Unwitting Adult Marijuana Poisoning: A Case Series
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Abstract
- Case of a large-scale unintentional marijuana exposure and intoxication occurring at a wedding
- 12 participants presented to the Loma Linda University Medical Center Emergency Department
- Varying symptoms included: altered mental status, aphasia, weakness, nausea, tremors, and hallucinations
- The emergency was deemed a mass casualty incident
- All patients were able to be properly assessed and no fatalities were recorded
- Marijuana was later discovered to have been served to the unaware guests at the wedding
- This incident merits timely exploration into proper management of cannabis and the ramifications of negligent distribution

Methods and Materials
- Retrospective analysis of Loma Linda ED pertinent patient data and qualitative analysis of conducted interviews, 12 of which were referred to the Toxicology Service for evaluation
- Case ages ranged from 23-69 and were of Caucasian and Hispanic descent
- Screening for ethanol and toxic alcohols was performed
- Six out of the 12 subjects consented to be interviewed using a standardized interview script
- The interview recordings were software-transcribed using Temi (USA, New York) and de-identified
- Interview analysis involved identifying and grouping the patient’s experiences and identifiers into common themes
- The common themes were categorized into a coding tree and refined through consensus via 3 reiterations
- Study reviewed and approved by the Loma Linda University Institutional Review Board

Introduction
- Currently increasing the legalization of marijuana across several US States
- The incidence of ED presentations for marijuana intoxication is increasing [Wang 2018, Shen 2019, Heard 2019]
- Results in important public health implications
- Mounting evidence links higher potency marijuana to an array of adverse outcomes, especially amongst novice users [Sevigny 2014]
- Despite requirements for child resistant packaging instituted in Colorado in 2014, visits to Children’s Hospitals and calls to the Regional Poison Center have continued to rise [Wang 2019]
- 2.5% of children in a National Poison Data Center study demonstrated respiratory depression, coma, or seizure [Onders 2015]
- Mounting cases of unintentional pediatric exposure to marijuana are readily available
- However, minimal research has been published about the effects of accidental marijuana ingestion on previously naive adults

Results
- Eleven of the 12 subjects tested positive for tetrahydrocannabinol (THC) via urine drug immunoassay
- Five patients were noted to have tachycardia (ranging from 100 to 136 beats per minute)
- Ethanol levels of 0.021 and 0.012 mg/dL were detected in two of the 12 patients
- No patients experienced significant bradycardia, hypertension or hypotension
- Three patients were admitted to Observation with an average length of stay of 12.5 hours

Discussion/Conclusions
- Unintentional marijuana poisonings have increased, but legal and regulatory barriers have limited the study of marijuana outside highly controlled conditions
- This case series illuminates the potential for adverse effects after unwitting marijuana exposure in adults
- While the marijuana exposure in this study did not result in admission for critical care or death, it did result in psychological distress and adversely affected work in some cases
- Proper public education and awareness of marijuana’s effects should be readily accessible in order to allow for fair and accurate policy implementation, hopefully minimizing unintentional intoxication cases in the future

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References