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Public Health Language for Recreational Cannabis Laws

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Executive Summary*

Cannabis legalization for recreational use (also called “adult use”) is a reality in a growing number of US states despite continued federal prohibition and limited scientific research on the long-term and short-term health effects of cannabis use. There may be benefits to legalization, but there are also significant public health risks, including many that strongly echo those caused by tobacco and alcohol. Public health best practices drawn from tobacco and alcohol control strategies can inform regulatory approaches to legalized cannabis that prioritize public health over industry profit. This report presents supporting evidence and legislative language based on public health principles to minimize negative public health impacts of cannabis legalization and prevent the nascent legal cannabis industry from repeating harmful practices of the tobacco and alcohol industries.

The three areas analyzed here represent some of the most significant challenges and important opportunities in regulating recreational cannabis:

- 1) Packaging and Labeling**
- 2) Advertising**
- 3) Public Use and Social/On-site Consumption.**

Packaging is a powerful marketing tool for most products.

- For products restricted to adults, packaging is also a means of unlawfully targeting underage persons.
- This effect extends beyond retail shelves to other locations where consumers use or possess the product (e.g., at home).
- The most effective approach to preventing inappropriate marketing to youth via packaging is fully standardized “plain packaging.”
- Plain packaging excludes all logos, colors, and branding other than plain text identifying the brand and product variant.

To protect public health, recreational cannabis packaging should be fully standardized and free of branding and other features attractive to minors. Based on tobacco control evidence, plain packaging:

- improves health warning effectiveness and visibility
- increases perceptions of harm
- reduces product appeal among adolescents and young adults
- amplifies the reach and impact of public health media campaigns.

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To further educate consumers, cannabis packaging should also carry highly visible and effective health warnings. The best evidence from tobacco control indicates that the most effective health warnings are:

- visually prominent
- written clearly and simply
- changed regularly to maintain consumer attention
- designed to incorporate pictorial content in addition to text.

Evidence for the health effects of cannabis is more limited than for tobacco or alcohol, particularly for certain types of cannabis products, such as vaporized extracts, edibles, and concentrates. However, many health risks are or are likely to be comparable to tobacco due to the similarities between tobacco and cannabis smoke and devices for vaporizing plant material or liquid extracts. As a result, specific content of cannabis health warnings should:

- use the best available existing evidence base for cannabis, beginning with the 2017 National Academies of Sciences, Engineering and Medicine report
- incorporate additional evidence from other closely related products, such as tobacco and e-cigarettes
- be regularly reviewed to ensure consistency with the latest scientific evidence
- include risks associated with motor vehicle accidents, problem use or dependence, use at an early age, lower birth weight when used during pregnancy, and development of schizophrenia or other psychoses
- include additional respiratory and cardiovascular risks for inhaled products
- include risks related to accidental consumption and delayed intoxication
- incorporate a universal warning symbol to alert consumers and prevent accidental consumption, as some products will be unfamiliar to many consumers and may closely resemble non-cannabis products.

Cannabis marketing and advertising quickly follows cannabis legalization based on experience in states that have legalized recreational and medical cannabis.

- In the absence of strong regulation, cannabis advertising is likely to be highly visible, including to minors.
- Based on evidence from tobacco products, advertising and promotional activities have a causal relationship to onset and continuation of smoking among adolescents and young adults.

This causal link justifies a precautionary approach to preventing a similar pattern for cannabis as the industry gains power and marketing expertise. While restrictions on advertising and marketing are likely to face legal challenge, state legal authority to protect public health and prevent underage use is strong and justifies a robust approach, including:

- banning elements attractive to minors

- prohibiting depiction of cannabis use
- barring depiction, promotion, or encouragement of excessive or rapid consumption, intoxication, or use for intoxicating effects
- requiring a warning statement on all advertisements
- disallowing all outdoor advertising near sensitive areas, other than limited on-site signage
- strictly limiting internet and social media advertising
- restricting event sponsorships and branded non-cannabis merchandise
- prohibiting paid product placement in media.

Public use and social/on-site consumption of cannabis raises pressing concerns including:

- normalization of cannabis use
- re-normalization of smoking behavior generally
- secondhand and third-hand smoke or vapor exposure.

Cannabis-specific evidence is limited, but, in concert with evidence from tobacco, is more than sufficient to support a restrictive approach to cannabis consumption consistent with best practices for smokefree environments.

