

Understanding the Full Effect of the Changing Legal Status of Marijuana on Youth

Getting It Right

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Imagine you are invited to testify before your state legislature about how legislation decriminalizing or legalizing marijuana use by adults 21 years and older in the state would affect those younger than 21 years. Alternatively, as an expert on child and adolescent health, you are asked to summarize the current evidence on whether medical marijuana laws affect youth perceptions of the risk of using marijuana at a grand rounds presentation. What would you say?

As this is written, 1 month before the November 2016 elections, 21 states have decriminalized possession of small amounts of marijuana for personal use,¹ and 4 additional states and Washington, DC, have legalized the use of small amounts for

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recreational use.¹ Measures to legalize marijuana use are on the November ballot in 5 other states. Twenty-five states and Washington, DC, have enacted medical marijuana laws.²

Clearly, the United States is undergoing a profound shift in the legal status of marijuana, although these changes—current and proposed—are limited to changes in legal status for those 21 years and older.

No one is yet advocating that adolescents should be allowed to purchase marijuana for their own recreational use. However, as is the case for alcohol and tobacco, products that are legal only for adults inevitably find their way into the hands of adolescents and young adults younger than 21 years to a significant degree. Hence, it is important to understand how changes in policies and laws aimed at adults affect children and adolescents.

Sound public policy should be based on data that are meticulously collected and thoughtfully analyzed. The evolving status of marijuana in the United States provides a critical opportunity for us to do so.³ Already, Wang et al⁴ have documented a substantial increase in marijuana ingestions among children younger than 12 years in Colorado after that state modified its drug enforcement laws in 2009. In this issue of *JAMA Pediatrics*, Cerdá et al⁵ found increases in marijuana use in the past month among eighth and 10th (but not 12th) graders in Washington but not Colorado, even though both states legalized marijuana for recreational use. While the authors offer a number of plausible explanations for the observed differences between the 2 states, it is fair to say that we are still uncertain how to explain the results.

Differences in overall use rates before and after changes in legal status, while important and perhaps the easiest change to monitor, are but one aspect of the marijuana use puzzle that

merits study. Changes in who uses and how frequently use occurs also merit careful assessment. Data from the study by Cerdá et al⁵ suggest increases in use were limited to younger (eighth and 10th grade) compared with older (12th grade) adolescents in Washington; this is particularly worrisome, as the adverse effects of marijuana use are generally believed to be greater for younger teenagers, especially those younger than 16 years. According to the Monitoring the Future study, daily use of marijuana by adolescents—which likely means these youth are attending school under the influence of marijuana—has increased by approximately 20%, from 5% in 2006 to 5.8% to 6% in 2014 and 2015, respectively, among 12th graders.⁶

Increases in marijuana use cannot be examined in a vacuum. If marijuana use does increase, will such use result in more adolescents and young adults using alcohol and marijuana together, or will increases in marijuana use be accompanied by decreases in alcohol use? The public health effect of the 2 outcomes are very different. In the 1999 College Alcohol Study, Wechsler et al⁷ showed that compared with students who attended colleges with low rates of binge drinking, students attending colleges with medium or high rates of binge drinking were significantly more likely to report having been pushed, hit, or assaulted or experiencing sexual assault or date rape. As cannabis use does not typically lead to such aggressive behaviors, the substitution of cannabis for alcohol could reduce the prevalence of such adverse consequences.⁸ Alternatively, an increasing prevalence of concomitant use of alcohol and cannabis could result in a greater number of harms, including, for example, a greater risk of impairment while driving compared with driving after consuming either alone.⁹ Finally, if a more permissive legal status does, in fact, result in increased or riskier use, how best to address this new reality? What lessons can we draw from what we know about curtailing use of alcohol and tobacco among teenagers? These are but a few of the questions that will need to be addressed in the coming years.

JAMA Pediatrics welcomes original research that will help policy makers and those caring for children, adolescents, and young adults to better understand how the changing legal status of marijuana affects use by adolescents and young adults younger than 21 years in all its complexities. We will not be devoting an entire issue to this topic; rather, we want to emphasize our commitment to publishing high-quality research that helps inform public policy regarding marijuana use in the years to come. We cannot afford to lose this opportunity, not when the public health consequences are potentially so significant.

ARTICLE INFORMATION

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