



June 13, 2017

California Department of Public Health  
Office of Regulations  
1415 L Street, Suite 500  
Sacramento, CA 95814  
DPH-17-004 Medical Cannabis Manufacturing  
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Dear Colleagues,

We take this opportunity, on behalf of ***Getting it Right from the Start: Regulation of Legalized Recreational Marijuana*** – a project of the Public Health Institute – to express serious concerns regarding the strength of public health protections specified in the proposed regulatory framework for medical cannabis manufacturing, as well as to raise key issues we believe should be included in upcoming regulations for recreational adult use. These include adopting more of the precautions used in sister states which have legalized, and lessons learned from tobacco and alcohol. We urge that you consider the recommendations provided here. We also recommend careful consideration of the important comments submitted by Professor Glantz and colleagues of UCSF today with particular emphasis on plain packaging.

While legalization of recreational marijuana use will have important social benefits for our state, particularly in reducing incarceration for marijuana related offenses and other criminal justice issues, we believe the regulatory process for both medical and recreational marijuana should fully incorporate the consideration that marijuana, while it has some medical benefits and positive effects, also continues to generate significant harmful effects. The National Academy of Sciences, as recently as January of 2017, reviewed the scientific evidence of both benefits and harms, sponsored by the California Department of Public Health amongst others.<sup>1</sup> While much research is still needed to clarify both benefits and harms, areas where their extensive review of the evidence confirms or supports the existence of harmful effects are summarized in Table 1. The breadth of the potential harms and effects noted calls for caution and prudence in the extent of accessibility and allowable marketing of this newly legalized product. This is especially the case given the extraordinary size of California's existing crop, which greatly exceeds current demand in the state. This creates a very strong incentive for aggressive marketing, promotion of heavier consumption, and capture of new clients of all ages, than existed in other states. Past aggressive marketing behaviors of the tobacco industry and of the patent medicine industry are already in use.

These are not light matters and there are significant implications for the health, safety and well-being of the people, in particular the youth, of California. The serious potential harms require that legalization should not imply *normalization*. The social interest in ending trafficking and excessive incarceration should not lead to newly unfettered promotion of a harmful substance.

The cannabis industry should not be allowed to replicate the historic aggressive marketing practices of the tobacco or alcohol industries which led to generations of dependent users,

whose suffering we have been working to remedy for decades. Current cannabis marketing

**Table 1. Harmful Effects of Cannabis Use Identified by the National Academy of Sciences in 2017 by Strength of Evidence <sup>1\*</sup>**

<b>Substantial Evidence of Harm</b>
Increased risk of motor vehicle crashes
Maternal cannabis smoking is associated with lower birth weight of the offspring
Development of schizophrenia or other psychoses, with the highest risk among the most frequent users
Worse respiratory symptoms and more frequent chronic bronchitis episodes (with long-term cannabis smoking)
Initiating cannabis use at an earlier age is a risk factor for the development of problem cannabis use
Increases in cannabis use frequency are associated with progression to developing problem cannabis use
<b>Moderate Evidence of Harm</b>
Increased risk of overdose injuries, including respiratory distress, among pediatric populations in U.S. states where cannabis is legal
Impairment in the cognitive domains of learning, memory, and attention (with acute cannabis use)
Increased symptoms of mania and hypomania in individuals diagnosed with bipolar disorders (with regular cannabis use)
A small increased risk for the development of depressive disorders
Increased incidence of suicidal ideation and suicide attempts with a higher incidence among heavier users
Increased incidence of suicide completion
Increased incidence of social anxiety disorder (with regular cannabis use)
The development of substance dependence and/or a substance abuse disorder for substances including, alcohol, tobacco, and other illicit drugs
<b>Limited Evidence of Harm</b>
Impaired academic achievement and education outcomes
Increased rates of unemployment and/or low income
Impaired social functioning or engagement in developmentally appropriate social roles
Maternal cannabis smoking and pregnancy complications for the mother
Maternal cannabis smoking and admission of the infant to the neonatal intensive care unit
Triggering of acute myocardial infarction (cannabis smoking),
Ischemic stroke or subarachnoid hemorrhage
Increased risk of prediabetes
An increased risk of developing chronic obstructive pulmonary disease (COPD) even when controlled for tobacco use (occasional cannabis smoking)
An increase in positive symptoms of schizophrenia (e.g., hallucinations) among individuals with psychotic disorders
The likelihood of developing bipolar disorder, particularly among regular or daily users
The development of any type of anxiety disorder, except social anxiety disorder
Increased symptoms of anxiety (near daily cannabis use)
Increased severity of posttraumatic stress disorder symptoms among individuals with post-traumatic stress disorder
The initiation of tobacco use
Changes in the rates and use patterns of other licit and illicit substances

