State Medical Marijuana Laws and the Prevalence of Opioids Detected Among Fatally Injured Drivers

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CONTRIBUTORS

J. H. Kim developed the study concept and design, collected and analyzed the data, interpreted the results, and drafted the article. J. Santaella-Tenorio, C. Mauro, and J. Wrobel collected and analyzed the data and interpreted the results. M. Cerdà, K. M. Keyes, D. Hasin, S. S. Martins, and G. Li helped develop the study concept and design and helped draft the article.

ABSTRACT

Objectives. To assess the association between medical marijuana laws (MMLs) and the odds of a positive opioid test, an indicator for prior use.

Methods. We analyzed 1999–2013 Fatality Analysis Reporting System (FARS) data from 18 states that tested for alcohol and other drugs in at least 80% of drivers who died within 1 hour of crashing (n = 68 394). Within-state and between-state comparisons assessed opioid positivity among drivers crashing in states with an operational MML (i.e., allowances for home cultivation or active dispensaries) versus drivers crashing in states before a future MML was operational.

Results. State-specific estimates indicated a reduction in opioid positivity for most states after implementation of an operational MML, although none of these estimates were significant. When we combined states, we observed no significant overall association (odds ratio [OR] = 0.79; 95% confidence interval [CI] = 0.61, 1.03). However, age-stratified analyses indicated a significant reduction in opioid positivity for drivers aged 21 to 40 years (OR = 0.50; 95% CI = 0.37, 0.67; interaction $P < .001$).

Conclusions. Operational MMLs are associated with reductions in opioid positivity among 21- to 40-year-old fatally injured drivers and may reduce opioid use and overdose. (*Am J Public Health*. Published online ahead of print September 15, 2016: e1–e6. doi:10.2105/AJPH.2016.303426)