Cannabis poisoning in young children increased nine times after legalization

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Ontario saw nine times more emergency department (ED) visits per month for cannabis poisonings in young children under the age of 10 after Canada legalized recreational cannabis, according to a study published in *JAMA Network Open*. While single hospitals have reported on child cannabis poisonings before, this is the first study to look at an entire region.

“We saw more frequent and severe ED visits due to cannabis poisoning in children under 10 following the legalization of cannabis, and the legalization of edible cannabis products appears to be a key factor,” said lead author Dr. Daniel Myran, a family physician, public health and preventive medicine specialist, and postdoctoral fellow at The Ottawa Hospital and the University of Ottawa Department of Family Medicine.

The research team looked at all ED visits in Ontario during three periods; pre-legalization, after flower-based cannabis products and oils were legalized in October 2018, and after commercial cannabis edibles (e.g. gummies and chocolates) and other products were legalized and became available for sale in late January 2020.

During the entire study period (January 2016 to March 2021), there were 522 ED visits for cannabis poisoning in children under 10. The average age of these children was three years, nine months.

While there were no deaths, 171 (32.7%) visits required hospitalization and 19 visits (3.6%) required intensive care unit (ICU) admission. ED visits for cannabis poisonings increased the most after commercial edibles were legalized, and more of these visits required hospitalization compared to the other two periods (39% compared to 25%).

**Study results:**

**Pre-legalization** (January 2016-September 2018)

- Total ED visits: 81
- Average number of ED visits per month: 2.5
- Percentage of ED visits that were hospitalized: 25%

**Legalization of cannabis flower, seed and oil** (October 2018-January 2020)

- Total ED visits: 124
- Average number of ED visits per month: 7.8
- Increase in average monthly ED visits compared to pre-legalization: 3 times
- Percentage of ED visits that were hospitalized: 24%

**Legalization of edibles and other products** (February 2020-March 2021)

- Total ED visits: 317
- Average number of ED visits per month: 22.6
- Increase in average monthly ED visits compared to pre-legalization: 9 times
- Percentage of ED visits that were hospitalized: 39%

The researchers noted that cannabis legalization in
Canada overlapped with the COVID-19 pandemic. They found that while ED visits for pediatric poisonings of any kind decreased in Ontario during the pandemic, visits for cannabis poisonings increased during this time. After commercial edibles became available, nearly 10% of all ED visits for poisonings in children in Ontario were related to cannabis.

"Canada's approach to legalization was intended to prevent increases in child cannabis poisonings through policies limiting the strength of cannabis edibles, requiring child resistant packaging and education for parents and caregivers." said Dr. Myran. "Unfortunately, the rates we saw in our study suggest the approach has not met that goal."

"As more places around the world consider legalizing recreational cannabis, we need to learn how to better protect children from cannabis poisoning," said Dr. Myran. "More education is a start, but we may need to consider other measures to reduce cannabis edibles' appeal to young children, such as much stricter limits on what edibles can look and taste like after they are removed from their packaging."

Researchers at ICES, Bruyère Research Institute, the Canadian Centre on Substance Use and Addiction and The Hospital For Sick Children (SickKids) also contributed to this study.


If your child has accidentally consumed cannabis, contact the Ontario Poison Control Centre at 1-800-268-9017. Cannabis poisoning in babies, children and youth is a medical emergency. Call 9-1-1 if your child is ill and/or has difficulty breathing. Caregivers can prevent poisonings by keeping cannabis products in a locked container away from other food and drinks, and out of children's reach. Learn more about the risks of cannabis and how to prevent unintentional poisoning.