**\*Substantial Evidence:** There is strong evidence to support or refute a statistical association between cannabis or cannabinoid use and the health endpoint of interest. **Moderate Evidence:** There is some evidence to support or refute a statistical association between cannabis or cannabinoid use and the health endpoint of interest. **Limited evidence:** There is weak evidence to support or refute a statistical association between cannabis or cannabinoid use and the health endpoint of interest.

already does this, mimicking, for example, Joe Camel, one of the most successful advertising campaigns ever in generating the addiction of teens to a harmful product.<sup>ii</sup> In 1991, the *Journal of the American Medical Association* published a study showing that by age six nearly as many children could correctly respond that "Joe Camel" was associated with cigarettes as could respond that the Disney Channel logo was associated with Mickey Mouse.<sup>iii</sup>

As the state's Blue Ribbon Commission on Marijuana and Lieutenant Governor Newsom stated, marijuana "should not be California's next Gold Rush." Instead, it prescribed that sheltering youths and communities must lay at the heart of any proposed regulation.

To protect youth, all parts of the regulatory framework should include rigorous provisions constraining marketing. Dispensaries and products should also not be allowed to be marketed in locations with significant youth exposure such as on billboards, outdoor advertising, TV or radio. These marketing practices have been limited strongly in other states such as Washington. Additionally, there is no standard for adjudicating what is a valid health claim. Unlike pharmaceuticals, where clear standards exist for establishing valid indications, no such system exists for marijuana, nor will one be feasible for some years to come, given current Federal obstacles to high quality research. Current marketing materials for medical marijuana include unsubstantiated claims, for example "shrinking tumors or antibacterial." Photos of current problem marketing practices are included at the end of this document.

**The following are specific recommendations on issues of concern to public health,** for the regulation of both the medical and adult markets, although the specific drafts under study are for medical marijuana. Some reference sections of your proposed regulation, others are sections we believe should be added.

#### **§40128**

We strongly recommend that manufacturing licenses for neither medical nor adult recreational use marijuana be issued to holders of licenses for food production or food service. Given the significant evidence of harm, cannabis products should not be treated as food or served with or as part of meals. It will also be impossible to prevent cross contamination of foods and cannabis products.

#### **§40268**

You may wish to include rules for CDPH initiated recall.

#### **§40272 Track and Trace availability for evaluation**

We recommend that track and trace data incorporate the age of the consumer, in order to assess exposure of the population under 25, to assess use at younger ages and when neurological development is still vulnerable. We recommend that the track and trace system data be fully available through the California Public Records Act. If this change is not made in the law, at a bare minimum it should be available through data use agreements. The track and trace program database should be available not only for enforcement but also for bona fide research purposes, including at public and private non-profit research institutions as well as public health departments to permit understanding of the nature of this new market for a product with significant known harms and to allow its study in conjunction with health data to understand impact. Understanding what types of products are used, and

how that correlates with youth and problem use, illness and adverse events is essential. Confidentiality as currently specified would place industry concerns over understanding of the public health impact of legalization. The Washington State database is publicly available and the Oregon state health officer informs us that Oregon's data is available through public records request. Prop 64 did not specify confidentiality for track and trace, only for patients. We recommended changes in the trailer bill to this effect and would recommend similar clarity in regulatory framework establishing a mechanism to access track and trace data.

#### **Product content, packaging and labeling pre-approval Process:**

We recommend that a process be created, including use of an expert non-industry advisory committee, with the purpose of pre-approving cannabis products prior to the item being sold to a consumer, assuring that such products and packaging adhere to the rules set out in the regulations and any new knowledge that emerges with regard to safety, claims and to appeal to and accessibility by minors. This process could begin in late 2018, and products could be granted an interim authorization until that time.

