Appropriate Labeling of Cannabis- and Marijuana-Derived Products

NSC Policy Position:

The National Safety Council (NSC) supports explicit, clear, detailed labeling for all cannabis-derived products that contain THC (delta-9 tetrahydrocannabinol), CBD (cannabidiol) and products marketed as “synthetic marijuana” to prevent misuse, which could create a safety risk to the individual or others, and unintentional overconsumption, which could lead to medical complications or other adverse effects. The rapid decriminalization of cannabis occurring in states, coupled with the passage of the 2018 Farm Bill, makes requiring labels an acute need to ensure the public is well-informed of the contents and concentrations of these products.

Requiring cannabis and cannabis-derived products, including hemp-derived CBD, to have accurate information on packaging will improve public safety and allow authorized users to use it in an appropriate manner. For situations in which false claims are made or incorrect labeling is present, the Food and Drug Administration (FDA) and other appropriate government agencies should use their authority to enforce laws and regulations.

Facts

Cannabis is the most widely consumed illicit substance worldwide.\(^1\) In 2015, “more than 11 million individuals ages 18 to 25 used cannabis”.\(^2\) Although medical and recreational cannabis is legal in certain states, it is still classified as a schedule 1 drug by the federal government under the Controlled Substances Act (CSA). Due to its illegal federal standing, the FDA has not officially approved any drug products containing CBD or THC (or their synthetic derivatives) other than Epidiolex, Marinol, Syndros and Cesamet.\(^3\) All four of these products have demonstrated clinical efficacy and safety, when used as prescribed, and require a prescription from a licensed healthcare provider.\(^4\)

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\(^2\) [https://www.drugabuse.gov/publications/drugfacts/cannabis](https://www.drugabuse.gov/publications/drugfacts/cannabis)


CBD is available in many parts of the U.S. over-the-counter, and sometimes these products come with palliative or other medicinal claims. Selling products with unsubstantiated therapeutic claims is illegal, with FDA acting as the enforcement authority. The FDA reiterated its authority to require substances in interstate commerce claiming a therapeutic benefit to be FDA-approved for its intended use. This also applies to CBD additives to food products in interstate commerce. One study examined 84 different CBD products. Regarding their CBD concentration, nearly 43% of products were under-labeled, and 26% were over-labeled—meaning that less than one third of products are accurately labeled.

Similarly, the Johns Hopkins University School of Medicine performed a study of 75 cannabis-derived edible products from 47 different brands, purchased in random dispensaries located in San Francisco, Los Angeles, and Seattle. The study found only 17% were accurately labeled, 23% were under labeled, and 60% were over labeled with respect to THC content. More than half of the products had significantly less cannabinoid content than labeled. The lack of surety pertaining to labeling poses significant public health and safety risks, as products containing significantly more THC than labeled place patients at risk of experiencing adverse effects, and products containing less THC than labeled may lead people using these products to use more to achieve the desired impact, increasing risk for other side effects.

Existing Labels and Packaging

Twenty-nine states and D.C. have a baseline of packaging and labeling requirements. Washington State is a leader on setting clear requirements for cannabis and cannabis-derived product labeling. The Washington State Liquor and Cannabis Board adopted a list of packaging and labeling requirements for all cannabis and cannabis-derived products effective in January 2019. All marijuana products that are sold and distributed in Washington must have child resistant packaging, and some additional requirements include:

- Prominently displaying the number of servings in the package and the amount of product per serving:
  - Net weight in ounces and grams or volume as applicable
  - THC concentration listed as total THC and activated THC-A and CBD concentration listed as total CBD and activated CBD-A.
- Not designing [packages] in any manner that is especially appealing to children or other persons under twenty-one years of age.
- Include standard warnings on all labels in a legible and visible manner including:
  - “Warning – May be habit forming”
  - “Unlawful outside Washington State”

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5 Ibid.
7 https://jamanetwork.com/journals/jama/fullarticle/2661569
8 https://jamanetwork.com/journals/jama/article-abstract/2338239
10 https://marijuanapackaginglaws.com/
12 Ibid.
13 Ibid.
14 Ibid.
It is illegal to operate a motor vehicle while under the influence of marijuana”\textsuperscript{15}

- “The marijuana universal symbol”\textsuperscript{16}
- “Should not be used by women that are pregnant or breast feeding”\textsuperscript{17}

The requirements above are only a small selection of the numerous rules and regulatory components Washington State has used to attempt to clearly provide safety and legal information about cannabis and cannabis-derived products on packaging.

