

# Examining the changes in alcohol and substance use among motor vehicle crash (MVC) patients from 2013–2021

## 2022 Lifespan Research Day Abstract

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### Abstract

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**Background & Aim:**

In May 2022, RI joined 18 other states who have legalized recreational marijuana. With this trend, an increasing number of people are using marijuana. Other states that have legalized marijuana have seen an increase in marijuana use while driving. Our objective is to examine for any previous changes in substance use among motor vehicle crash (MVC) patients that required trauma center admission in Rhode Island.

**Methods:**

The data collected from the RIH trauma registry of admitted adult trauma patients meeting the following inclusion criteria: 1) admitted between January 1, 2013–December 31, 2021, 2) 18 years and older and 3) presented with pedestrian related or motor vehicle crash (MVC) related injuries. Data points collected include: age, gender, and alcohol or drug use at time of injury. Univariate analysis done with MS Excel. A Poisson regression with offset (log of number tested) was conducted to examine the trend in positivity for alcohol, marijuana, and opiates, among tested trauma patients over time (2013–2021).

**Results:**

Our sample included a total of 4089 patients. The slope for alcohol testing was not significant ( $\beta = 0.97$ ; 95% CI: 0.76, 1.23,  $p = 0.78$ ) indicating no significant increase in positivity over time. Positive opiates tests significantly decreased ( $\beta = -3.49$ ; 95% CI:  $-4.31, -2.67$ ,  $p < 0.0001$ ), while marijuana was positive and significant ( $\beta = 1.75$ ; 95% CI: 1.19, 2.58,  $p = 0.004$ ), indicating significantly more positive tests for marijuana over time.

**Conclusion:**

During the years 2013–2021, there was a significant increase in marijuana detected in admitted MVC trauma patients. With the RI laws changing in 2022 for recreational marijuana and usage already increasing in MVC trauma patients, the trajectory of marijuana usage in MVC trauma is of concern as well as continued attention is required for addressing alcohol related MVC.

**Clinical Implications:**

Physicians should be screening for marijuana and advising patients on the risks of marijuana usage and MVCs.