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Emergency Visits Related to Marijuana Use at a Colorado Children's Hospital Quadruple after the Drug's Legalization

Research at the 2017 Pediatric Academic Societies Meeting finds more than half of teens' marijuana-related visits also involved psychiatric evaluations.

SAN FRANCISCO — Visits by teens to a Colorado children's hospital emergency department and its satellite urgent care centers increased rapidly after legalization of marijuana for commercialized medical and recreational use, according to new research being presented at the 2017 Pediatric Academic Societies Meeting in San Francisco.

The study abstract, "Impact of Marijuana Legalization in Colorado on Adolescent Emergency Visits" on Monday, May 8 at the Moscone West Convention Center in San Francisco.

Colorado legalized the commercialization of medical marijuana in 2010 and recreational marijuana use in 2014. For the study, researchers reviewed the hospital system's emergency department and urgent care records for 13- to 21-year-olds seen between January 2005 and June 2015. They found that the annual number of visits with a cannabis related diagnostic code or positive for marijuana from a urine drug screen more than quadrupled during the decade, from 146 in 2005 to 639 in 2014.

Adolescents with symptoms of mental illness accounted for a large proportion (66 percent) of the 3,443 marijuana-related visits during the study period, said lead author George Sam Wang, MD, FAAP, with psychiatry consultations increasing from 65 to 442. More than half also had positive urine drug screen tests for other drugs. Ethanol, amphetamines, benzodiazepines, opiates and cocaine were the most commonly detected.

Dr. Wang, an assistant professor of pediatrics at the University of Colorado Anschutz Medical Campus, said national data on teen marijuana use suggest rates remained roughly the same (about 7 percent) in 2015 as they'd been for a decade prior, with many concluding no

significant impact from legalization. Based on the findings of his study, however, he said he suspects these national surveys do not entirely reflect the effect legalization may be having on teen usage.

"The state-level effect of marijuana legalization on adolescent use has only begun to be evaluated," he said. "As our results suggest, targeted marijuana education and prevention strategies are necessary to reduce the significant public health impact of the drug can have on adolescent populations, particularly on mental health."

Dr. Wang will present the abstract, "Impact of Marijuana Legalization in Colorado on Adolescent Emergency Department (ED) Visits," from 8 a.m. to 10 a.m. Numbers in this news release reflect updated information provided by the researchers.

Please note: only the abstract is being presented at the meeting. In some cases, the researcher may have more data available to share with media, or may be preparing a longer article for submission to a journal. Contact the researcher for more information.

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The Pediatric Academic Societies (PAS) Meeting brings together thousands of individuals united by a common mission: to improve child health and wellbeing worldwide. This international gathering includes pediatric researchers, leaders in academic pediatrics, experts in child health, and practitioners. The PAS Meeting is produced through a partnership of four organizations leading the advancement of pediatric research and child advocacy: Academic Pediatric Association, American Academy of Pediatrics, American Pediatric Society, and Society for Pediatric Research. For more information, visit the PAS Meeting online at www.pasmeeting.org, follow us on Twitter @PASMeeting and #pasm17, or like us on Facebook.

ABSTRACT

TITLE: Impact of Marijuana Legalization in Colorado on Adolescent Emergency Department (ED) Visits

Background: According to the National Survey on Drug Use and Health, approximately 1.8 million adolescents (7%) aged 12 to 17 are current users of marijuana. National data does not appear to demonstrate state legalization impacting use rates. The percentage of adolescents in 2015 who were current users was similar between 2004 and 2014. However, the state level effect of marijuana legalization on adolescent use has only begun to be evaluated.

Objective: The objective was to evaluate the impact on adolescent ED visits Colorado, a state that has legalized both medical (2000) and recreational marijuana (2014).

Design/Methods: This was a retrospective review of adolescents presenting for an ED or Urgent Care (UC) visit at a tertiary care children' children's hospital or their surrounding satellite UC.

Subjects were ≥ 13 years and < 21 years presenting to the ED or UC from 2005 through June 2015. ED and UC visits were determined as marijuana-related if they had and ICD-9 code for marijuana use (305.20, 969.6 or E854.1), or a positive urine toxicology screen for marijuana (tetrahydrocannabinol). ED visits were also noted if a psychiatry consultation was performed (for drug use or behavioral health concerns). Annual visit data was reported as total number of visits, and as visits per 1000 to adjust for yearly changes in volume

Results: During the study period there were 3,443 individual patients who were evaluated in the ED (3137, 91%) or UC who either had only an ICD-9 code related to marijuana use (881), or both a ICD-9 code and positive THC on urine toxicology screen (2562). The mean age of patients evaluated was 16.2 years. Of these patients, 2345 (68%) were also evaluated by psychiatry. The annual number of ED visits related to marijuana use increased from 106 in 2005 to 631 in 2014, with psychiatry consultations increasing from 65 to 442.(Figure 1). Rate of visitation per 1000 ED/UC visits increased from 0.95 visits per 1000 visits in 2009, to 4.01 visits per 1000 visits in 2015.

Conclusion(s): ED and UC visits with adolescent marijuana use in Colorado increased at a rapid rate after commercialization of medical marijuana and legalization of recreational marijuana. Adolescents with psychiatric illnesses were comprised a large proportion of marijuana exposures. Targeted education and prevention strategies for marijuana use are necessary in adolescent population to reduce the public health impact.