- The real and present potential risk of rolling back or weakening existing smokefree laws for tobacco further supports adding cannabis in all inhaled forms to existing prohibitions in comprehensive smokefree laws.
- As additional evidence develops, modifications may be warranted, but creation of social/on-site consumption locations raises serious concerns about exposure and ventilation.
- Social/on-site consumption also raises issues echoing those from alcohol control, including intoxicated driving, server and retailer training and liability, outlet density, and proximity to sensitive locations.
- A health-protective approach to public consumption and social/on-site consumption in initial cannabis legalization would preserve the opportunity to modify restrictions based on future evidence, while the history of tobacco control demonstrates that weak restrictions may take years or decades to strengthen even when supported by compelling evidence.

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Introduction

Cannabis legalization, including for recreational (“adult use”) cannabis, is a reality in a growing number of US states.¹ There may be benefits to legalization, including probable medical utility for some conditions² and the potential to end discriminatory enforcement practices that have disproportionately burdened vulnerable communities, particularly communities of color. However, cannabis legalization also carries significant public health risks.² Many of these risks strongly echo those of tobacco and alcohol, which continue to impose massive public health burdens driven by powerful industries.

Accordingly, we present evidence and language for recreational cannabis laws that protect public health to the greatest degree possible in order to minimize the negative public health impacts of legalization and prevent the nascent legal cannabis industry from repeating the harmful practices of the tobacco and alcohol industries. We focus on three areas that present significant challenges but also important opportunities in regulating recreational cannabis:

1. Packaging and Labeling
2. Advertising
3. Public Use and Social/On-Site Consumption

This analysis is based on public-health oriented best practices drawn from tobacco and alcohol control models and best practice documents, as well as strong provisions from existing cannabis legal frameworks.³⁻⁹

This analysis presents an assertive approach that prioritizes public health over commercial interests. The history of tobacco control and other public health efforts demonstrates that it is significantly easier to liberalize regulations that prove overly restrictive than it is to tighten regulations that are too permissive. We recognize that some of the provided language may surpass requirements in existing US federal or state regulation of tobacco and alcohol. Existing laws often fall short of the public health best practices that guide this analysis.¹⁰ Rather than viewing existing policy as a legal ceiling for cannabis regulation, this analysis describes robust, public health-oriented cannabis laws. The unique legal circumstances and history of cannabis may enable laws that better reflect public health principles than existing regulation of substances like alcohol and tobacco that has been shaped by powerful industry influence. In turn, strong cannabis regulation could potentially facilitate future improvements in the regulation of substances such as alcohol and tobacco.

We intend this analysis to provide model language that advances a public health-oriented approach to cannabis legalization and summarize key evidence supporting this approach. While it is not legal advice, this document may serve as part of a public

health counterpoint to model laws promoted by industry and advocacy groups that do not adequately protect public health.

To use this analysis effectively, consult attorneys and other experts familiar with your jurisdiction's existing laws. While we offer very specific language in many instances, we have also indicated (via brackets, “[]”) numerous instances where state code-specific elements must be inserted (e.g., agency granted regulatory authority) or details are flexible while remaining consistent with a best public health practice standard (e.g., font size). All provisions should be adapted to each jurisdiction's legal framework, and definitions should be harmonized with those already in use. Conflicts with existing laws or regulations will also need to be addressed by qualified experts. Robust state-level control maximizes authority and regulatory clarity, but local jurisdictions should have appropriate flexibility to anticipate and respond to local concerns.¹¹ This is especially relevant to matters of cannabis outlet density, public nuisance abatement, crime, intoxicated driving, land use, and similar issues.

Citations are provided for reference in developing and supporting state-specific provisions. Requirements for compelled commercial speech (e.g., warning labels) and restrictions on commercial speech (e.g., marketing restrictions) must be supported by strong evidence and meet strict legal requirements.¹² While such provisions are often subject to legal challenge from regulated industries and associated allies, the governmental interest in protecting the public's health is strong and is sufficient to sustain well-supported, reasonable, and proportionate commercial speech regulation. Implementing jurisdictions should consult legal counsel to ensure adherence to limitations on governmental authority and framing consistent with legal best practices.

