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## Brief Commentary: Consequences of Marijuana—Observations From the Emergency Department

**Kennon Heard, MD, PhD, Andrew A. Monte, MD, PhD, Christopher O. Hoyte, MD**

University of Colorado School of Medicine, Aurora, Colorado.

Cannabis has been available for medical use in Colorado since 2000 and widely available since federal enforcement was minimized in 2009. Nearly 90 000 Colorado residents currently have medical cannabis cards, and approximately one third of users report daily consumption. Although the benefits for medical conditions continue to be debated, we highlight several unintended consequences of increased cannabis availability observed in Colorado emergency departments.

Before 2009, very few children were hospitalized for marijuana exposure in Colorado. At our largest pediatric hospital, no children were hospitalized for this condition between January 2005 and September 2009. However, such hospitalizations became common when availability of medical marijuana increased, and we still see several each month (1). These hospitalizations are almost always due to unintentional, unsupervised ingestion of an edible product containing cannabis, such as candy or baked goods. Although most of these children are minimally symptomatic, a few require intensive care admission. Furthermore, the clinical presentation of these children may mimic life-threatening conditions that can lead to extensive work-ups that include advanced imaging and invasive procedures.

Another unintended consequence is a dramatic increase in emergency department visits for hyperemesis. Cannabinoid hyperemesis was first described in 2004 but was virtually unrecognized in Colorado until 2009 (2). Our hospital currently sees more than 100 patients for this condition each year. These patients are in severe distress; frequently require several visits for symptom control; and occasionally develop severe dehydration, renal injury, acidosis, and even death (3). The management of this disorder is complicated by its cyclical nature and the perception of many patients that marijuana cannot be the cause. Patients who are considering using cannabis as daily therapy are at risk for this condition.

**Corresponding Author:** Kennon Heard, MD, PhD, 12401 E. 17th Avenue, Campus Box B-215, Aurora, CO 80045; [kennon.heard@ucdenver.edu](mailto:kennon.heard@ucdenver.edu).

**Current Author Addresses:** Dr. Heard: 12401 E. 17th Avenue, Campus Box B-215, Aurora, CO 80045.

Drs. Monte and Hoyte: 12401 E. 17th Avenue, Aurora, CO 80045.

**Author Contributions:** Conception and design: K. Heard, C.O. Hoyte.

Analysis and interpretation of the data: A.A. Monte, C.O. Hoyte.

Drafting of the article: K. Heard, A.A. Monte.

Critical revision of the article for important intellectual content: K. Heard, A.A. Monte, C.O. Hoyte.

Final approval of the article: K. Heard, A.A. Monte, C.O. Hoyte.

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Collection and assembly of data: A.A. Monte.

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Continuing evidence has linked cannabis use to mental health disorders and shows a causal link between marijuana use and psychiatric disease (4). In Colorado, emergency department visits attributable to cannabis use were 5 times more likely to be coded as related to a mental health disorder than visits not associated with cannabis (5).

In summary, as emergency medicine providers in a state with a high level of cannabis use, we have observed a substantial increase in acute medical conditions associated with this substance. Providers considering recommending medical cannabis should counsel patients on safe storage, inform them of the symptoms of cannabinoid hyperemesis, and warn them that cannabis use may precipitate mental health crises.

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