Calls to Washington Poison Center for Intentional Exposure to Cannabis, 2017-2021

ADAI ADDICTIONS, DRUG & ALCOHOL INSTITUTE

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Washington Poison Center (WPC)

receives calls for help about people who used a substance and experienced negative reactions. An increase in poison center calls for cannabis consumption has been documented in legalized states since 2014.[1] Given this increase and the diversification of legalized cannabis products, poison centers began collecting more information on the type of cannabis products that triggered these requests for help in 2017.

This factsheet describes the demographics and clinical severity of cases reported to WPC from 2017-2021, by cannabis product consumed, and focused on people 13 years of age or older who intentionally consumed cannabis. This report does not cover unintentional, accidental use of cannabis by children under the age of 13, which has been analyzed elsewhere.[2]

Any person with a Washington state phone number who calls the national poison center hotline will be referred to WPC for consultation. Since 2017, WPC has received 924 calls for help because of intentional cannabis use; an average of 185 calls per year. The majority of calls report use of "cannabis" or "cannabis flower" (52% of all calls); 31% edibles, and 17% concentrates. The most common types of edible products were candy, drinks, and brownies, and the majority of concentrate products reported were oils and dabs.

Over time the number of calls for edibles has increased: by 2021 most calls were for cannabis edibles, an 83% increase from 2017 (Figure 1). The number of WPC calls for drinks containing THC have doubled each year, with 21 calls in 2021. Increases in WPC calls for edibles may be driven by changes to cannabis product packaging rules over time, such that in 2020 a measuring device was no longer required on bottles that contained multiple servings of THC, up to 100mg of THC or 10 servings, as long as serving size is visible on the bottle (WAC 314-55-105). Before 2020, a measuring device like a removable cap with markings, similar to what is used on a Nyquil bottle or with other liquid medications, was required on bottles containing multiple servings of THC.