- (1) Prior to a cannabis item being sold to a consumer, manufacturer must submit an application for product content, package and label pre-approval by the Committee.*
- (2) The packaging and labels must be accompanied by information including but not limited to:*
  - (A) Documentation that the package has been certified for child resistance by a qualified third party child-resistant package testing firm.*
  - (B) A picture of and description of the item to be placed in the package.*
  - [C] Full description of product content*
- (3) The Committee will evaluate the product, packaging and label in order to determine whether:*
  - (a) The packaging:*
    - (A) Has been certified as child resistant by a qualified third party child-resistant package testing firm;*
    - (B) Is attractive to minors or is packaged or marketed in a manner attractive to minors;*
    - (C) Contains untruthful or misleading content or unauthorized claims; and*
    - (D) Will contain a cannabis product that is not compliant with these rules.*
  - (b) The label complies with the labeling rules.*
  - {c} The cannabis product is compliant with these rules and contains no novel or unexpected hazards*

#### **§40300 Prohibited Products**

We strongly support the provisions "a-e" noted in this section. We would go further however. While edible products are potentially preferable to smoked products in reducing certain adverse effects, the proliferation of attractive, tasty products in a wide variety of formats attractive to children and youth will inevitably increase the likelihood of youth experimentation and initiation over time. In recent years, for example, the tobacco industry has greatly diversified the offerings of a wide variety of flavored and textured products to attract the young, from chocolate pop rocks to bubble gum snuss.<sup>iv,v</sup> Youth and young adults are the heaviest users of these products. The marijuana industry is copying these practices with the addition of large numbers of edibles attractive to youth. These measures have increasingly been the object of tobacco control actions banning or restricting flavors, and these measures have been successful in reducing adolescent tobacco use. Public health advocates have worked for decades to ban menthol cigarettes, for example, proven to be

used to appeal to African Americans and have not yet been successful. We should not start the marijuana market burdened with these issues.

We believe that to reduce youth initiation and problem use, and not just for food safety reasons, the diversity and types of edible products should be intentionally limited to reduce attractiveness as well as reduce the risk of overconsumption, while still permitting an alternative to smoking. Specifically:

- 1) Baked goods and granola bar type products should not be allowed
- 2) Edible products should be restricted to hard candies (which should be termed “lozenges”) or small chocolates.
- 3) Flavors should be limited to no more than 3 and not include flavors specifically attractive to children such as bubble gum or cotton candy.
- 4) Edibles should not exceed 20 calories per dose.
- 5) Products in the shape of animals, fruits, cartoon characters or plants other than a marijuana leaf should not be allowed.

#### **§40305 Edible Products Serving Size**

We support the restriction to a maximum of 10 mg THC per serving and 100 mg THC per package for both medical and recreational marijuana.

We recommend adoption of Washington’s approach of requiring separate packaging of each serving, rather than merely scoring or delineation. While more expensive, this is more likely to reduce overconsumption episodes which occur naturally when products look like a regular, unadulterated food item, even if scored. It may also help avoid inadvertent pediatric poisonings at higher doses.

We recommend that each dose be marked with the universal identifier.

#### **§40405 - 40408 Primary Panel**

We recommend that the language “Contains marijuana” be used rather than “cannabis-infused”. Cannabis-infused is unlikely to be understood by many low literacy individuals. THC content should be given in no less than 12-point font.

We recommend that packaging in general be as close to the plain packaging requirements being adopted globally for tobacco. Bright colors should not be permitted to avoid attracting children (in use in Washington). A dull brown base color is recommended.

