



## INDIANA UNIVERSITY

PAUL H. O'NEILL SCHOOL OF PUBLIC  
AND ENVIRONMENTAL AFFAIRS

12 November 2019

Journal of the American Medical Association: Internal Medicine  
Editorial Office

Dear Editors,

I wish to submit a manuscript entitled “States with recreational marijuana have lower rates of vaping associated lung injury” on behalf of myself and co-authors Ashley C. Bradford, Aaron E. Carroll, and Alex Hollingsworth for consideration as a Research Letter at the *Journal of the American Medical Association: Internal Medicine*.

Over the past six months, hospitals around the country have been treating patients for a new illness that the CDC calls “e-cigarette and vaping related lung injury” (EVALI). The specific cause of EVALI is not known. However, case reports indicate the many EVALI patients have recently used vaping products that contain tetrahydrocannabinol (THC), which is the psychoactive component of marijuana. The CDC has hypothesized that certain TCH vaping products may be responsible causes EVALI.

We hypothesized that people with access to legal marijuana markets might be less likely to purchase black market THC vaping products. To assess the credibility of that theory, we compared EVALI case rates per 1 million population in states with different marijuana regulations. We found that there are about 8.1 EVALI cases per million in prohibition states and only 1.7 EVALI cases per million in recreational marijuana states. The geographic distribution of EVALI cases suggests that the presence of legal markets for marijuana may have reduced the size of the EVALI outbreak. It also provides supports the CDC’s theory that black-market THC vaping products are the source of the outbreak. Importantly, we also show that the prevalence of e-cigarette use is not related to the EVALI case rate or recreational marijuana adoption.

The attached research letter describes our results. Please note that this manuscript is not under review elsewhere (nor has it been submitted to the *JAMA: IM* previously). We hope you find the results interesting, convincing, and likely to contribute to this important health policy conversation. Should our paper be accepted, we will provide all the data and programs used in our research, allowing them to be posted on the journal's website. We look forward to your response.

Sincerely,

Coady Wing  
Associate Professor  
Indiana University  
O’Neill School of Public and Environmental Affairs