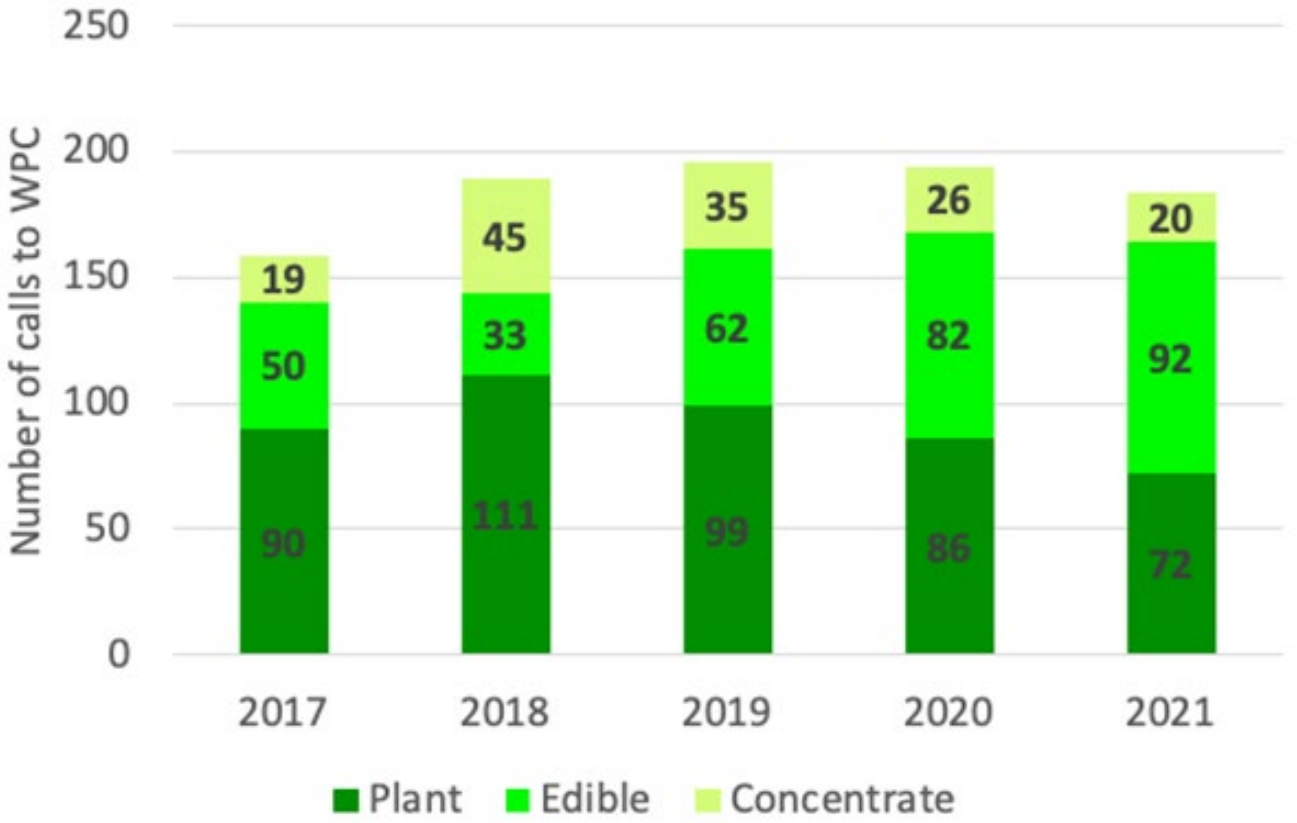

Figure 1. Intentional cannabis exposures over time by product types, Washington Poison Center, 2017-2021

The number of calls for concentrates were increasing from 2017 to 2019 but have since declined, likely reflecting the rapid increase in cannabis concentrate sales in Washington state and then subsequent shifts in product type preferences.[4,5] Also of note, a peak of concentrate-motivated calls occurred in 2018, during the vaping lung injury outbreak.[6]

This factsheet includes WPC calls during the first 18 months of statewide restrictions to prevent the spread of COVID-19 (March 15th 2020, when Washington state governor Jay Inslee ordered the closure of indoor gathering spaces).[7] Despite record breaking increase in cannabis sales at the beginning of the pandemic, there was not an increase in the overall number of calls to WPC for cannabis exposures. Though, calls for cannabis-only exposures increased during the pandemic (49% vs 41% of calls before pandemic), and more calls were for female users during the pandemic (49% vs 40% of calls before pandemic.

One in every five calls involving cannabis (22%) were classified as a suspected suicide (204 cases) and 98% of those calls involved at least one other substance besides cannabis. Not surprisingly, suspected suicide cases were more likely to result in moderate or major medical outcomes that required healthcare intervention (e.g., admitted to hospital or psychiatric facility) when compared to cases not involving suspected suicide.

The following analysis examines WPC cannabis cases involving voluntary use that was not classified as a suspected suicide attempt and cannabis was the only substance consumed. This analysis includes 56% of calls (or 401 cases) where cannabis was the only substance consumed.

Patterns in intentional cannabis exposure by product type and demographic groups

Gender

More poison center calls involving intentional cannabis use (2017-2021) were for males, representing 56% of calls:

- 68% of calls about using concentrates were for males
- 53% of calls for cannabis flower were for males
- 53% of calls for edibles were for males

Age

The age of cases ranged from 13 to 84 years old:

- 27% of calls were about underage cannabis use (<21 years old)
- 42% of all calls were for cases under the age of 25
- Calls for underage cases (13-20 years) were more likely to be for cannabis plant (31%) or concentrate (31%) exposure compared to older adults who could legally use cannabis (20% for plant and 21% for concentrates)
- 35% of calls for concentrate exposures were about underage cannabis use
- Adults of legal age (21+ years) were more likely to call about edibles (59% of calls) compared to underage users (39%)
- Edibles were the most common exposure for all age groups in 2021. In prior years, plant consumption, and not edibles, was the most common exposure for cases under the age of 25. (Figure 2)

