668
Cancer	0.814	0.633	0.350	1.894
Obese	0.834	0.327	0.581	1.198
ASA class 3, 4 or 5 (ref group: 1 or 2)	1.348	0.116	0.929	1.956
90-day preop daily OME	0.998	0.566	0.993	1.004