

# Legal cannabis markets linked to increased motor vehicle deaths

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A new study from the University of Illinois Chicago has used death

certificate data to compare mortality rates in states that legalized recreational cannabis dispensaries with states that only provided access to medical cannabis. The work is published in is published in the journal *Social Science & Medicine*.

The UIC researchers found that there was a substantial increase in crash fatalities in four of the seven states used in the study with legalized recreational markets, and that on average, recreational markets were associated with a 10% increase in motor vehicle accident deaths.

Study first author Samantha Marinello said the findings suggest that it may be beneficial for states with legal recreational cannabis to invest in policies and public health initiatives to mitigate this potential harm and build awareness of the dangers of driving under the influence.

"To see a 10% increase in [motor vehicle accident](#) deaths associated with recreational markets is concerning. Previous studies have found cannabis impairs driving ability and that driving while high is fairly common among regular cannabis users," said Marinello, a postdoctoral research associate with the division of health policy and administration at the UIC School of Public Health.

For the analysis, Marinello and Lisa Powell, UIC distinguished professor and director of the division, focused on seven states that implemented legal recreational cannabis markets: Alaska, California, Colorado, Massachusetts, Nevada, Oregon and Washington. They collected data from [death certificates](#) from 2009-2019 on deaths in three areas that have previously been linked to cannabis use but are still poorly understood: [motor vehicle accidents](#), suicide and opioid overdose.

For each cause of death, the researchers compared trends in deaths in states with legal markets with those in states that had comprehensive medical cannabis programs and similar trends in [death rates](#) prior to

implementing markets.

"We didn't want to compare states with very different mortality trends or social ideology, so we looked at each state and outcome and identified comparison states with existing [medical cannabis](#) programs and with similar pre-trends to conduct our analysis," Marinello said.

The data revealed significant increases in crash fatalities in Colorado (16%), Oregon (22%), Alaska (20%) and California (14%).

"The results suggest that a potential unintended consequence of recreational markets is increased cannabis-intoxicated driving and crash deaths, and hence, a potential need for policies focused on reducing driving under the influence of cannabis," the authors write.

The researchers found no evidence that recreational markets impacted suicides, which is notable because [cannabis use](#) is associated with the development of depressive disorders and suicidality.

For opioid overdose deaths, recreational markets were associated with an 11% reduction in fatalities, on average. Across all seven states, the reduction ranged from 3% to 28%.

Marinello said that the reduction in [opioid overdose](#) fatalities is another potential area of impact that should be a factor in states considering legalization.

"This study provides evidence of both potential benefits and harms that policymakers should consider when legalizing recreational cannabis markets," Marinello said.

**More information:** Samantha Marinello et al, The impact of recreational cannabis markets on motor vehicle accident, suicide, and

opioid overdose fatalities, *Social Science & Medicine* (2023). [DOI: 10.1016/j.socscimed.2023.115680](https://doi.org/10.1016/j.socscimed.2023.115680)

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