

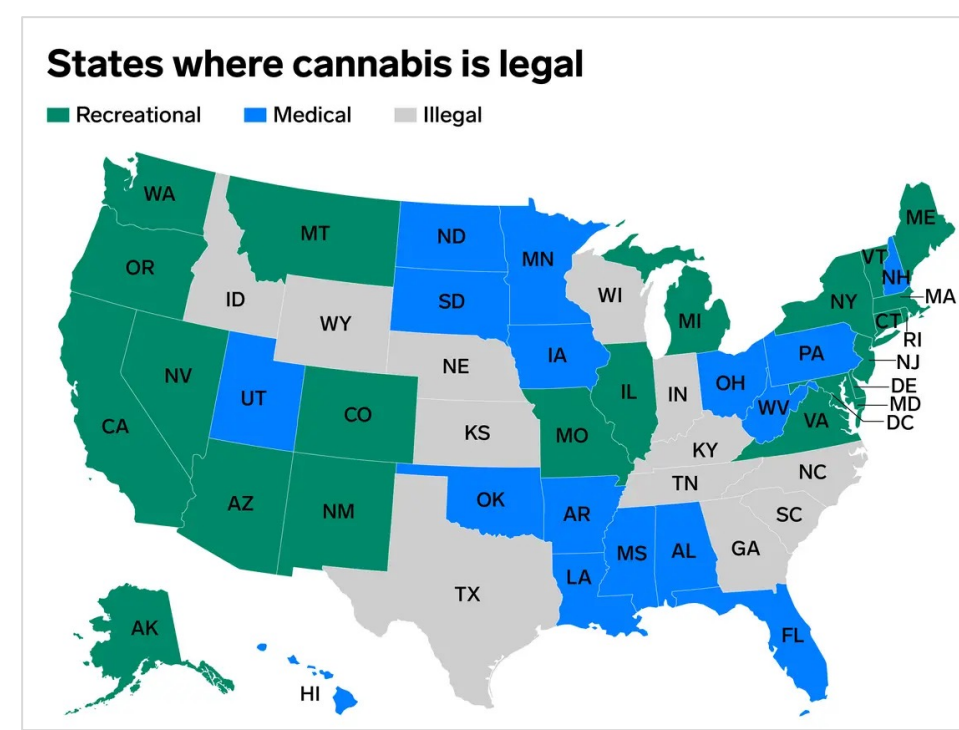
# Patterns of Marijuana Use and Nicotine Exposure in Patients Seeking Elective Aesthetic Procedures

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## Background

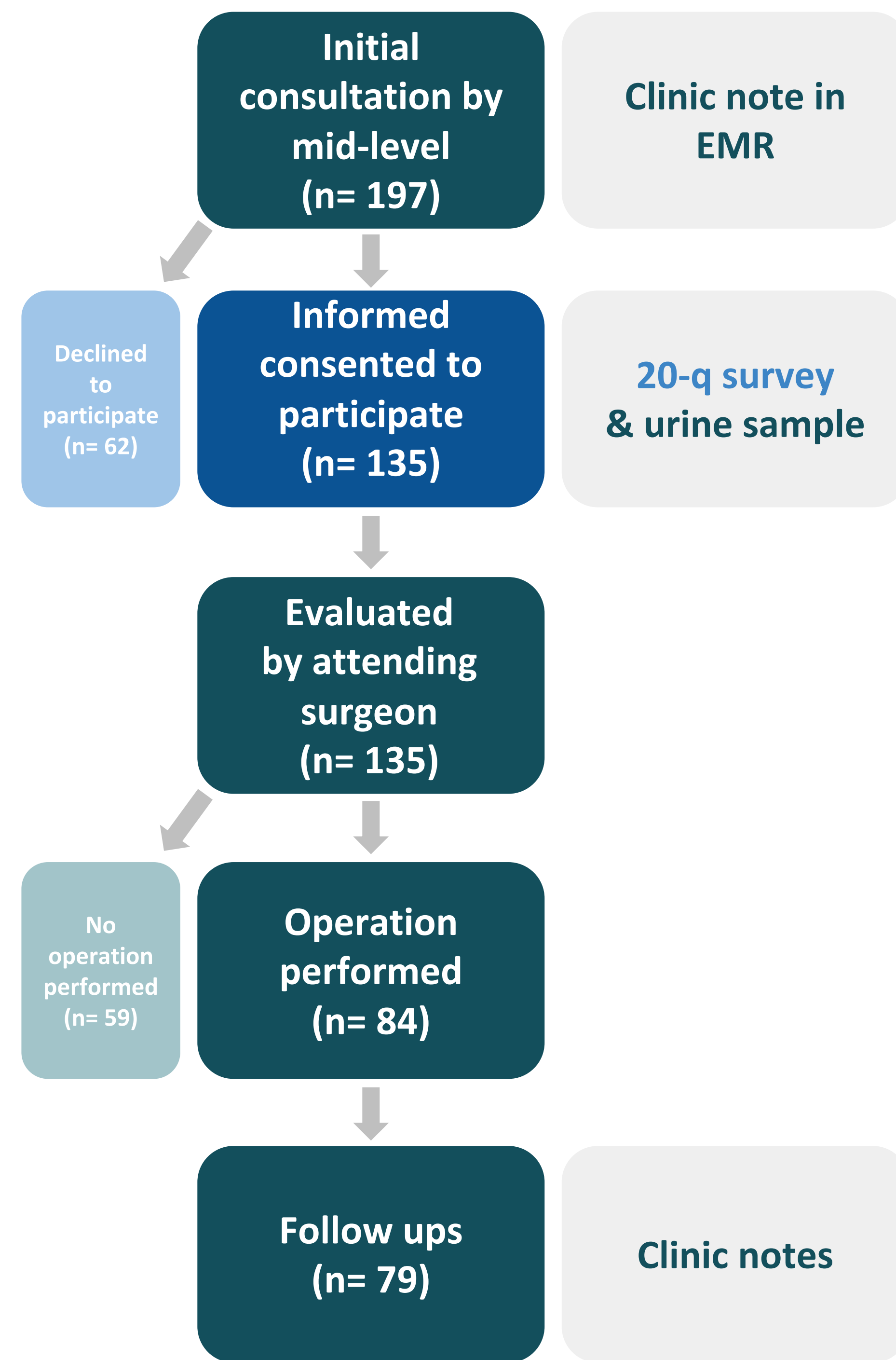
- With legalization of marijuana and increasing popularity of various nicotine products, it is challenging for clinicians to identify patients exposed to nicotine
- Nicotine negatively affects surgical outcomes, effect of marijuana is less studied, and inadvertent nicotine exposure through marijuana use under-recognized



