

COVID-19 on mental health.

## 5 Utilization of Telehealth Solutions for Patients with Opioid Use Disorder Using Buprenorphine: A Scoping Review

Aileen Guillen; Bharath Chakravarthy; Minal Reddy; Soheil Saadat

**Objectives:** A scoping review was conducted to examine the breadth of evidence related to telehealth innovations being utilized in the treatment of Opioid Use Disorder (OUD) with buprenorphine and its effect on patient outcomes and healthcare delivery.

**Background:** With the opioid epidemic worsening from year to year, there is a critical need to connect with this growing population and get them access to life-saving interventions. Buprenorphine is shown to be associated with lower overdose rates and a decrease in opioid-related acute care, but has historically been underutilized in treatment for OUD. Previous studies have determined that geographical barriers and lack of access to DEA-waivered providers are common obstacles towards starting MAT. Telehealth presents itself as a solution to this discrepancy and is becoming more feasible to integrate into clinical practice.

**Methods:** The authors systematically searched seven databases and websites for peer-reviewed and gray literature related to telehealth solutions for buprenorphine treatment published between 2008 and March 18, 2021. There were 69 articles which met inclusion criteria.

**Results:** According to the reviewed literature, incorporation of telehealth technology with Medication Assisted Treatment (MAT) for OUD is associated with higher patient satisfaction, comparable rates of retention, and an overall reduction in health care costs.

**Conclusion:** Utilization of synchronous videoconferencing has reportedly been effective in increasing access to and usage of buprenorphine by overcoming both geographical and logistical barriers. This has been made possible through the expansion of telehealth technologies and a substantial push towards relaxed federal guidelines, both of which were quickly escalated in response to the COVID-19 pandemic. Future research is needed to fully quantify the effect of these factors; however, the results appear promising thus far and should urge policymakers to consider making these temporary policy changes permanent.

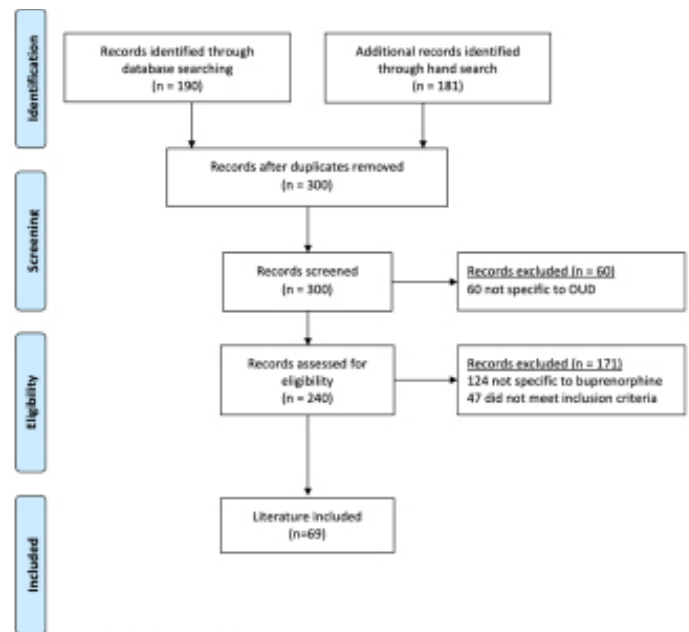


Figure 1. Prisma Flow Diagram.

## 6 Variation in Trauma Team Response Fees in United States Trauma Centers

Arianna Neeki; David Wong; Fanglong Dong; Jan Serrano; Louis P. Tran; Mason Chan; Michael M. Neeki; Pamela R. A. Lux

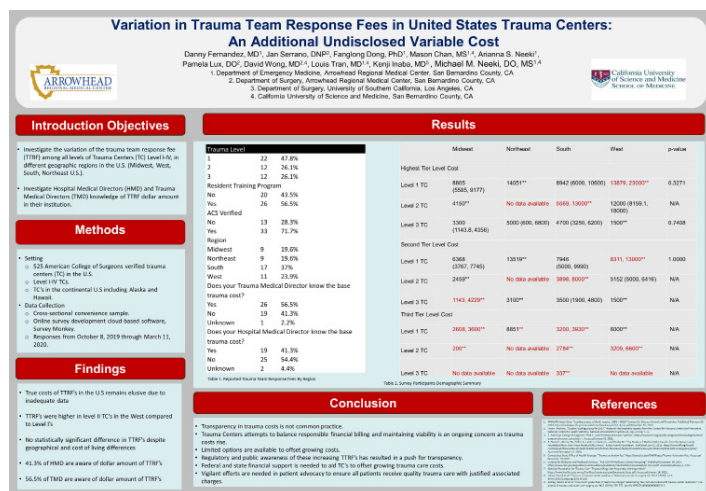
**Objectives:** Investigate the variation of the trauma team response fee (TTRF) among all levels of Trauma Centers (TC) Level I-IV, in different geographic regions in the U.S. (Midwest, West, South, Northeast U.S.).

