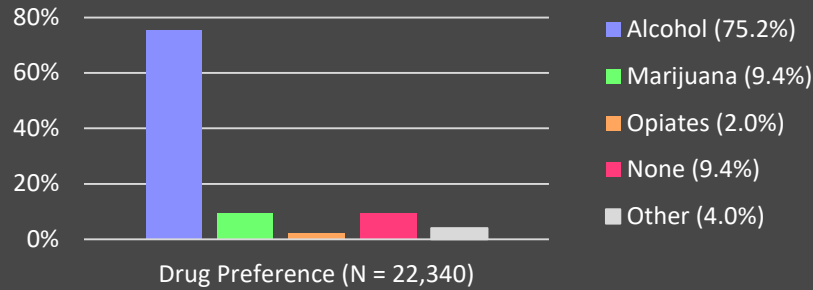


# DUI Recidivism by Drug Preference: The Case of Georgia

Percentage of Convicted Drivers by Drug Preference



## Introduction

Substances have varied perceptions among the population with regard to their potential for impairment. While many drivers understand the risks of driving under the influence of alcohol, there remain misunderstandings surrounding other drugs and their impairing effects. Drivers may underestimate the risks associated with marijuana use or other drug use, which can lead to higher rates of re-offense following DUI school.

## Methodology

Using data from the Georgia Department of Driver Services (2019), we tabulate the number of Georgia drivers with a DUI conviction between 2015 and 2017 who were required to attend DUI school within the prior 10 years (N = 22,340). Drivers who were required to attend DUI school as part of their sentence were asked to indicate their most preferred drug, which are matched with each applicable driver on the DDS dataset using their date of birth and ID number. We use these drivers' total DUI re-offenses from the prior ten years as the dependent variable (mean = .23, variance = .253). We test the count data using a Lagrange multiplier test, and reject the null hypothesis of equidispersion with  $p < .001$ . Due to the count data's overdispersion, we use a negative binomial regression to look at correlations between self-reported drug preference and the number of DUI re-offenses among drivers. Other factors and covariates include race, gender, and education level.

Among subjects in our final dataset, 70.6% were male. 50.5% of subjects' race were not recorded; among those recorded, 14.9% were black, 26.2% were white, 3.4% refused to identify, 2.4% were Hispanic, and 1.2% were multi-racial. Each other racial demographic comprised less than 1% of subjects. The average education level was 13.14 years. 80.1% of subjects in our data have only one DUI conviction in our 10-year sample.



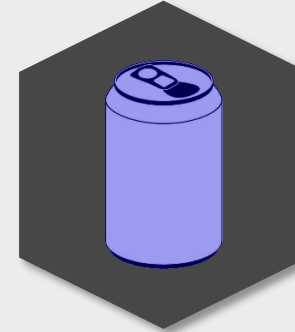
## Results

Alcohol and opiates as a self-reported drug of choice showed positive effects on DUI recidivism. Marijuana as a self-reported drug of choice showed a negative effect on recidivism. Other drugs and stimulants as drugs of choice showed no significant effect on recidivism. Female drivers were shown to have a lower rate of recidivism than male drivers, and Hispanic and Asian drivers had a lower rate of recidivism than Caucasian drivers.

Predictors of Re-Offense Among Convicted DUI Drivers

	$\beta$	Incidence Rate Ratio ( $e^{\beta}$ )	95% Wald Confidence Interval for $e^{\beta}$	
			Lower	Upper
Gender				
Female	-.239***	.787***	.734	.845
Male	0 (base)	1	-	-
Race				
Asian	-.475*	.622*	.413	.935
Black	-.039	.962	.869	1.064
Hispanic	-.216	.806	.642	1.012
Indian	.007	1.007	.443	2.291
Multiracial	-.148	.863	.63	1.181
Other	> -.001	1	.661	1.514
Refused	-.178	.837	.692	1.013
Unknown	.092*	1.097*	1.019	1.181
White	0 (base)	1	-	-
Drug				
Alcohol	.108	1.114	1	1.240
Depressants	.174	1.19	.945	1.499
Marijuana	-.237**	.789**	.678	.918
Opiates	.301**	1.352**	1.084	1.686
Other	-.204	.816	.458	1.453
Stimulants	-.034	.966	.739	1.263
None	0 (base)	1	-	-
Education (Years)	-.008	.992	.980	1.003

\* $p < .05$ ; \*\* $p < .01$ ; \*\*\* $p < .001$ .



### Alcohol: Incidence Rate Ratio = 1.114

Convicted DUI drivers who report alcohol as their drug of choice have an 11.4% higher rate of re-offense in this study than those who report having no drug of choice. This is one of the smallest positive effect sizes among drug categories in this study compared to the base category.

### Marijuana: Incidence Rate Ratio = .789

Convicted DUI drivers who report marijuana as their drug of choice have a 21.1% lower rate of re-offense in this study than those who report having no drug of choice. This lower rate may be due to effective DUI sentencing with regard to marijuana, or marijuana DUIs may be more difficult to detect or convict.



### Opiates: Incidence Rate Ratio = 1.352

Convicted DUI drivers who report some type of opiate as their drug of choice have a 35.2% higher rate of re-offense in this study than those who report having no drug of choice. This is the largest effect size of any drug category in our study. This may be due to a variety of reasons, including ineffective DUI sentencing or lower risk perception among opiate users.

## Discussion

The aim of this study was to identify potential differences in behavior and risk perception among convicted DUI drivers. Our findings suggest that DUI drivers may attach different levels of risk to driving impaired depending on the drug being used. Moreover, drivers may respond differently to enforcement and sentencing depending on their drug of choice.

When interpreting these results, it is important to bear in mind the limitations of this study. Since we use conviction data supplied by the DDS and match them with respondent data from DUI schools, there may be a selection bias present. Furthermore, since respondents are asked to self-report a preference for illegal substances, there may be an underreporting of some categories.

