

# SATA | Society for the Advancement of Transplant Anesthesia

## ARTICLE OF THE MONTH

Cron D, Tincopa M, Lee J, Waljee A, Hammoud A, Brummet C, Waljee J, Englesbe M, Sonnenday C. **Prevalence and Patterns of Opioid Use Before and After Liver Transplantation.** *Transplantation.* 2021; 105(1):100-107

### Abstract:

**“Background.** Opioid use in liver transplantation is poorly understood and has potential associated morbidity. **Methods.** Using a national data set of employer-based insurance claims, we identified 1257 adults who underwent liver transplantation between December 2009 and February 2015. We categorized patients based on their duration of opioid fills over the year before and after transplant admission as opioid-naive/no fills, chronic opioid use ( $\geq 120$  d supply), and intermittent use (all other use). We calculated risk-adjusted prevalence of peritransplant opioid fills, assessed changes in opioid use after transplant, and identified correlates of persistent or increased opioid use posttransplant. **Results.** Overall, 45% of patients filled  $\geq 1$  opioid prescription in the year before transplant (35% intermittent use, 10% chronic). Posttransplant, 61% of patients filled an opioid prescription 0–2 months after discharge, and 21% filled an opioid between 10–12 months after discharge. Among previously opioid-naive patients, 4% developed chronic use posttransplant. Among patients with pretransplant opioid use, 84% remained intermittent or increased to chronic use, and 73% of chronic users remained chronic users after transplant. Pretransplant opioid use (risk factor) and hepatobiliary malignancy (protective) were the only factors independently associated with risk of persistent or increased posttransplant opioid use. **Conclusions.** Prescription opioid use is common before and after liver transplant, with intermittent and chronic use largely persisting, and a small development of new chronic use posttransplant. To minimize the morbidity of long-term opioid use, it is critical to improve pain management and optimize opioid use before and after liver transplant.”

COMMENTS MADE BY CROUCH, CARA MD

### Summary:

This article<sup>1</sup> was chosen from the January issue of *Transplantation* because it highlights an important topic that often comes up during patient selection. Despite the increased

notoriety of the opioid epidemic, it's discussion among the transplant community is often limited to the effect on the donor population. It has been noted that over 70% of transplant programs have no written policy regarding opioid use prior to transplantation despite the majority (64%) citing chronic opioid use as a relative contraindication to liver transplantation.<sup>2</sup>

This article identified 1257 adult patients who underwent liver transplantation over a 5.5 year period and stratified them into opioid naïve, chronic opioid use or intermittent use based on opioid prescription refills noted on insurance claims. The authors noted that the majority of patients (54.7%) were opioid naïve while 10.3% met criteria for "chronic use." As would be expected, the authors found that the "prevalence of postdischarge opioid use was highest among patients who were chronic opioid users before transplant and lowest among preoperatively opioid-naïve patients." A notable finding was 4% of patients who were previously stratified as "intermittent" users became chronic opioid users after transplant. The authors point out the limitations with this study, primarily that it is based on commercial insurance claims and may not be fully applicable to the transplant population as a whole; additionally, the claims reviewed were for outpatient opioid refills and thus inpatient use is not accounted for. They also note that there are several programs that consider pre-operative opioid use to be a contraindication to transplant and this may bias the results. Despite these limitations, this study is a good glimpse into the impact that pre-operative opioid use can have on patients who subsequently undergo liver transplant. The opioid epidemic is unlikely to disappear anytime soon and as such, the transplant community should continue to try and understand it's impacts on transplant recipients.

## References:

1. Cron D, Tincopa M, Lee J, Waljee A, Hammoud A, Brummet C, Waljee J, Englesbe M, Sonnenday C. Prevalence and Patterns of Opioid Use Before and After Liver Transplantation. *Transplantation*. 2021; 105(1):100-107
2. Braun H, Ascher N. Opioid Use and Liver Transplantation. *Transplantation*. 2021; 105(1):25-26