Children's Hospital of Philadelphia PolicyLab

Recent Trends in Marijuana-related Hospital Encounters in Young Children

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Multiple states have passed legislation permitting marijuana use. The impact of legalization on trends in hospital encounters for marijuana exposures in young children across states remains unknown. We aimed to describe trends in marijuana-related hospital encounters over time in children <6 years and assess the association of state-level marijuana legislation with the rate of marijuana-related hospitalizations. We identified inpatient, emergency department and observation encounters for children <6 years with marijuana exposures (defined by International Classification of Diseases diagnosis codes) unique on the patient-year level at 52 children's hospitals in the Pediatric Health Information System database from 01/01/2004-12/31/2018. Trends in encounters across the study period were evaluated using negative binomial regression with outcome of marijuana-related hospital encounters and year as the predictor variable accounting for clustering by hospital. We then estimated a negative binomial regression difference-in-differences model to examine the association between the main outcome and state recreational and medical marijuana legalization. Of the 1296 included unique patient-year encounters, 50% were female with mean age 2.1 years (SD=1.4). Fifty percent were inpatient (n=645) and 15% required intensive care with 4% requiring mechanical ventilation. There was a 13.3-fold increase in exposures in 2018 compared to 2004 (p <0.001). We did not find an effect of state legalization status for recreational (p=0.24) or medical (p=0.30) marijuana. The observed dramatic increase in marijuana-related hospital encounters highlights the need for prevention strategies aimed at reducing unintentional marijuana exposures in young children, even in states without legislation permitting marijuana use.

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