**Background:** Investigate Hospital Medical Directors (HMD) and Trauma Medical Directors (TMD) knowledge of TTRF dollar amount in their institution.

**Methods:** Setting 525 American College of Surgeons verified trauma centers (TC) in the U.S. Level I-IV TCs. TC's in the continental U.S including Alaska and Hawaii. Data Collection Cross-sectional convenience sample. Online survey development cloud-based software, Survey Monkey. Responses from October 8, 2019 through March 11, 2020.

**Results:** True costs of TTRF's in the U.S remains elusive due to inadequate data. TTRF's were higher in level II TC's in the West compared to Level I's. No statistically significant difference in TTRF's despite geographical and cost of living differences. 41.3% of HMD are aware of dollar amount of TTRF's. 56.5% of TMD are aware of dollar amount of TTRF's.

**Conclusion:** Transparency in trauma costs is not common practice. Trauma Centers attempts to balance responsible financial billing and maintaining viability is an ongoing concern as trauma costs rise. Limited options are available to offset growing costs. Regulatory and public awareness of these increasing TTRF's has resulted in a push for transparency. Federal and state financial support is needed to aid TC's to offset growing trauma care costs. Vigilant efforts are needed in patient advocacy to ensure all patients receive quality trauma care with justified associated charges.



**Figure 1.** Variation in trauma team response fees in United States trauma centers: an additional undisclosed variable cost.

## 7 Analysis of Time-to-Disposition Intervals During Early and Late Parts of a Shift

Anne Grossestreuer; Bryan Stenson; David T. Chiu; Joshua W. Joseph; Lakshman Balaji; Leon D. Sanchez; Peter S. Antkowiak

**Objectives:** To assess whether time-to-disposition is significantly different when a patient is seen by a provider during the early half or late half of a shift.

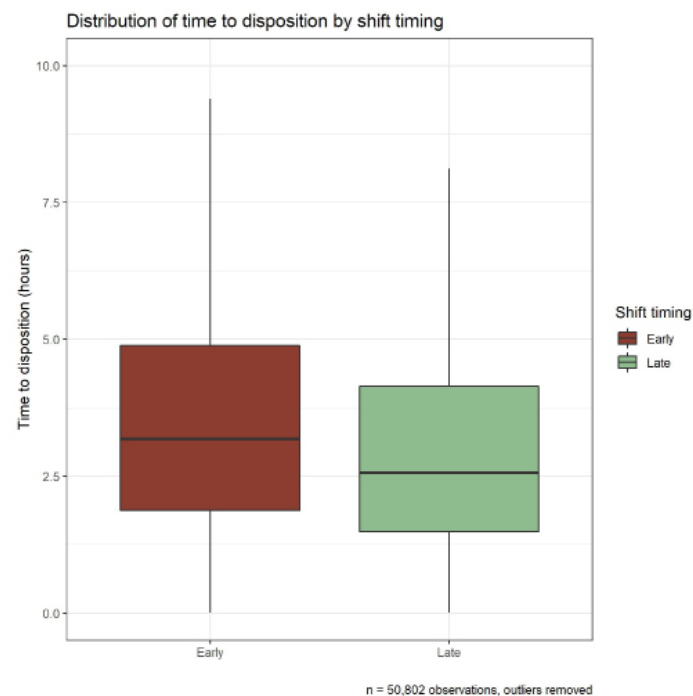
**Background:** Time-to-disposition is an important metric for emergency department throughput. We hypothesized that providers view the shift end as a key timepoint and attempt to leave as few dispositions as possible to the oncoming team, thereby making quicker decisions later in the shift. This study evaluates disposition distribution relative to when patients are

assigned a provider during the course of a shift.

**Methods:** 50,802 cases were analyzed over the one-year study interval. 31,869 patients were seen in the early half of a shift (hours 1-4) and 18,933 were seen in the later half (hours 5+). We ran a linear mixed model that adjusted for age, gender, emergency severity index score, time of day, weekend arrivals, quarter of arrival and shift type.

**Results:** Median time-to-disposition for the early group was 3.25 hours (IQR 1.90-5.04), and 2.62 hours (IQR 1.51-4.31) for the late group. From our mixed model, we conclude that in the later parts of the shift, providers take on average 15.1% less time to make a disposition decision than in the earlier parts of the shift.

**Conclusion:** Patients seen during the latter half of a shift were more likely to have a shorter time-to-disposition than similar patients seen in the first half of a shift. This may be influenced by many factors, such as providers spending the early hours of a shift seeing new patients which generate new tasks and delay dispositions, and viewing the end of shift as a landmark with a goal to maximize dispositions prior to sign-out.



**Figure 1.** Distribution of time to disposition by shift timing.