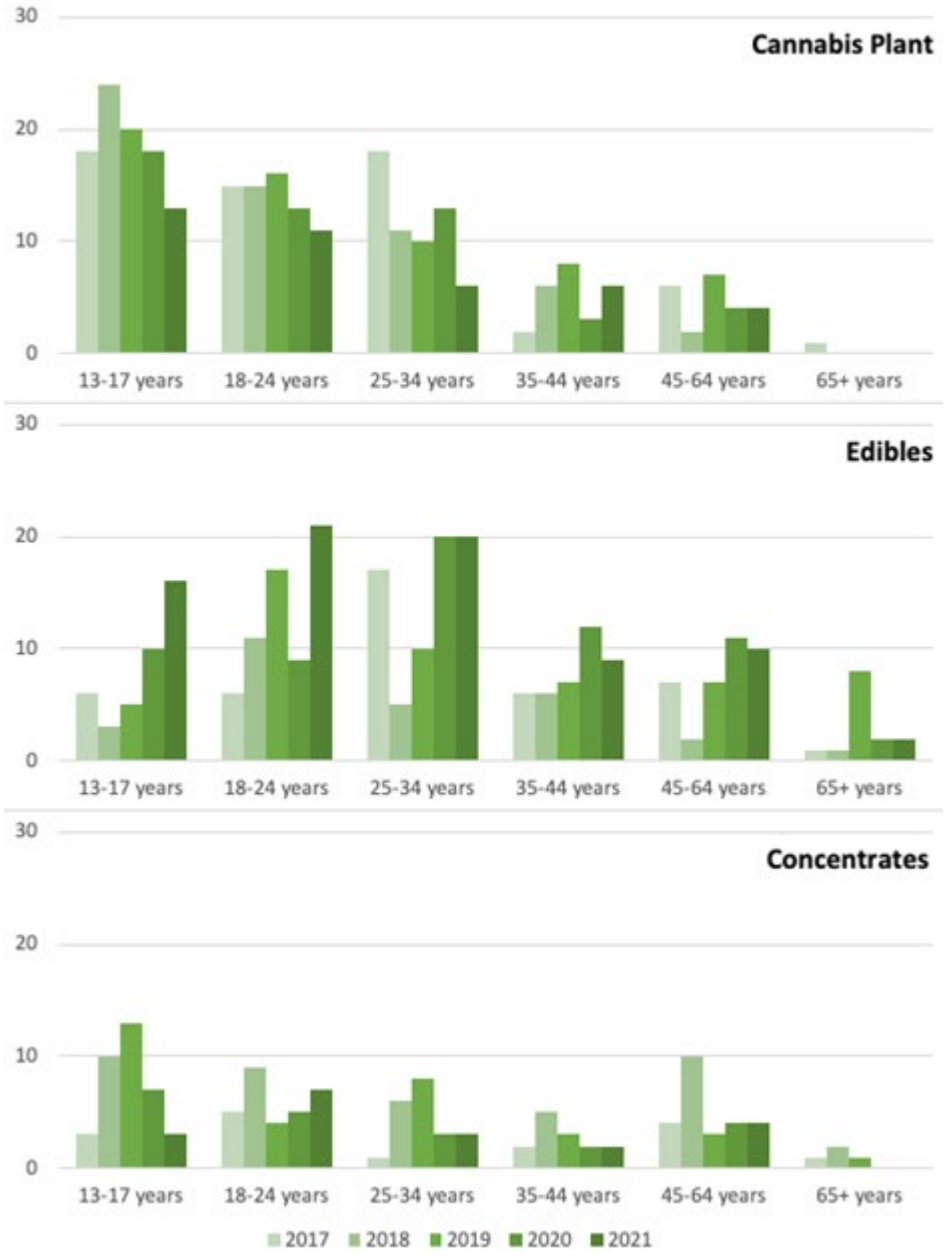

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Figure 2. Number of calls for intentional cannabis exposures by age of user and product type, Washington Poison Center, 2017-2021

Intentional cannabis exposures that likely result in medical interventions

People who experienced moderate or major clinical effects likely needed medical intervention; 80% of calls with moderate or major clinical effects were made from health care facilities compared to 31% of calls with less severe effects.

The number of cases that result in moderate to major clinical effects has more than doubled over the past five years, from 32 in 2017 to 73 in 2021. Increases in the severity of clinical effects over time is likely due to a combination of factors that relate to cannabis use behavior and shifting

societal norms. This includes factors like using cannabis products with higher THC potency which may lead to undesired intoxicating effects,[8] or people may be less likely to call WPC for less severe cases as the cannabis market matures and more community resources are available to prevent and treat cannabis misuse. Though, moderate or major cases were also more likely to involve at least one another substance that was not cannabis prior to calling poison center (71% compared to 49% among patients with less severe effects).

For those who were only exposed to cannabis:

- Moderate or major clinical effects were more common for calls about concentrate and edible exposures. Roughly,1 in 3 calls about concentrates and 1 in 5 calls about edibles resulted in moderate or several clinical effects.
- When differences in age, gender, and year were accounted for, the likelihood of a moderate or major clinical effect was nearly four times higher for cases who used concentrates and nearly twice as high for cases who used edibles compared to those who consumed cannabis plant or did not specify a cannabis product.
- Experiencing moderate or major clinical effects was not linked to age or gender.

Conclusions

- **WPC calls for intentional cannabis exposures have not increased** over the past 5 years, but the **number of calls for edibles has**.
- Despite record high cannabis sales at the beginning of the COVID-19 pandemic, **the number of WPC calls for cannabis did not increase during the pandemic.**

- **Calls about edible exposures continue to increase**, which may indicate **shifts in product preferences that have longer lasting psychoactive effects**, like edibles, compared to products that are inhaled or vaped with shorter lasting psychoactive effects.
- **Concentrate use did result in stronger clinical effects** and their calls were more common among males and underage users (13-20 years old).

This analysis of WPC data sheds light on which types of cannabis products and who may be more likely to experience more sever negative outcomes after their use. Work remains to understand how product dosing, packaging, and consumer behavior influence negative experiences and calls made to poison center.

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