Jurisdictions should gather information from multiple sources to ensure they are maximizing effective use of their public health authority while minimizing legal weaknesses. Additionally, jurisdictions wary of legal challenge should note that industry claims may be overstated and designed for intimidation, and that well-crafted public health policies can withstand such challenges.¹³

Cannabis Packaging and Labeling

Packaging

Packaging is a powerful marketing tool for a variety of products. For products that are restricted to adults, like recreational cannabis, companies may use packaging to evade restrictions on other forms of marketing or to appeal to young persons whom they may not lawfully target. In existing recreational cannabis frameworks, persons under 21 are not permitted inside retail outlets (with some exceptions for authorized medical

patients). Such provisions help limit youth exposure to cannabis marketing, including on-package marketing, and are essential in light of evidence from tobacco that in-store displays provide a powerful avenue for youth marketing via packaging.^{14,15}

However, retailer access restrictions do not stop branding on packaging from reaching youth. Children and adolescents frequently encounter products used by others, and products that provide identity or personality cues (“badge products,” such as cigarette packs) act as a form of advertisement.¹⁶ Branded cannabis products may operate similarly and expose children and adolescents to potent marketing. For example, an adult consumer who legally purchases a cannabis product and brings it home may unintentionally expose children in the home to the branded package if it is placed where children may see or find it. The tobacco industry has long recognized that branded packages provide a type of secondary promotion to persons other than the consumer who purchased them, and have exploited this effect to circumvent restrictions on advertising.¹⁶ A tobacco trade magazine once coached manufacturers that even if the industry lost access to billboards or glossy magazine ads, brands could continue to use packaging to “at least court smokers from the retailer’s shelf, or from wherever it is placed by those already wed to it.”¹⁷ While many other industries undoubtedly hope to influence and attract consumers and potential consumers with package branding, tightly regulating this powerful tactic when applied to addictive products restricted to adults, including cannabis would protect public health.

Plain Packaging

Tobacco companies use package branding to establish brand identification among target populations, including youth and young adults.¹⁶ Cannabis companies are likely to do the same without proper regulation. Tobacco control research indicates that the best packaging approach to prevent inappropriate marketing of a harmful and addictive product is standardized “plain packaging.” Plain packaging uses standardized, unappealing colors and excludes all logos, colors, and branding with the exception of plain text identification of the brand and product variant in a specified size, font, and position on the package.^{17,18} For example, Australian tobacco packaging (Figure 1) uses a background color of drab dark brown (Pantone 448 C)¹⁹ determined to be especially unpleasant based on market research,²⁰ with brand and variant information in plain white text (in addition to large graphic warnings). Plain packaging – particularly when paired with large graphic warnings – has the following effects for tobacco products:

- Improves the effectiveness and visibility of health warnings^{6,21,22}
- Reduces the impact of misleading branding on beliefs about harmfulness^{21,23}
- Reduces product appeal among adolescents and young adults²³⁻²⁶
- Increases the reach and impact of public health media campaigns²⁷
- Increases adolescent attention and perceptions of harm²⁸

- Reduces product image and social appeal among adolescents.²⁸



Figure 1: Plain packaging example for tobacco cigarettes from Australia ²⁹

While the US has not implemented plain packaging for tobacco products, other countries have done so successfully, beginning with Australia in 2011, and several elements of the language discussed below are drawn from Australia’s plain packaging law.³⁰ The implementing guidelines for the WHO Framework Convention on Tobacco Products (FCTC), a widely adopted global tobacco control treaty with 181 parties (not including the United States), also support adoption of plain packaging for tobacco products.⁹ The documented effects of tobacco plain packaging demonstrate the beneficial impact the strategy may have for cannabis products and how this regulatory approach serves the goals of preventing youth use, limiting initiation, and informing the public.

A form of plain packaging for cannabis products has been adopted in Uruguay, which legalized recreational cannabis via government monopoly but prohibits the two private companies that provide the cannabis from including company labels on packaging.³¹⁻³³ The impact has not yet been fully analyzed and may be affected by other restrictions, including limits on the types of products available and the government monopoly structure. Additionally, Canada is poised to adopt recreational cannabis regulations that generally require plain packaging, but allow the inclusion of one branding element (e.g., logo or slogan) and use of a single, uniform, but non-standardized color with some restrictions (e.g., no fluorescent or metallic colors, must contrast with required warnings).³⁴ No US jurisdiction has yet implemented a plain packaging requirement for recreational cannabis.

