Medical marijuana laws and workplace fatalities in the United States.

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Abstract

AIMS: The aim of this research was to determine the association between legalizing medical marijuana and workplace fatalities.

DESIGN: Repeated cross-sectional data on workplace fatalities at the state-year level were analyzed using a multivariate Poisson regression.

SETTING: To date, 29 states and the District of Columbia have legalized the use of marijuana for medicinal purposes. Although there is increasing concern that legalizing medical marijuana will make workplaces more dangerous, little is known about the relationship between medical marijuana laws (MMLs) and workplace fatalities.


MEASUREMENTS: Workplace fatalities by state and year were obtained from the Bureau of Labor Statistics. Regression models were adjusted for state demographics, the unemployment rate, state fixed effects, and year fixed effects.
Legalizing medical marijuana was associated with a 19.5% reduction in the expected number of workplace fatalities among workers aged 25-44 (incident rate ratio [IRR], 0.805; 95% CI, .662-.979). The association between legalizing medical marijuana and workplace fatalities among workers aged 16-24, although negative, was not statistically significant at conventional levels. The association between legalizing medical marijuana and workplace fatalities among workers aged 25-44 grew stronger over time. Five years after coming into effect, MMLs were associated with a 33.7% reduction in the expected number of workplace fatalities (IRR, 0.663; 95% CI, .482-.912). MMLs that listed pain as a qualifying condition or allowed collective cultivation were associated with larger reductions in fatalities among workers aged 25-44 than those that did not.

The results provide evidence that legalizing medical marijuana improved workplace safety for workers aged 25-44. Further investigation is required to determine whether this result is attributable to reductions in the consumption of alcohol and other substances that impair cognitive function, memory, and motor skills.

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**KEYWORDS:** Medical marijuana; Workplace fatalities
