

# Effects of Opioid Prescribing Laws on Drug Use in Trauma Patients

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## INTRODUCTION

Oklahoma had the 6th highest Opioid Overdose Death Rate in the United States in 2012. The Opioid Epidemic left Oklahoma with insurmountable losses and a solution was gravely needed. The solution in Oklahoma was thought to be Bill 1446, severely limiting the opioid prescribing practices of physicians. However, what many people do not know is that the Opioid Epidemic had already improved significantly by the time the bill passed in Oklahoma. According to the NIH, "In 2017, there were 388 overdose deaths involving opioids in Oklahoma—a rate of 10.2 deaths per 100,000 persons", compared to a death rate of 14.2 deaths per 100,000 persons in 2012. The most significant decline occurred among deaths involving prescription opioids, from 444 deaths in 2012 to 251 deaths in 2017." By this time, Oklahoma was 29<sup>th</sup> in the Opioid Overdose Death Rate rankings.

## OBJECTIVES

Assess the drug use in patients enrolled in the trauma registry in a level II trauma center from November 1<sup>st</sup>, 2017 – October 31<sup>st</sup>, 2019, one year prior and after the implementation of the Oklahoma Bill 1446. Assessing these outcomes will help clinicians better address proven risks and benefits of the new Opioid Prescribing Laws in Oklahoma.

## METHODS

Retrospective Database Search SJMC  
November 1<sup>st</sup> 2017 – October 31<sup>st</sup> 2019

Inclusion Criteria:

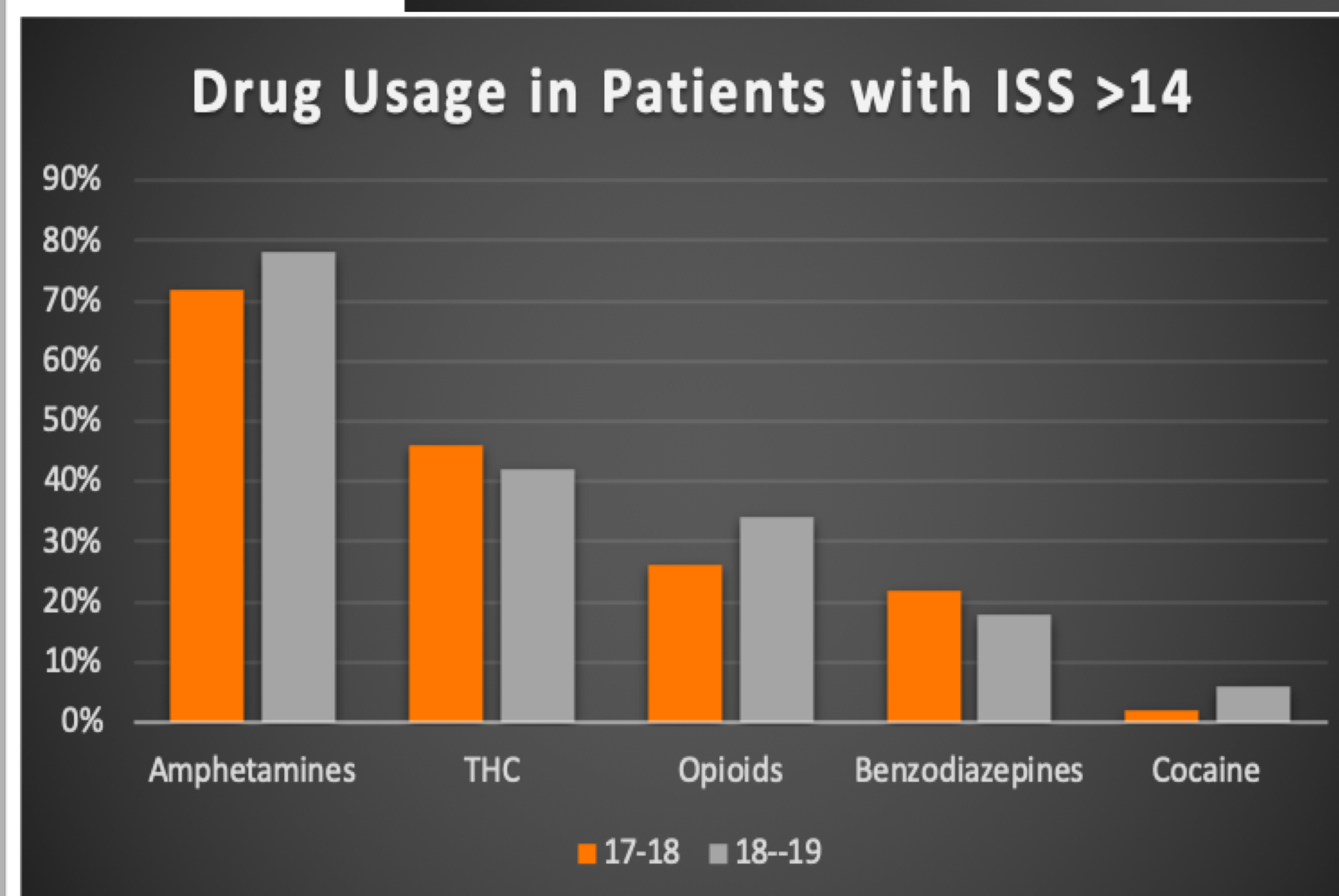
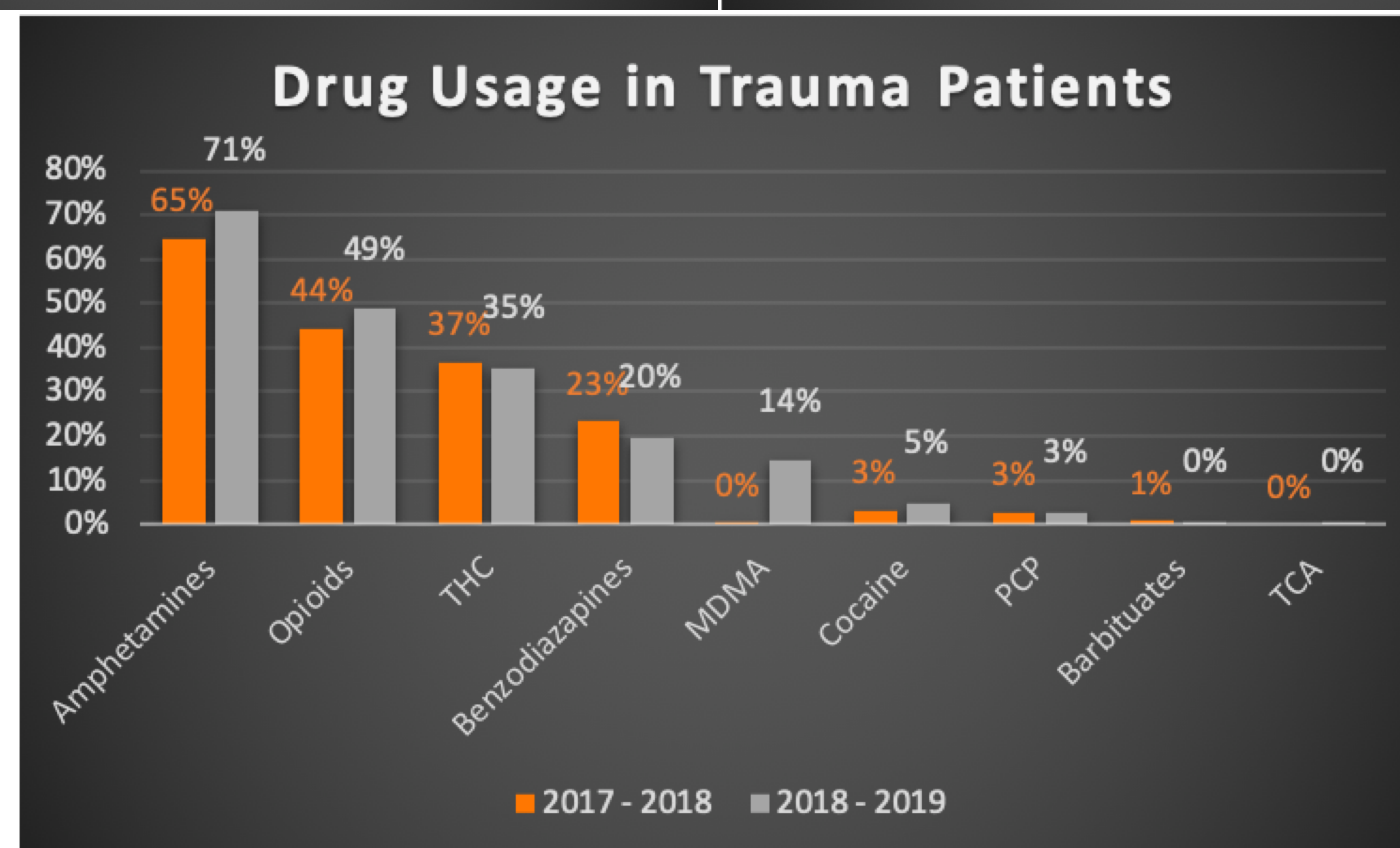
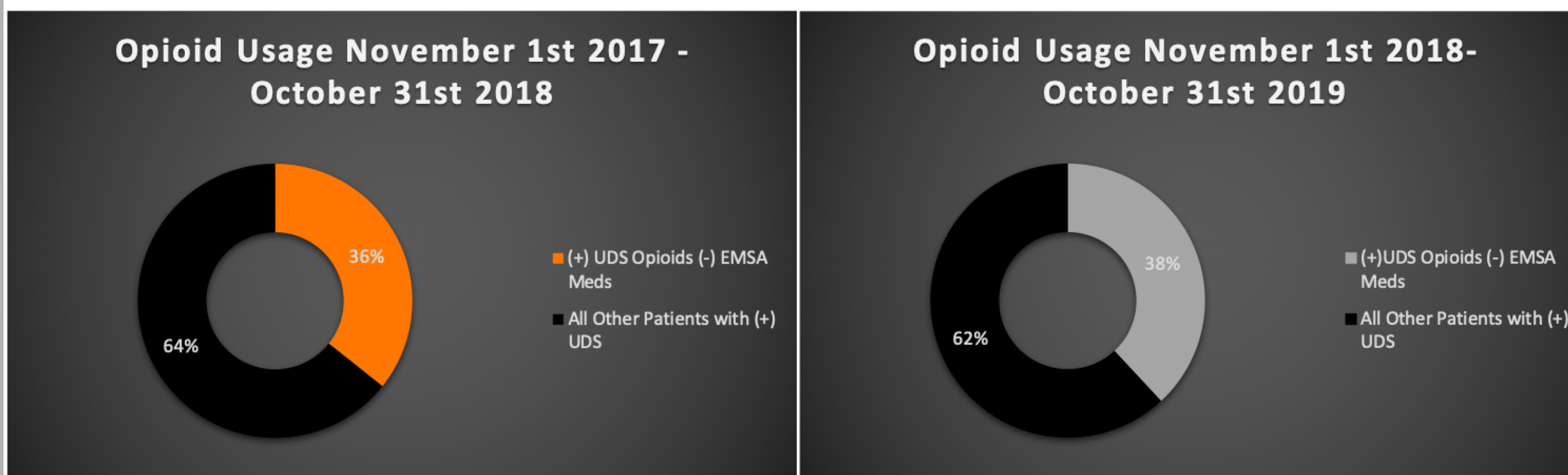
- All Healthy Patients Enrolled in the Trauma Registry
- Positive Urine Drug Screen