If plain packaging is not politically feasible, jurisdictions could consider requiring that packages and labels for cannabis products be pre-approved by the responsible regulatory agency, ideally the department of public health (or equivalent). For example,

Alaska requires cannabis product manufacturing facilities to file an operations plan that includes “the packaging to be used for each type of product” and “sample labels showing how the labeling information required . . . will be set out.”³⁵ Oregon also requires label pre-approval, but allows cannabis licensees using packaging that has “no graphics, pictures or logos” and contains only legally required information to bypass this requirement,³⁶ creating a form of voluntary plain (or at least quasi-plain) packaging.

Package and label preapproval, with or without an exception for packaging with limited branding, may diminish the potential for harmful on-package marketing strategies, but there are disadvantages compared to mandatory plain packaging. For example, preapproval may create significant burden on the assigned agency, as each product label will require individual review. Additionally, the simultaneous display of products with and without plain (or quasi-plain) packaging may create erroneous consumer perceptions that one product is less harmful or of higher quality than another. Based on documented effects for tobacco products, mandatory plain packaging is likely the most effective approach to protect public health and limit the potential that the cannabis industry may seek to replicate the tobacco industry’s harmful practices.

Packaging, Dosage, and Product Safety

Packaging and dosage are closely intertwined. Based on principles from tobacco control, restricting cannabis product potency may help to reduce addictiveness and limit negative health effects.^{3,5,7} While overall potency limits are beyond the scope of this analysis, we note developing norms among recreational cannabis states to restrict the potency of manufactured products, such as edibles and concentrates, though they have not to date restricted the potency of flower cannabis.

Oregon³⁷ and Alaska,³⁸ for example, have set lower 5 mg per serving and 50 mg per package limits on THC (Δ^9 -tetrahydrocannabinol) potency for edible manufactured products for the adult use market, while most other states have set a 10 mg per serving and 100 mg per package limit. Potential benefits to the 5 mg limit as compared to 10 mg requires further research, and some jurisdictions may be constrained by ballot initiative language.

We have separately suggested that similar limits apply to products intended or likely to be inhaled (e.g., vaporizable liquid extracts; concentrates for “dabbing”) and products likely to be consumed accidentally (e.g., concentrates, extracts, topicals), with a higher threshold permitted for products such as capsules, tinctures, transdermal patches, and suppositories that are more typical medicinal product categories.³⁹ Additionally, limits on the potency of flower cannabis, pre-rolls, and related product categories may also be beneficial, but are beyond the scope of this analysis and should be considered in tandem with purchase limits for individual transactions or periods of time.

Jurisdictions may also consider additional methods for indicating dosage on packaging, particularly for liquid products. For example, based on evidence from adult administration of liquid pediatric medications, dosage errors are common, but can be reduced by using measuring tools closely matched to appropriate dose volume, instructions in both text and pictogram form, and tools and labels in milliliters only (rather than milliliters and teaspoons).⁴⁰

Implementing Language

I. Cannabis Product Packaging

A. All cannabis products shall be packaged for sale to the consumer in a container meeting all of the following requirements:

1. The package shall protect the product from contamination and shall not expose the product to any toxic or deleterious substance.
2. The package shall be opaque and shall not allow the contents to be visible through the packaging under typical circumstances.
3. The package shall be tamper-evident, meaning that the product is sealed such that it cannot be opened without obvious destruction of the seal.
 - a. A container that is capable of remaining child-resistant when reused may be refilled provided it is resealed and remains compliant with all other requirements.
4. The package shall be child-resistant, meaning it satisfies one of the following requirements:
 - a. It has been certified by a qualified third party child-resistant package testing firm to be designed or constructed to be significantly difficult for children under 5 years of age to open within a reasonable time and not difficult for normal adults to use properly, consistent with Title 16 C.F.R. 1700 of the Poison Prevention Packaging Act.
 - b. It is a solid or liquid product packaged in plastic that is four (4) millimeters or greater in thickness that is heat-sealed with no tab, dimple, corner, or flap, making it difficult for a child to open.
 - c. It is a liquid product sealed using a metal crown cork style bottle cap.
5. If the product contains more than one (1) serving or dose, it shall be re-sealable and shall provide an appropriate, accurate, and consistent means of measuring dosage, including but not limited to a measuring device, scored or demarcated sections, or graduated or calibrated bottle.
 - a. Products containing more than one serving or dose shall include clear instructions for measurement, such as pictographic diagram.