\textit{Washington Retail Cannabis Warning Label}

\textbf{Harmful Effects of Inadequate Labels}

A 2017 study revealed that nearly 70\% of all cannabidiol-based products sold online contained percentages of CBD either over or under the labeled concentration, which can cause serious harm to its consumers.\textsuperscript{18} According to the study, only “30 percent of CBD products purchased contained an actual CBD content that was within 10\% of the amount listed on the product label.”\textsuperscript{19} Some products also contained a significant amount of THC that was not noted in the product.\textsuperscript{20}

Another potentially harmful effect of inadequate product labeling revolves around THC concentration. Certain states do not require packaged cannabis products to display the total THC amount and activated THC-A.\textsuperscript{21} However, when a product containing THC-A is heated up, such as an edible, THC-A is converted to THC, and the THC concentration is more than the percentage listed on the packaging.\textsuperscript{22}

\textsuperscript{15} Ibid.
\textsuperscript{16} Ibid.
\textsuperscript{17} http://www.weberpackaging.com/pdfs/Cannabis%20Laws%20by%20State.pdf
\textsuperscript{18} https://www.pennmedicine.org/news/news-releases/2017/november/penn-study-shows-nearly-70-percent-of-cannabidiol-extracts-sold-online-are-mislabeled
\textsuperscript{19} Ibid.
\textsuperscript{20} Ibid.
\textsuperscript{21} THC-A is an inactive compound that in its regular state does not have psychoactive effects. When heated, THC-A changes so that it has psychoactive effects. Therefore, when THC-A is used in items that will be heated, like some edibles, the overall THC content will be higher.
\textsuperscript{22} https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5852027/
While CBD is marketed as offering health benefits, many products contain psychoactive substances that are not otherwise disclosed on the label. The fact that these products may contain psychoactive substances other than CBD illustrates the need for oversight.

A study examining nine cannabidiol e-liquids from a single manufacturer resulted in the detection of CBD in all nine products, along with the unexpected detection of “5-fluoro” (MDMB-PINACA), a cannabimimetic and an active ingredient in synthetic cannabinoid. 5-fluoro recently has been found laced on plant material and marketed under the guise of herbal incense products. 23 5-fluoro has also been encountered on the designer drug market, which has also been detected in individuals after smoking “spice”, a mix of herbs and laboratory-made chemicals with mind-altering effects. It is often referred to as “synthetic marijuana”.

Clear labeling of THC concentrations is important to public health. While THC content in cannabis was less than 5% in 1980, concentrations today of more than 20% THC can lead to a greater risk of addiction or adverse reaction. 24 Research has also discovered that the risk of developing a psychotic disorder triples with adolescence and regular cannabis use. 25

Conclusion

The National Safety Council supports clear and detailed labeling and safe packaging, similar to that of Washington State, for all cannabis and cannabis-derived products that contain THC or CBD. Requiring cannabis or cannabis-derived products to have accurate information on packaging will improve public safety and allow authorized users of cannabis to use it in a safe and appropriate manner. It is imperative that consumers know what they are putting into their body and effective labeling requirements and oversight will directly benefit public health.

For those products without appropriate labeling, the FDA and other appropriate agencies should use their authority to protect public health and enforce requirements under its jurisdiction.

This position statement reflects the opinions of the National Safety Council but not necessarily those of each member organization.

Adopted by the National Safety Council, 2019

23 https://www.deadiversion.usdoj.gov/drug_chem_info/5F-ADB.pdf
24 https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4987131/
25 https://www.themarshallproject.org/2019/01/14/how-dangerous-is-marijuana-really