## Objectives

- To establish normative data on pattern of marijuana use and other nicotine containing products in patients seeking elective plastic surgery procedures
- Demonstrate that marijuana use history is a risk factor of nicotine exposure
- Correlate reported use with urine nicotine and cotinine levels
- Prospectively examine clinical decision on offering surgery and surgical outcome

## Methods



## Results

**Reference**  
 Nicotine Smoker 200-700 ng/mL, nonsmoker <17 ng/mL  
 Cotinine smoker 300-1300 ng/mL, nonsmoker <20 ng/mL

Self-reported use pattern	%	Nicotine ng/mL	p	Cotinine ng/mL	p
Never users (n=67)	50	1.0 ± 0.5	-	7.5 ± 4.1	-
Active marijuana users (n=10)	7	23.1 ± 13.5	0.00007	221.2 ± 141.8	0.0002
Active nicotine users (n=25)	19	354.4 ± 210.9	0.007	352.6 ± 127.4	0.00002
Active marijuana and nicotine users (n=18)	13	294.7 ± 177.0	0.002	399.4 ± 163.0	0.00001
Former users* (n=15)	11	0.1 ± 0.1	ns	0 ± 0	ns

\*former user defined as last use >8 weeks ago

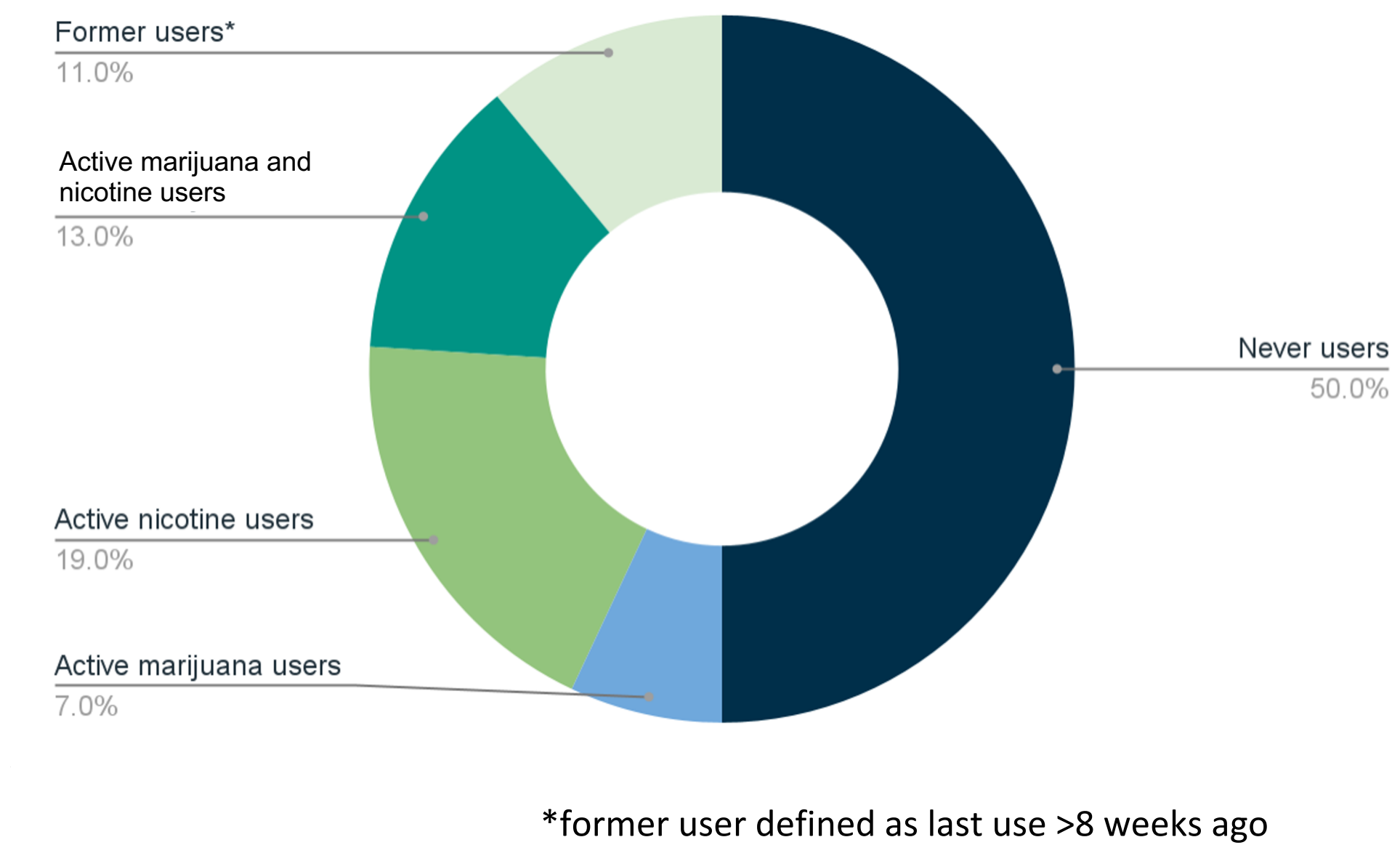
TABLES. Survey-reported use pattern of marijuana and nicotine versus clinical-reported use

Survey-reported use pattern	Reported during clinical encounter	Nicotine ng/mL	Cotinine ng/mL	Unreported during clinical encounter	Nicotine ng/mL	Cotinine ng/mL
Non-users (n=68)	-	1 ± 0.5	7 ± 4	-	1 ± 0.5	7 ± 4