6. Included measuring devices, sections, or graduations shall be labeled in milliliters only.
- B. No cannabis product package shall contain any of the following:
1. Logos, colors, or branding elements other than those specified by law; or
 2. Any element that closely resembles or imitates the packaging or branding of any non-cannabis product, including but not limited to food, medicine, alcohol, or tobacco.
- C. Plain Packaging
1. Unless otherwise specified, all cannabis product retail packaging shall:
 - a. Have a matte finish; and
 - b. Use a background color of drab dark brown, also known as Pantone 448 C¹⁹ [or another color to be determined by the [insert governmental authority]].
 2. Brand, business or company name, and variant name (if any) may appear on the package, and, if it appears, shall be in [12-point, or smaller than required warning text if less than 12-point], sans-serif black text, unless otherwise specified by the [insert governmental authority].
 - a. No trademark, logo, slogan, or other branding element shall appear anywhere on the retail packaging of cannabis products other than as explicitly permitted by this section.
 3. Cannabis product packaging shall not include any features designed to change after retail sale, including but not limited to:
 - a. Heat-activated inks;
 - b. Inks or embellishments designed to appear over time;
 - c. Inks that appear fluorescent in certain light;
 - d. Panels designed to be scratched or rubbed to reveal an image or text;
 - e. Removable tabs or pull-tabs;
 - f. Inserts or onsets [unless required by the [insert governmental authority]]; or
 - g. Fold-out panels.

Labeling

Jurisdictions may specify a variety of labeling elements for cannabis products for various tracking and informational purposes, such as net weight or volume, manufacturer or producer information, cannabinoid content, harvest or processing lot numbers and date, strain name, potential allergens, or other elements. This analysis specifically addresses the content and form of health warning labels, which serve a unique function in not only informing consumers, but also influencing behavior to

minimize or prevent youth use, problem use, and specific harms to public health, such as intoxicated driving.

Health warning labels influence risk perceptions, but their influence is affected by size, prominence, position, and design.^{6,9} The WHO FCTC and its implementing guidelines require tobacco health warnings cover at least 30% of the principal display area of a tobacco package.^{8,9} WHO recommends warnings cover 50% or more of the package,^{8,9} and some countries' tobacco labels cover up to 90% of the package.⁸ In this analysis, the term “primary panel” is used in the same sense as the FCTC’s term “principal display area.” The definition provided for “primary panel” is taken from US federal regulations that govern cosmetic labeling,⁴¹ which, like cannabis, includes numerous types of products with a variety of possible container shapes and configurations.

WHO's required standard for tobacco is associated with improvements in health knowledge and motivation to quit,^{6,9} and larger labels are more effective among youth.⁴² While there is no comparable evidence yet available specific to cannabis labeling, similar impacts are likely and are justified based on comparable product age restrictions, health risks, and product types/methods of use. Robust health warning labels therefore serve compelling public health interests in informing consumers, reducing demand, and reducing youth initiation.

Health Effects

Research on the health effects of cannabis has been hindered by research barriers related to the drug's illegality. As a result, less is known about the health effects of cannabis compared to substances like tobacco or alcohol. Cannabis research is ongoing and evolving quickly. As a result, the evidence of cannabis's health effects is likely to change rapidly. In implementing cannabis health warning labels, it is important to provide the agency tasked with overseeing labeling (ideally the public health authority) with flexibility to keep warning labels consistent with the best available evidence.

Warnings must also be clear to be effective, and the National Institutes of Health recommends that health warnings be brief (10-15 words) and easy to comprehend (sixth-grade reading level or lower).⁴³ Warning statements required by most existing state cannabis laws are modeled on warnings from alcohol control, which are unlikely to prevent problem cannabis use in recreational markets given that alcohol use is a continuing source of health harm and US alcohol labels appear to have little to no impact on drinking behavior (though they may increase awareness of included messaging).⁴⁴ The cannabis industry is likely to oppose stronger health warnings, and mandatory warnings require a robust evidence base to meet legal requirements. The specific health warning statements included in this analysis concern health effects for

which the 2017 National Academies of Sciences, Engineering and Medicine (NASEM) Report, *The Health Effects of Cannabis and Cannabinoids*² found “substantial evidence” of an association with cannabis use, specifically:

- worse respiratory symptoms and more frequent chronic bronchitis episodes (long-term cannabis smoking)
- problem use and dependence, particularly with increased frequency and initiation at an earlier age
- increased risk of motor vehicle accidents
- lower birth weight (maternal cannabis smoking)
- development of schizophrenia and other psychoses, with highest risk among most frequent users.