The warning label recommended in Prop 64 in is not consistent with current science and we recommend that it be strengthened. It should also occupy 50% of the front panel of the product. We recommend updating the language initially to:

***“WARNING: The State of California warns consumers that***

***Marijuana use:***

- ***During pregnancy is associated with low birth weight of babies. Use during pregnancy and breastfeeding is not advisable.***
- ***Increases the risk of motor vehicle crashes. Do not use while operating a motor vehicle.***

- *Is associated with development of psychoses and schizophrenia, especially in frequent users.*
- *At an early age or high frequency is associated with problem use.*

***Effects of edibles may only be felt only 2 or more hours after eating them [edibles only]***

We recommended in the discussion of the trailer bill that CDPH receive the authority to update warning messages based on the current scientific literature and testing of effectiveness and consumer comprehension. In some research, fewer, but strong rotating messages have proven more effective. We suggest that the warning language be evaluated by CDPH through research with consumers and updated every 3-5 years to reflect findings and current science. The warning language should be far more prominent than other language, occupying at least 50% of the principal surface. A 6-point warning label is useless.

We also recommend the use of the “Not for Kids” logo in combination with the universal cannabis symbol chosen.

Given the growing body of literature on potential negative effects on cognition when marijuana is used during youth, especially heavy use, we recommend evaluating the following warning for inclusion:

***“Use of this product by individuals under age 25 may be related to cognitive difficulties.”***

#### **§40410**

##### **Appeal to minors in packaging and products by distributors or dispensaries:**

We recommend that the sections on labeling restrictions in relation to appeal to minors be significantly strengthened:

*Recommend: (b) Packages and labels shall not be made to be attractive to minors, defined as persons below the legal age of consumption. Packaging and labeling may not contain content that is likely to appeal to minors, including but not limited to, cartoon characters (meaning any drawing or other depiction of an object, person, animal, creature or similar caricature using comically exaggerated features), animals, anthropomorphized creatures (meaning the attribution of human characteristics to animals, plants or other objects, or the similar use of anthropomorphic technique), bright colors, other pictures or images that would appeal to minors, or any likeness to images, characters or phrases that are popularly used to advertise to children. Use of the word “candy” and/or “candies” or “gummies” on the product, packaging or labeling for retail marijuana or retail marijuana product is prohibited. Packaging may not look like candy, or other products primarily consumed by or marketed to minors or products that could reasonably be mistaken for that branded product, especially by minors.<sup>vi,vii,viii</sup>*

*We strongly support provision (e) prohibiting the presence of claims of any health benefits or other physical benefits.*

However, these draft regulations do not cover other marketing materials. No such claims of health or other physical benefits should be allowed on cannabis packaging or advertising materials, given the absence of any clear regulatory framework to distinguish substantiated and unsubstantiated health claims for cannabis effectiveness at this time. See **Figure 3** for

examples. Practitioners and prescribers must rely on published scientific literature and prescribing guidelines. Oregon's rules, for example, state: **From Oregon 845-025-8040 Advertising Restrictions** "(1) Marijuana advertising may not: .... (e) Make claims that recreational marijuana has curative or therapeutic effects;"

We suggest that other claim types also be restricted, for example claims to contain vitamins or minerals, claims of being "natural" or "organic", or claims of "potency" or of other physical effects such as "highs."

#### **§40412**

While we strongly support the cannabis product symbol the design is not intuitively clear and understanding of THC as the active ingredient of cannabis requires relatively high literacy. We suggest the Oregon symbol may be preferable. While a marijuana leaf image could be thought to be promotional, at least it is more clear and understandable to both youth and non-native English speakers. We recommend focus group evaluations of the proposed symbol options to identify an option that consumers most clearly understand to be associated with marijuana and with exercising caution. See also UCSF comments on this issue.

We recommend considering joint use of the "Not for Kids" symbol with the universal symbol.

#### **Recommend addition of a section regulating marketing practices to restrict appeal to minors and exposure of minors through advertising by holders of manufacturing licenses (for both medical and recreational):**

*Licensees may not advertise or market cannabis products or brand names of cannabis products or businesses on billboards, online unsolicited digital pop-ups, broadcast, cable or radio. Use of the licensed cannabis product brand or business name is not allowed even if the advertising is purchased by a business licensed for other purposes. Licensees may not market at sporting events, festivals, fairs or other community events where attendance of persons less than 21 years of age is allowed. Any advertising or marketing placed in print or digital communications shall only be displayed where at least 85<sup>ix,x</sup> percent of the audience is reasonably expected to be 21 years of age or older, as determined by reliable, up-to-date audience composition data at the local market level.<sup>xi</sup> A licensee who advertises via webpage must utilize appropriate measures to ensure that individuals visiting the web page are over 21 years of age. A licensee may not engage in advertising via marketing directed towards location-based devices, including but not limited to cellular phones, unless the marketing is a mobile device application installed on the device by the owner of the device who is 21 years of age or older and includes a permanent and easy opt-out feature.<sup>xii</sup>*

