



# Patterns of Postoperative Complications Related to Cannabis and Tobacco Usage in Patients Undergoing Facial Fracture Surgeries



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## Background

- Cannabis is the third most used controlled substance in the world.
- Despite widespread use, there is minimal research investigating cannabis usage in patients undergoing facial fracture surgeries.

## Objective

- To evaluate patterns of postoperative complications related to independent marijuana or tobacco use in facial fracture surgeries.

## Methodology

- PearldiverTM was used to identify patients.
- To assess influence of substances on postoperative complications, a logistic regression was performed.

Figure 1. Study selection criteria

Patients undergoing facial fracture surgeries and have used cannabis or tobacco between 2010-2021

(n=26,830)

ICD-9, ICD-10, and CPT code groups

Isolated mandibular fractures  
(n=25,298)

Isolated maxilla fractures  
(n=1,532)



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Independent utilization of  
cannabis or tobacco is  
associated with increased risk  
of post operative  
complications in facial  
fracture surgeries

## Results

- In patients reporting cannabis use, 14 (1.0%) had maxilla fractures and 367 (1.5%) mandible fractures, while in patients reporting tobacco use, 613 (40%) had maxilla fractures and 11,429 (45.2%) mandible fractures.

Table 1. Post operative complications, by substance

	Cannabis Usage		Tobacco Usage	
	OR	95% CI	OR	95% CI
Post-op infection	1.78*	(1.03-2.87)	1.35*	(1.16-2.57)
Fracture non-union	2.27*	(1.51-3.28)	1.46*	(1.29-1.65)
Hardware failure	1.03	(0.57-1.70)	1.15*	(1.01-1.31)
Facial abscess	1	(0.65-1.47)	1.11*	(1.01-1.22)
Debridement	1.13	(0.68-1.77)	1.21*	(1.08-1.36)
Malocclusion	1.25	(0.90-1.69)	1.19*	(1.09-1.29)
Visual disturbance	1.2	(0.92-1.56)	1.14*	(1.07-1.22)

\*p-value < 0.05

## Conclusion

- Using both substances is still associated with increased risk of numerous complications following facial fracture surgeries.
- Additional studies are needed to determine timing to stop using these substances to decrease risk of complications.

## Limitations and Disclosures

- Single institution departmental study
- Retrospective in design
- No disclosures to share
- COMIRB exempt