Other findings from the NASEM report are worth considering (i.e., those with “moderate evidence”), and this analysis also includes warnings incorporating findings from more recent studies, animal studies, and studies of related tobacco and nicotine products to provide a more comprehensive view of risks based on current evidence, including:

- secondhand smoke exposure^{45,46}
- chemical additives^{47,48}
- cardiovascular disease^{45,49,50}
- respiratory disease⁵¹
- neurological disease⁵²
- cancer.^{53,54}

Especially for combusted cannabis, warnings and public health information campaigns should utilize the robust evidence base for the harms of tobacco smoke and secondhand smoke. Other than nicotine and cannabinoid content, cannabis smoke and tobacco smoke are very similar.⁴⁶ Tobacco smoking is causally linked to diseases of nearly every organ, diminished health status, fetal harm, cancer, inflammation, and impaired immune function.⁷ Secondhand tobacco smoke exposure has well-documented negative health effects in exposed children and adults, including premature death and disease, immediate adverse cardiovascular effects, coronary heart disease, and lung cancer.⁵⁵ Given the similarities between cannabis smoke and tobacco smoke and the considerable known dangers of tobacco smoke, it is reasonable to warn consumers of potentially similar risks from cannabis smoke unless and until research demonstrates otherwise.

As noted in the NASEM report, there is much less information available regarding manufactured cannabis products – concentrates, edibles, extracts, and other forms – compared to the more commonly used dry flower.² While dry flower remains the most

common mode of use, these other products are a growing share of recreational cannabis markets (including up to 1/3 of revenues in Colorado and Washington in 2016).² Effects attributable to cannabinoid content (specifically THC), including problem use, motor vehicle accidents, and psychological and neurological effects, should reasonably extend to all types of cannabis products, but some risks may differ by consumption type and necessitate further research.⁵⁶ For example, non-inhalational consumption methods (e.g., edibles, tinctures) are unlikely to present respiratory or secondhand exposure risks. However, such methods should not be considered riskless. Edibles, for instance, are easily overconsumed by adults⁵⁷ and accidentally consumed by children.⁵⁸ Concentrates, due to exceptionally high levels of THC and rapid consumption, may present increased risks of dependence⁵⁹ and have been linked to psychosis in case reports.⁶⁰

Rotating Warnings and Graphic Warnings

Studies of tobacco warning labels indicate that warning labels are more effective when changed periodically.^{8,61,62} Labels that do not change become familiar and can be ignored by consumers. For tobacco products, the WHO FCTC requires rotating warnings approved by a competent national authority.^{8,9} Canada's proposed cannabis regulations similarly require rotating warnings.³⁴

Graphic warning labels (GWLs) are also a key element of modern tobacco product regulation. GWLs are more impactful and informative than text-only warnings^{8,62,63} and better able to reach lower-literacy adults, children, and those that do not speak English.⁹ In contrast, text-only labels, as used on tobacco products in the US, are poorly recalled and have low impact on use.⁶⁴ FDA has specifically found that the small size, text-only style, and static nature of warnings on US cigarette packages makes them less effective, less noticeable to consumers, and less able to communicate health risks.⁶⁵

The Family Smoking Prevention and Tobacco Control Act of 2009 requires the use of GWLs for US tobacco products,⁶⁶ but efforts to implement this requirement have been stymied by legal challenges. The US Court of Appeals for the Sixth Circuit found that mandatory text and graphics are constitutionally acceptable for inherently dangerous products like tobacco to prevent consumer deception, but the specific images advanced by the FDA for cigarette packages were struck down by the US Court of Appeals for the DC Circuit as exceeding the government's authority to require disclosure of "factual and uncontroversial" information.⁶⁷ The DC Circuit has clarified, however, that preventing deception is not the only valid purpose of mandatory disclosures, and that the government may require factual and uncontroversial disclosures that directly advance other substantial governmental interests.⁶⁸ FDA has yet to issue a new rule with GWLs to replace those struck down by the DC Circuit.

Several health advocacy groups sued in 2016 to compel the agency to do so, arguing that it is the agency's statutory duty under the 2009 law, but the court has not issued an opinion as of April 2018.⁶⁹

The US Supreme Court has never ruled directly on either the constitutionality of mandatory tobacco warnings based on modern public health evidence or inclusion of images on warning labels. As a result of this continuing ambiguity, legal challenge to robust warning labels for cannabis, especially GWLs, is likely and may attract significant attention due to the opportunity to set legal precedent for other products, such as tobacco and alcohol. Jurisdictions implementing GWLs for cannabis products should ensure that messages are based on sound scientific evidence and present objectively factual information regarding the health effects of cannabis. Jurisdictions should also articulate the clear and compelling government interests justifying warning labels and the basis for concluding that proposed labels will serve those interests.