*Digital marketing communications on a site or web page controlled by the brand advertiser that involve direct interaction with a user should utilize commercial age-identification and/or filtering software with parental notification features, and require active input of date of birth by the user prior to full user engagement of that communication to determine that the user is of legal purchase age. User-generated content on a site or web page controlled by the brand advertiser must be monitored and moderated on a regular basis. Digital marketing communications that are intended to be forwarded by users should include instructions to individuals downloading the content that they should not forward these materials to individuals below the legal purchase age.<sup>xiii</sup>*

*Advertising or marketing shall not be attractive to minors, defined as persons below the legal*

*age of consumption, and cannot contain cartoons (meaning any drawing or other depiction of an object, person, animal, creature or similar caricature using comically exaggerated features), characters with attributes of unnatural or extra-human abilities, such as imperviousness to pain or injury, X-ray vision, tunneling at very high speeds or transformation, animals, anthropomorphized creatures (meaning the attribution of human characteristics to animals, plants or other objects, or the similar use of anthropomorphic technique), toys, celebrities who appeal to youth, or actors who appear to be under age 21 or are under age 25; advertising or marketing cannot use elements of magic or fantasy, music with appeal to youth, cannot depict consumption of the product, allude to consumption of the product (for instance showing smoke but not the person smoking), or portray persons experiencing effects after consumption, advertising cannot associate the product directly or indirectly with rebellion or achievement in any venture including but not limited to: wealth, society, romance, or physical activity.<sup>xiv,xv,xvi</sup> Use of the word “candy” and/or “candies” or “gummies” on advertising for cannabis a product is prohibited. Advertising may not display candy, or other products primarily consumed by or marketed to minors or products that could reasonably be mistaken for that branded product, especially by minors.<sup>xvii,xviii,xix</sup> Advertising may not contain claims or health or other physical benefits, of being natural, or of being fortified with any substance, or other claim not allowed on product packaging.*

The current restrictions on advertising are severely inadequate and stand in strong contrast to Washington and Colorado’s more robust controls to protect children from exposure to marijuana advertising. Colorado for example banned billboards and pop-up ads, both of which inevitably expose children. Yet, already as one comes over the Bay Bridge into San Francisco a giant billboard with a cute, three eyed Joe Camel type cow in a top hat advertises Korova “unrivalled potency” marijuana to every passing child (see Figure 1 and 2). Without a stronger regulatory framework for marketing rampant advertising exposure of children and youth in broadcast, cable, print and digital media will follow. We recommend restricting cannabis advertising to certain print and digital media with a higher youth audience threshold. These more stringent thresholds are recommended because the trailer bill proposed language suggesting a 71.6% adult target market is adopted from alcohol industry self-regulatory guidelines which have been found in research to be wholly inadequate to protect youth from advertising exposure.<sup>xx xxi</sup> A report from the National Research Council and Institute of Medicine recommended a maximum 15% threshold. It reported that this as standard would preclude alcohol advertising on only 34.0 percent of television programming if the base included children ages 2 and above, and 19.2 percent of programming if the base were limited to person age 12 and above (the group between the ages of 12 and 20 comprises the young people who are most at risk of initiating underage drinking). Additionally, research has shown that it is the local market data which needs to be assessed, not national, as there is considerable variation across locales.

Note that a systematic review of the literature on youth perceptions of advertising for alcohol and tobacco found specific advertising content features to which minors are particularly susceptible due to their unique developmental stage, propensity for high-risk behaviors, and relative inexperience with consumption of these substances. A subsequent analysis found a positive association between the use of such features in alcohol brand advertisements and youth consumption of those brands, and no association with adult alcohol consumption of those brands, suggesting they have particular appeal for youth.<sup>xxii</sup> Rigorous controls on cannabis marketing are perhaps the most promising route to reducing risk of increasing youth and problem use while permitting legal commerce of cannabis and cannabis products. Recent conversations with Colorado cannabis officials also noted the

importance of covering the product brand name under regulation whether the advertiser is the cannabis producer or a firm using part of the same name, a strategy that was used in that state to bypass restrictions.

