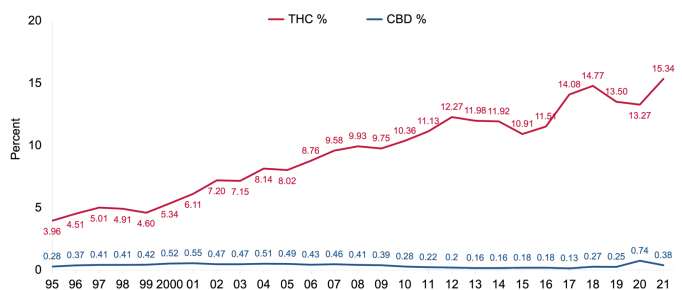


# HIGH POTENCY THC PRODUCTS: EMERGING PROBLEMS AND POTENTIAL RESPONSES

## Introduction

The increased concentration of *tetrahydrocannabinol* (THC) in cannabis products over the last two decades has created concerns about product strength. THC is the primary intoxicating component in cannabis, and the concentration of THC determines the potency of the product, including the intensity of the product's effect on the consumer.[1] According to available data, the amount of THC in cannabis products nearly quadrupled from 1998 to 2021.[2]

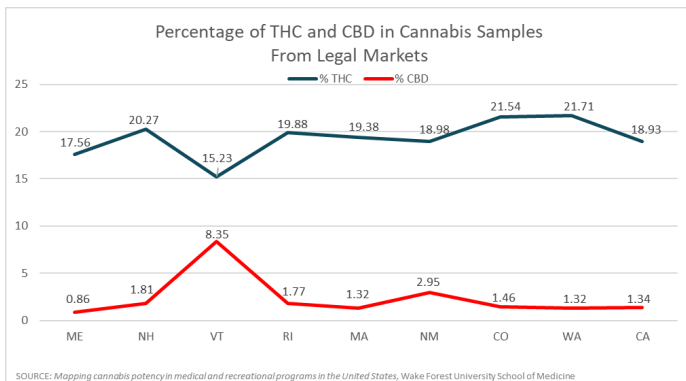
Percentage of THC and CBD in Cannabis Samples Seized by the DEA, 1995-2021



SOURCE: U Miss, Potency Monitoring Project

Fig. 1

Cannabis products sold in legal markets, either medical or retail, have similar levels of THC. Data from a 2020 research article that compiled THC and CBD concentrations in states with established markets showed that products being sold legally were similar in concentration to those seized from the illicit market. Often, the THC content in these legal products was greater than the THC content in seized products.[3]



SOURCE: Mapping cannabis potency in medical and recreational programs in the United States, Wake Forest University School of Medicine

Fig. 2

## Negative Side Effects of High Potency Cannabis and Associated Healthcare System Cost

Consuming more potent cannabis products can increase the likelihood of negative side effects. Physical issues such as increased heart rate and increased blood pressure are more common with high potency THC use.

Mental and behavioral side effects are prevalent among users of high potency cannabis products. Anxiety, panic attacks, and paranoia after cannabis use are all more likely and more severe with higher THC concentrations. In some cases, users have reported hallucinations and psychosis. The increase in THC concentration is correlated with higher costs to the healthcare system due to more cannabis related emergency room visits, more fatalities and injuries in motor vehicle accidents with suspected cannabis use, more cannabis-involved overdoses, and a dramatic rise in poison control calls and reported accidental ingestions.[4] Cannabinoid hyperemesis syndrome (CHS) is also linked to high potency THC products. CHS occurs in heavy or regular users of cannabis and causes severe nausea and prolonged and violent bouts of vomiting. [5]

## ***Impact of High Potency Cannabis Products on At-Risk Populations***

High potency THC products are linked with greater negative side effects for at-risk populations, including those with mental health issues or at risk of mental health issues and those who struggle with addiction. Cannabis Use Disorder (CUD) is strongly linked to the use of high potency THC products.[6] [7] CUD is the inability to stop cannabis use despite its use potentially producing social or health-related harms. Side effects of cannabis are more severe for people under 21, whose brains are still developing.[8][9]

## ***Unique Challenges Posed by Cannabis***

Cannabis products pose unique challenges compared to botanical cannabis. Cannabis products such as edibles, concentrates, and vapes are gaining popularity with cannabis users, but they routinely contain higher THC concentrations than traditional flower. Cannabis products also often contain many serving sizes per container, increasing the possibility of consuming a high amount of THC. Products sold in packaging with multiple servings require consumers to be familiar with what constitutes a serving size, which can be difficult to determine.

