

# 'A tale of two substances': An observational study of opioid use among cannabis-related emergency room visits in Colorado

## ABSTRACT

**Background:** Despite legalization of medical and recreational cannabis in Colorado over the past decade, the exact effects on public health remain unknown, partially due to federal restrictions on research involving marijuana. This study aims to look at differences in emergency room visits between those that are also associated with opioid use and those that are not.

**Methods:** This study was an analysis of retrospective chart review done of all visits to the UCH ED between 2012 to 2016 that contained pre-determined cannabis-related ICD-9/10-CM codes. Demographic data, various visit metrics, and substance exposures, including opioid use per urine toxicology or patient narrative, were abstracted and analyzed using Exploratory.io.

**Results:** Of the study population, 9.6% of visits were also associated with opioid use (OU+). These patients were more likely to be white men than all-comers to the ED ( $p < 0.0001$ ), and were significantly more likely to be admitted (71.4%) than all-comers (15.1%) or the study population (47.6%,  $p < 0.0001$ ).

**Conclusion:** There are unique demographic characteristics and increased hospital admission risks for those who co-use cannabis and opioids. The exact mechanism or cause behind this association requires further research and exploration.