While questions of first amendment protections for commercial speech may be raised, the situation of marijuana is unique. It is prohibited by the federal government while legal for sale in the State. Other states have successfully restricted advertising of marijuana products.

**Suggest adding restrictions on manufacturer use of discounts and coupons**

Use of promotions, discounts and coupons are well known marketing mechanism widely used by the tobacco industry to encourage addiction and initiation and to increase sales. Their effectiveness in increasing consumption is confirmed by the fact that point of sale discounts absorb a significant part of the tobacco industry marketing budget. Washington, for example, has banned this practice for marijuana dispensaries. We recommend not allowing these instruments in either the medical or recreational markets.

Language mirroring that used in some California local tobacco control laws could be used:

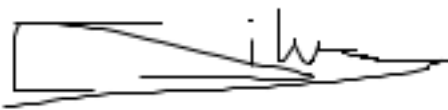
*Definition:*

*Price reduction instrument" means any coupon, voucher, rebate, card, paper, note, form, statement, ticket, image, or other issue, whether in paper, digital, or any other form, used for commercial purposes to receive an article, product, service, or accommodation without charge or at a discounted price.*

*No licensee shall offer price reduction instruments related to the sale of cannabis to a consumer; distribute signage, fund or provide other instruments to promote multi-package discount or otherwise provide to a consumer any cannabis for less than the listed price in exchange for the purchase of any other cannabis product by the consumer.*

We would greatly appreciate that your offices take into consideration the incorporation of these changes for the protection of public health.

Respectfully,



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## References:

- <sup>i</sup> National Academies of Sciences, Engineering, and Medicine. 2017. The health effects of cannabis and cannabinoids: The current state of evidence and recommendations for research. Washington, DC: The National Academies Press. doi: 10.17226/24625.
- <sup>ii</sup> In 1991, the *Journal of the American Medical Association* published a study showing that by age six nearly as many children could correctly respond that "Joe Camel" was associated with cigarettes as could respond that the Disney Channel logo was associated with **Mickey Mouse**, and alleged that the "Joe Camel" campaign was targeting children,<sup>[3]</sup> despite R. J. Reynolds' contention that the campaign had been researched only among adults and was directed only at the smokers of other brands. At that time it was also estimated that 32.8% of all cigarettes sold illegally to underage buyers were Camels, up from less than one percent.<sup>[4]</sup> Subsequently, the *American Medical Association* asked R. J. Reynolds Nabisco to pull the campaign. R. J. Reynolds refused, and the Joe Camel Campaign continued. In 1991, Janet Mangini, a San Francisco-based attorney, brought a suit against R. J. Reynolds, challenging the company for targeting minors with its "Joe Camel" advertising campaign. In her complaint, Mangini alleged that teenage smokers accounted for US \$476 million of Camel cigarette sales in 1992. When the Joe Camel advertisements started in 1988, that figure was only at US\$6 million, "implicitly suggesting such advertisements have harmed a great many teenagers by luring them into extended use of and addiction to tobacco products.
- <sup>iii</sup> Fischer, PM, Schwartz, MP, Richards, JW, Goldstein, AO, Rojas TH. *Brand Logo Recognition by Children Aged 3 to 6 Years*, *Journal of the American Medical Association*. December 11, 1991,
- <sup>iv</sup> Kuiper NM, Gammon D, Loomis B, Falvey K, Wang TW, King BA, Rogers T. Trends in Sales of Flavored and Menthol Tobacco Products in the United States during 2011-2015. *Nicotine Tob Res*. 2017 Jun 1. doi: 10.1093/ntr/ntx123. [Epub ahead of print]
- <sup>v</sup> Villanti AC, Johnson AL, Ambrose BK, Cummings KM, Stanton CA, Rose SW, Feirman SP, Tworek C, Glasser AM, Pearson JL, Cohn AM, Conway KP, Niaura RS, Bansal-Travers M, Hyland A. Flavored Tobacco Product Use in Youth and Adults: Findings From the First Wave of the PATH Study (2013-2014). *Am J Prev Med*. 2017 Mar 13. pii: S0749-3797(17)30065-X. doi: 10.1016/j.amepre.2017.01.026. [Epub ahead of print]
- <sup>vi</sup> Colorado Department of Revenue, Marijuana Enforcement Division, Retail Marijuana Rules. 1CCR 212-2 R 1001 – Labeling and Packaging Requirements: General Applicability
- <sup>vii</sup> Oregon Liquor Control Commission, Division 25, Recreational Marijuana, General Requirements Applicable to all Marijuana Licensees: 845-025-7000 Packaging and Labeling
- <sup>viii</sup> Alaska Department of Commerce, Regulation of Marijuana Industry. Chapter 306. Chapter 306.510. Acts prohibited at marijuana product manufacturing facility.
- <sup>ix</sup> Jernigan, D., Ostroff, J., & Ross, C.J. (2005). Alcohol Advertising and Youth: A Measured Approach, *Journal of Public Health Policy*, 26; 312-325
- <sup>x</sup> National Research Council and Institute of Medicine. *Reducing Underage Drinking: A Collective Responsibility*. Washington, D.C.: National Academies Press; 2004.
- <sup>xi</sup> Centers for Disease Control (2013). Youth Exposure to Alcohol Advertising on Television – 25 Markets, United States, 2010. *Morbidity and Mortality Weekly Report*, 62, 877-880.
- <sup>xii</sup> Oregon, 845-025-8060. Advertising Media, Coupons, and Promotions
- <sup>xiii</sup> Distilled Spirits Council's Guidance Note on Responsible Digital Marketing Communications, September 30, 2011. Accessed at: [http://www.discus.org/assets/1/7/DISCUS\\_Digital\\_Communications\\_Guidelines.pdf](http://www.discus.org/assets/1/7/DISCUS_Digital_Communications_Guidelines.pdf)
- <sup>xiv</sup> Oregon, 845-025-8040. Advertising Restrictions
- <sup>xv</sup> Alaska, Chapter 306.360. Restrictions on advertising of marijuana and marijuana products.
- <sup>xvi</sup> Padon, A.A., Rimal, R.N., DeJong, W., Siegel, M. & Jernigan, D. (2016). Assessing Youth-Appealing Content in Alcohol Advertisements: Application of a Content Appealing to Youth (CAY) Index. *Health Communication*, 0, 1-10.
- <sup>xvii</sup> Colorado Department of Revenue, Marijuana Enforcement Division, Retail Marijuana Rules. 1CCR 212-2 R 1001 – Labeling and Packaging Requirements: General Applicability

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- <sup>xviii</sup> Oregon Liquor Control Commission, Division 25, Recreational Marijuana, General Requirements Applicable to all Marijuana Licensees: 845-025-7000 Packaging and Labeling
- <sup>xix</sup> Alaska Department of Commerce, Regulation of Marijuana Industry. Chapter 306. Chapter 306.510. Acts prohibited at marijuana product manufacturing facility.
- <sup>xx</sup> Distilled Spirits Council of the United States. *Code of Responsible Practices for Beverage Alcohol Advertising and Marketing*. Washington, DC; 2011.  
[http://www.discus.org/assets/1/7/May\\_26\\_2011\\_DISCUS\\_Code\\_Word\\_Version1.pdf](http://www.discus.org/assets/1/7/May_26_2011_DISCUS_Code_Word_Version1.pdf)
- <sup>xxi</sup> Beer Institute. *Advertising and Marketing Code*. Washington, DC; 2011.  
<http://www.beerinstitute.org/assets/uploads/BI-AdCode-5-2011.pdf>.
- <sup>xxii</sup> Padon, A.A., Rimal, R.N., & Jernigan, D.H. (2014). Linking Alcohol Advertising and Underage Drinking: Triangulation of Data from Content Analysis, Youth Survey, and Market Exposure Data. American Public Health Association Annual Conference, New Orleans, LA, 15-19 November

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## Examples of Marketing Materials that Target Youth or are Misleading

Figure 1. Examples of “Joe Camel” style cannabis advertising, known to appeal to youth, on a California billboard (identical to the one at the Bay Bridge entrance) and the original Joe Camel ads