Cannabis research is limited because THC is classified as a Schedule 1 substance by the Drug Enforcement Administration. Although researchers are working to validate claims about the potential harms and benefits of higher potency THC, there is not enough information available to make evidence-based conclusions. [10] [11]

## **Proposed or Implemented Policy Solutions to Address High Potency THC Issues**

Other jurisdictions have implemented a variety of policy approaches to address problems caused by the proliferation of high potency cannabis products.[12] [13] [14] [15]

### ***Caps on THC and Serving Sizes in THC Products***

Limiting, or capping, the amount of THC allowed in regulated products is one approach used in some retail and medical markets. Regulators have implemented caps in two ways: (1) caps on total allowed THC per product, and (2) caps on THC allowed per serving size.

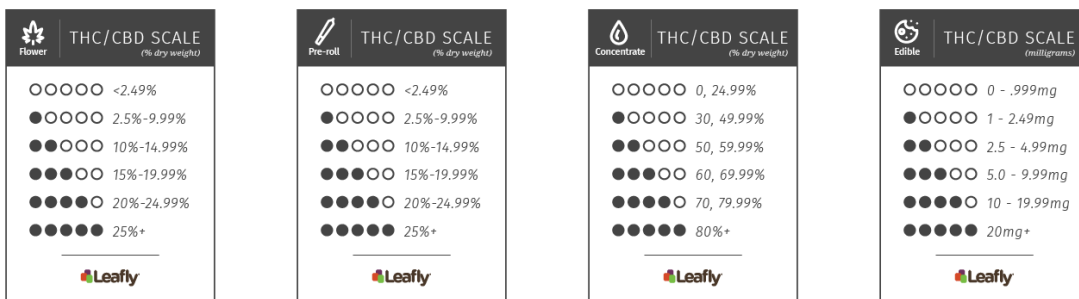
Caps on overall THC per product establish a maximum limit on the total THC concentration of each product sold, which allow regulatory control of the product's potency.

Caps on THC per serving reduce only the amount of THC allowed per individual serving. Products that include more than one serving can still contain larger amounts of THC in a single package. The consumer maintains the discretion to consume only an appropriate number of servings to avoid overdose.

Both forms of caps often face opposition from consumers and the cannabis industry. In addition, many manufacturers turn to diluting their products with additives to stay within the maximum amount of THC. Such additives may pose additional risks to consumer health and safety, particularly in vaped products.

## **Stronger Labeling and Advertising Requirements for High Potency Cannabis Products**

Requiring specific labels for high potency cannabis products is another common approach. As product potency rises, labels can indicate the products' increased impact and risks. Consistent and identifiable warning labels created specifically for high potency cannabis products can alert consumers of potential side effects and highlight the products' overall strength at point-of-sale locations. While this approach is more common in adult-use retail market settings, it might also be applied in a medical cannabis program to encourage medical cannabis facilities to promote less potent products. Some cannabis industry groups have proposed measures like scaled labeling for cannabis products to give consumers the ability to compare products (see figure 3). [16]



Source: How to help consumers understand the amount of THC and CBD in their cannabis, Leafly

**Fig. 3**

## **Increased Education about High Potency Cannabis Products**

Education can increase awareness of the risks and potential effects of high potency products and encourage safe cannabis consumption practices that help prevent cannabis overuse. “Start low and go slow”—the common catchphrase used to urge cannabis users to start with lower doses of product and increase their dose only gradually over time—is especially pertinent to high potency cannabis products.

Educational materials created by government entities like the Virginia Cannabis Control Authority can be distributed directly from the state cannabis regulator and/or be shared through partnerships. Outreach events to distribute materials or address community questions are another option. Some states also have collaborated with the cannabis industry to encourage distribution of educational materials at point-of-sale (POS) locations and through public-private partnerships. Mandating the distribution of such resources at each POS location is also an option.

## **Conclusion**

THC concentration in cannabis has trended upward in recent years. As this trend continues, public health problems posed by this shift will continue to grow. As states continue to implement new approaches to address these issues, Virginia should explore options to adopt in the Commonwealth and monitor trends in other states, especially any approaches used in other states limited to medical cannabis programs.

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