GWLs have proven effective on cigarette packs in countries like Canada, Australia, and the UK,⁶³ and, if properly designed, are justified for cannabis products to inform consumers, prevent confusion and deception, and protect public health. Providing "factual and uncontroversial" information should not be understood as requiring an unattainable standard of absolute scientific certainty. Rather, compelled warnings must derive from a rational factual basis, rather than opinion or speculation, and should serve interests in protecting public health and providing consumers with information relevant to their purchasing decisions.⁶⁷ The most easily defensible public health justification for cannabis packaging and labeling laws and other restrictions on cannabis products and businesses is the prevention of underage use and inducement to such use.⁷⁰

Additionally, analysis of restrictions on cannabis products may not follow existing legal precedent for other products due to the continued federal illegality of cannabis, a reality that is unlikely to change in the immediate future. As a result, free speech protections under the US Constitution may not apply to cannabis products or cannabis businesses. However, this issue has not yet been resolved, and state constitutions may provide commercial speech protections similar to, and sometimes greater than, the US Constitution, depending on legal precedent in a particular state.⁷⁰

Cannabis Warning Symbol

Several state legal frameworks now require a universal symbol for cannabis products, including California, Colorado, Oregon, and Washington^{10,71} A warning symbol is appropriate for cannabis products, as such products are a new addition to legal commercial markets and many consumers may not be familiar with them. Additionally, many cannabis products, particularly edibles and topicals, but also many other manufactured products, may closely resemble non-cannabis products (e.g., brownies,

lotions). To prevent consumer confusion, misuse, and accidental use by both adults and children, cannabis products should be clearly marked to distinguish them from other products. Using a single symbol across all cannabis products will assist quick identification and differentiation between cannabis and non-cannabis products of all types.

Each state has thus far developed its own symbol, and some (e.g., California, Colorado) have included the state name or initials in the symbol. While a separate mark identifying the state of origin may be useful for tax enforcement and other purposes, a warning symbol used consistently across all states with legalized cannabis would be ideal to ensure that consumers traveling from one state to another are familiar with and understand cannabis package and labeling information.

Tobacco companies' research on packaging color and consumer perceptions indicates that black is the most visually prominent color, particularly black text on a lighter background. Yellow is the most effective color for quickly gaining and keeping consumer attention, is perceived as unattractive, and signals a warning, especially when paired with black text, as in road warning signs.⁷² This is reflected in a symbol we developed (Figure 2), which emulates common road warnings in color, style, and shape.⁷³ This symbol also parallels elements of California's Proposition 65 carcinogen and reproductive toxin warnings, as a yellow equilateral triangle with black exclamation point (or black and white, in some instances) is part of warnings (as well as black and white) specifically outlined as satisfying the law's requirements beginning in 2018.⁷⁴

Other shape and color combinations, including other road sign-influenced styles, may also be effective. For example, the proposed standardized symbol for the Canadian recreational cannabis market is a red and black octagon, resembling a traffic stop sign, accompanied by warnings in black text on a yellow background.³⁴ Using the widely-recognized image of a cannabis leaf, instead of (or in addition to) more technical terms, such as "THC," ensures the broadest possible understanding of the symbol. Additionally, cannabis products containing little or no THC, such as many topicals, may still present a poisoning risk, and should be labeled as such.

The symbol may also be accompanied by written text, such as "This product contains cannabis/marijuana or cannabis/marijuana extracts." Research on effective warnings in other contexts, such as prescription drug labels,⁷⁵ should also inform cannabis labeling policy, though the relative potential harms of different products should also be considered to avoid dilution of warning symbols for especially dangerous products (e.g., household poisons).



