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207. Characterization of marijuana use in US college students as reported to an online survey

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Objective: Although marijuana is a federally controlled substance, half of US states have passed medical marijuana legislation and several have legalized recreational marijuana.[1,2] Overconsumption of edible products has been associated with increased emergency department visits and blamed in adult deaths. Our objective was to describe marijuana use among US college students. **Methods:** The RADARS[®] System College Survey Program is an online questionnaire of students attending a 2 or 4 year university, technical or online school to assess non-medical use of prescription drugs. Surveys are administered to different students during the fall, spring and summer semesters across the US. Questions about marijuana use/accessibility/risk were added in the 2014 through the 2015 spring semester surveys. States were categorized as non-legal, medical or medical + recreational based on decriminalization/legalization status during the study period. **Results:** Overall 7105 respondents were included: 4404 were from non-legal, 2482 from medical, and 219 from medical + recreational states (Table 1). In non-legal states 10% of students reported purchasing marijuana in a store. Respondents stated it was easy to obtain with increasing frequency from non-legal (81%) to medical (83%) to medical + recreational (87%) ($p = 0.02$). Regardless of marijuana legislation, slightly less than half perceived marijuana use to be a great-moderate risk to mental health ($p = 0.12$). **Conclusion:** Recreational marijuana legalization is associated with increased use, increased edible consumption and easy access for college students. Standardization of edible product manufacturing may be needed to reduce morbidity, particularly as its frequency is increasing. Students in non-legal states purchased marijuana in stores suggesting diversion from medical and medical + recreational states to non-legal states. Continued surveillance is necessary to determine the long-term impact (e.g. academic performance, driving while impaired) on use among college students.

Table 1. Characteristics of students who indicated they used marijuana during the last 3 months.

Characteristics of students	Status of marijuana based on decriminalization/legalization status during the study period			p value
	Non-legal	Medical	Medical+ Recreational	
Used marijuana (%)	950 (22)	630 (25)	62 (28)	<0.001
Median age in years (IQR)	24 (21, 28)	24 (21, 29)	24 (22, 27)	0.59
Median days of use (IQR)	5 (2, 20)	6 (2, 20)	10 (2, 25)	0.58
Smoked (%)	845 (89)	545 (87)	54 (87)	0.34
Ingested edible (%)	241 (25)	200 (32)	29 (37)	<0.001
Vaporize/e-cigarette (%)	247 (26)	167 (27)	14 (23)	0.80

References

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208. Severe and fatal accidental pharmaceutical poisoning in young children in the UK

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Objective: Accidental pharmaceutical poisoning in young children is common, but severe or fatal events are rare. This study was performed to identify the number of such events occurring in the UK and the medications that were most commonly responsible. **Methods:** Data, with identification of causative agent where possible, were obtained from the Office of National Statistics (ONS) for fatal poisoning and the Paediatric Intensive Care Audit Network (PICANet) and the National Poisons Information Service (NPIS) for severe non-fatal poisoning. English hospital admission and prescribing data for implicated agents were obtained from Hospital Episode Statistics (HES) and the electronic Prescribing Analysis and Cost (ePACT) databases, respectively. **Results:** Between 2001 and 2013 there were 28 children aged under 5 years with a death registered as due to accidental poisoning by a pharmaceutical product in England and Wales. Methadone was the causative drug in 16 cases and tricyclic antidepressants in 3. Deaths per million primary care prescriptions were substantially higher for methadone (0.58) than tricyclic antidepressants (0.02), the next most common drug group causing childhood deaths. In the UK 201 children aged under 5 years were admitted to paediatric intensive care with pharmaceutical poisoning between 2002 and 2012. The agent responsible was identified in 115 cases, most commonly benzodiazepines (22 cases), methadone (20 cases), other opioids (19 cases) and tricyclic antidepressants (13 cases). It was often not possible to differentiate between poisoning due to exploratory ingestion and iatrogenic causes. Iron and its products, anticonvulsants and methadone were the most common agents reported to NPIS with severe symptoms associated with ingestion in young children. For children aged under 14 years, hospital episode statistics demonstrate a fall in admissions due to poisoning by the drug groups associated with deaths in the early 2000s with a steady rate since 2006. **Conclusion:** Methadone is the most common pharmaceutical causing fatal poisoning and a common cause of intensive care admissions in young children in the UK. Further measures to reinforce safe storage and use in the home, including considering pharmacy supervised therapy for parents who are on opiate replacement therapy, might lead to a significant reduction in deaths. A robust system for reporting significant harm associated with accidental poisoning in the UK would assist further targeted prevention strategies for other implicated medications and help with the early identification of other potentially toxic substances.