**Figure 2. Examples of “Joe Camel” style advertising, known to appeal to youth and” from California marketing materials, with very high dose edibles**





# KOROVA

UNRIVALED POTENCY

MINT BLACK 1,000mg THC

BLACK BAR 1,000mg THC

SALTED CARAMEL BLONDIE 500mg THC

FIFTY ONE FIFTY 500mg THC

MINT DIP 250mg THC

PEANUT BUTTER DIP 250mg THC

REVERSE DIP 250mg THC

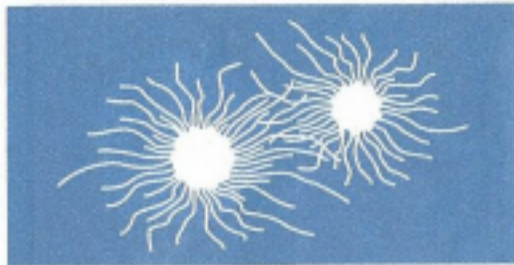
CHOCOLATE DIP 250mg THC

CHOCOLATE CHIP 150mg THC

WHITE CHOCOLATE PISTACHIO 150mg THC

GINGER CHEW 150mg THC

**Figure 3. Examples of what appear to be exaggerated, false or misleading health claims in marketing materials, such as shrinking tumors, treating depression, inflammation, diabetes and bacterial infections, bone stimulant, immunosuppressive and neuroprotective action**



#### **CANCER**

Recommended dose for symptom management is 20 mc THC daily, but varies from patient-to-patient. 10-20 mc of CBDs will help with appetite and anxiety. For Chemo-related N/V, up to 20 mc of THC may be needed per dose but start low as a precaution. Oral doses are effective, if you are able. Sprays, tinctures and suppositories are best for N/V or appetite. There are many studies showing whole plant extract oil has been known to shrink tumors, guidance from your cannabis provider is recommended.

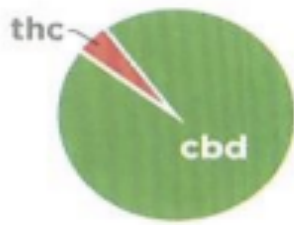
#### **THC Robust 1:5**



THC Robust ratio is recommended by many oncologists for support with tumors and other ailments related to cancer.

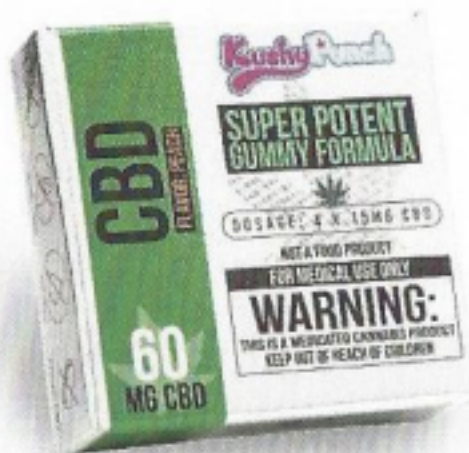
This ratio is most commonly known as the ratio for "Rick Simpson Oil" and is highly psychoactive.

**Abundant 20:1**



Patients find CBD Abundant ratio helpful for spasms, convulsions, tremors, endocrine disorders, anxiety, depression, psychosis and other mood disorders, and overall wellness.

CBD counteracts the effects of THC, therefore has reverse (non) psychoactive effects.



## CBD

Provides anti-inflammatory, anti-pain, anti-anxiety, anti-psychotic, and anti-spasm relief

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cannabis without the "high." CBD has analgesic, antibacterial, anti-diabetic, antidepressant, anti-emetic, anti-epileptic, anti-inflammatory, anti-insomnia, anti-ischemic, antipsoriatic, anti-proliferative, antipsychotic, antioxidant, antispasmodic, anxiolytic, bone stimulant, immunosuppressive, intestinal anti-prokinetic, neuroprotective, and vasorelaxant effects. CBDA converts to CBD when heated. CBDA is non-psychoactive and has antibacterial and anti-inflammatory properties and has also been shown to be anti-inflammatory, anti-emetic, and anti-proliferative.