Inclusion criteria needed to be enrolled in the trauma registry according to the American College of Surgeons and the National Trauma Data Bank include an injury other than "superficial" and the patient is admitted to the hospital or for surgery.

We chose Injury Severity Scale greater than 14 because patients with an ISS greater than or equal to 15 have a mortality of 10%.

## RESULTS

Trauma Registry Data from St. John's Medical Center  
Comparing Drug Use in Trauma Patients



Name	Odds Ratio	P-Value
Opioid Usage (-) EMSA Meds	1.11	0.52
Drugs Usage in Trauma Patients Opioid	1.13	0.39
Drugs Usage in Trauma Patients AMP	1.12	0.33
ISS>14 AMP	1.20	0.45
ISS>14 Opioid	1.44	0.33
ISS>14 THC	0.99	0.98

## CONCLUSION

Bill 1446's purpose was to combat the Opioid Epidemic. If this was the case and the law was effective then we should have seen a decrease in positive opioid drugs screens in trauma patients. However, there was no statistically significant differences in positive UDS from November 1<sup>st</sup> 2017-October 31<sup>st</sup> 2018 compared to November 1<sup>st</sup> 2018 – October 31<sup>st</sup> 2019 in any of the data pulled from the retrospective database search. We saw a rise in both positive opioid and amphetamine UDS percentages after the bill went into effect. We believe based off of the preliminary data and the findings from the CDC and NIH demonstrated that Oklahoma's Prescription Opioid Problem significantly decreased by the end of 2017. Physicians' opioid prescribing practices changed obviously however, positive opioid and amphetamine UDS percentages increased. We believe patients acquired narcotics illegally based off the combined CDC, NIH data and our own findings. So the question that should be asked "Will this Bill ever have the intended effect on physicians and patients across Oklahoma?"

While these are preliminary findings, we are working on a multi-center retrospective chart review of all patients in the trauma registries while checking the Prescription Monitoring Program to cross reference which patients were previously prescribed opioids during their enrollment.

## REFERENCES

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- Oklahoma Medical Board. "COMPLIANCE AND BEST PRACTICE FOR AN ACT REGULATING THE USE OF OPIOID DRUGS OKLAHOMA SENATE BILLS 1446 & 848." *Oklahoma Medical Board*, Oklahoma Medical Board, 3 June 2019.