Active marijuana users (n=28)	8 (29%)	269 ± 202 (p=0.0001)	417 ± 190 (p<0.0001)	20 (71%)	169 ± 143 (p=0.05)	303 ± 146 (p=0.03)
Active nicotine users (n=41)	12 (29%)	105 ± 58 (p<0.0001)	470 ± 189 (p<0.0001)	29 (71%)	445 ± 207 (p=0.001)	357 ± 125 (p<0.0001)

	Nicotine ng/mL	Cotinine ng/mL	BMI kg/m <sup>2</sup>	Age years
Operation (n=79)	4.9 ± 1.8	54.7 ± 25.1	31.4 ± 0.5	40.4 ± 1.4
No operation (n=51)	276.0 ± 120.6	278 ± 84.3	31.6 ± 0.8	34.7 ± 1.8
p-value	0.006	0.003	0.7	0.02
All complication (n=38)	4.2 ± 2.1	27.4 ± 14.0	32.2 ± 0.7	39.2 ± 2.0
No complication (n=41)	5.6 ± 2.9	79.9 ± 46.5	30.5 ± 0.7	41.4 ± 2.1
p-value	0.7	0.3	0.08	0.5

	Operation OR (95% CI)	p	All complication OR (95% CI)	p
Clinical Reported use	0.46 (0.22 - 0.92)	0.03	0.48 (0.18 - 1.29)	0.1
Diabetes	1.14 (0.32 - 0.41)	0.8	2.95 (0.54 - 16.2)	0.2
Hypertension	2.28 (0.89 - 5.83)	0.09	0.44 (0.15 - 1.24)	0.1

**Some marijuana user= 21%**  
**Form of nicotine= 32%**



## Conclusion

- First descriptive data on prevalence of marijuana use and nicotine exposure in the patients seeking plastic surgery consultations in an urban academic practice
- Marijuana users have elevated nicotine levels, from possible exposure due to co-use of nicotine product
- Limitations: single institution, inability to demonstrate correlation between marijuana use and complication due to study design, limited detection of significance due to heterogeneity of procedures