

# Correlation between secondhand marijuana and tobacco smoke exposure and children ED visits

5 May 2018

Children exposed to the combination of marijuana and tobacco smoke have increased emergency department (ED) visitation and otitis media episodes compared to children with no smoke exposure, according to a new survey being presented during the Pediatric Academic Societies (PAS) 2018 Meeting. This association was not seen in children exposed to only marijuana smoke or to only tobacco smoke. This is the first study to demonstrate the notable impact between second hand marijuana smoke exposure and child health.

Marijuana is the most common illicit substance in the U.S. The goal of this study was to determine association between second hand [marijuana](#) smoke (SHMS) exposure and rates of ED visitation, and rates of [tobacco](#) sensitive conditions: asthma, otitis media and viral respiratory infections.

The research included a cross-sectional survey of caregivers of children presenting to the ED of an urban, tertiary care, academic children's hospital in Colorado. Data collected included [caregiver](#) demographics and use of tobacco and/or marijuana, along with index child medical history, number of overall ED visits and number of tobacco sensitive conditions in the prior year. Caregivers were classified into four categories depending on use: marijuana use only, tobacco use only, both tobacco and marijuana use, and neither marijuana nor tobacco use (control group). Poisson regression models were created to determine differences in overall ED visitation, as well as tobacco sensitive conditions. Results were expressed using incident rate ratios (IRR) and 95% confidence intervals. A total of 1,500 caregivers completed the survey.

The survey found that overall, 140 caregivers (9.2 percent, 95%CI = 7.7-10.7 percent) reported

regularly [smoking](#) marijuana, and 285 caregivers (19 percent, 17.1-21.1 percent) reported regularly smoking tobacco. Exposure groups included: marijuana only (n=62, 4.1 percent), tobacco only (n=213, 14.2 percent), marijuana and tobacco (n=75, 5percent), and unexposed (n=1147, 76.6 percent). When compared against each other, all groups had a similar rate of ED visitation other than the marijuana and tobacco group which had a significantly higher rate of ED visits compared to the controls. Children in the marijuana + tobacco group also had a statistically significant increase in otitis media episodes compared to controls (IRR = 1.81, 95%CI = 1.38, 2.35); differences were not elicited among the other groups or for other tobacco sensitive conditions.

Dr. Adam Johnson will present the abstract, "Impact of Second Hand Marijuana Smoke Exposure on Pediatric Health and Emergency Department Visitation," during the PAS 2018 Meeting on Saturday, May 5 at 1:15 p.m. EDT.

Provided by Pediatric Academic Societies

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