

Risk Factors for Opiate Addiction After Spine Surgery

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Abstract:

Introduction: Although the 2–3 months after surgery are critical for the transition from acute postsurgical opioid use to persistent opioid use, little is known about opioid refills during this period. The objective of this study is to determine the independent factors associated with prolonged postsurgical opioid refills at 31–90 days after discharge that may be a key component in contributing to long term opiate addiction.

Methods: This is a single center, retrospective cohort study evaluating 11,087 adult opioid-naïve and non-opioid-naïve patients who underwent spine surgery and were discharged between January 2017 and December 2023. The primary outcomes were opioid refills at 31–60 and 61–90 days after discharge. Data were analyzed using multiple logistic and linear regressions and Fisher's test.

Results: 25.4% and 14.8% of the patients received opioid refills at 31–60 and 61–90 days after discharge, respectively. Among the independent risk factors identified, an opioid refill at 31–60 days was the strongest predictor of a refill at 61–90 days (aOR 6.75, 95% CI 5.93–7.70). The rates of opioid refills at 61–90 and 31–60 days after discharge were linearly correlated ($p < 0.0001$, slope=0.73). An opioid refill at 31–60 days after discharge predicted a refill at 61–90 days with a negative predictive value of 94.3% and a positive predictive value of 41.5%, with NPVs exceeding 90% regardless of preoperative opioid use, procedures, and surgeons. Additionally, an opioid refill at 1–30 days was strongly associated with increased risks of refills at both 61–90 days (aOR 3.15, 95%CI 2.75–3.62) and 31–60 days (aOR 3.98, 95% CI 3.61–4.40) after discharge. Other factors associated with increased risks of prolonged opioid refills included pre-operative