Figure 2: Suggested Universal Cannabis Warning Symbol

Implementing Language

I. Health Warning Labels

- A. In addition to labeling required by [insert any other labeling section(s) of state recreational/medical cannabis law], each retail package of all cannabis products shall contain health warning labels meeting all of the requirements of this section.
- B. All text shall be clearly written in English in at least [12-point], sans-serif font unless otherwise specified.
 1. Text in additional languages, if required by [insert governmental authority], must be in at least [12-point] font.
- C. Primary Panel Label: All cannabis products shall include a label meeting the following requirements on the product's primary panel. "Primary panel" means the part of the package most likely to be displayed, presented, shown, or examined under customary conditions of display for retail sale.
 1. The label shall cover at least [50%] of the product's primary panel and shall be located at the uppermost edge of the panel unless the [insert governmental authority] specifies a different location.
 2. The label shall be positioned such that normal opening of the package does not conceal the text or images on the label.
 3. **All cannabis products:** As determined by the [insert governmental authority], a warning statement shall appear on the label on a schedule to be determined by the [insert governmental authority] and provided to cannabis licensees. The [insert governmental authority] shall review and update warnings based on current scientific evidence at least once every two (2) years. The [insert governmental authority] may require different statements to appear on different categories of products at the same time, but shall not require different statements to appear on products within the same category unless there is a reasonable basis to conclude that the products present different risks. Warning statements may include, but are

not limited to, the following risks, in language to be specified by the [insert governmental authority]:

- a. Motor vehicle accidents;
 - i. [Example: “Cannabis use increases your risk of motor vehicle accidents.”];
- b. Frequent use and problem use or dependence;
 - i. [Example: “Frequent cannabis use may lead to dependence or problem use.”]
- c. Use at an early age and problem use or dependence;
 - i. [Example: “Using cannabis at an early age may lead to dependence or problem use.”]
- d. Lower birth weight;
 - i. [Example: “Using cannabis when you are pregnant may lead to lower birth weight for your child.”]
- e. Development of schizophrenia or other psychoses]; and
 - i. [Example: “Using cannabis is associated with development of schizophrenia and other psychoses. Frequent use may increase the risk.”]
- f. Any other risk or association which the [insert governmental authority] determines is appropriate based on existing scientific evidence.

4. **Edible products:** As determined by the [insert governmental authority], warning statements for edible products may also include the following risks or associations, in language to be specified by the [insert governmental authority]:

- a. Accidental consumption by children;
- b. Delayed intoxication;
- c. Serving size, overdose, and lack of reliable information on how consumption will affect an individual; and
- d. Any other risk or association which the [insert governmental authority] determines is appropriate based on existing scientific evidence.

5. **Cannabis flower:** As determined by the [insert governmental authority], rotating warning statements for cannabis flower may also include the following risks or associations, in language to be specified by the [insert governmental authority]:

- a. Similarity of cannabis smoke to tobacco smoke;
- b. Secondhand smoke;
- c. Cancer;
- d. Cardiovascular disease;

- e. Worsened respiratory symptoms or respiratory disease; and
 - f. Any other risk or association which the [insert governmental authority] determines is appropriate based on existing scientific evidence.
6. **Cannabis concentrates:** As determined by the [insert governmental authority], rotating warning statements for cannabis concentrates may also include the following risks or associations, in language to be specified by the [insert governmental authority]:
- a. Dependence, tolerance, and withdrawal, including increased risks with higher potency;
 - b. Chemicals and toxins released by heating or combustion;
 - c. Cardiovascular and respiratory disease; and
 - d. Any other risk or association which the [insert governmental authority] determines is appropriate based on existing scientific evidence.
7. The rotating warning shall be followed by the statement in non-bolded font, "Warning from the [insert governmental authority]."
8. In addition to text, the warning label shall include a color graphic or pictorial element depicting the negative health consequences of cannabis to be developed by the [insert governmental authority].
- a. The graphic or pictorial element shall be rotated on a schedule to be determined by the [insert governmental authority] according to the same requirements and restrictions in [insert citation to above section requiring rotating text warnings].
 - b. The [insert governmental authority] shall determine the size, orientation, and content of graphic or pictorial elements.
9. If a product package area is insufficient to accommodate the warning label in the specified font size, the product package shall include the applicable warning in the largest achievable font and the product shall be accompanied by an attached supplemental label including the required warnings in at least [12-point] font.
- D. Additional Health Warning Label
1. In addition to the primary panel label, all cannabis products shall be labeled with each of the following statements in a minimum [12-point], sans-serif font:
- a. "Do not drive or operate heavy machinery while under the influence of cannabis";
 - b. "Do not use cannabis if you are pregnant or breastfeeding";
 - c. "Keep away from children and youth"; and

- d. Any other statement specified by the [insert governmental authority].
2. This label shall appear on the product's rear panel unless the [insert governmental authority] specifies another location.
3. If a product package area is insufficient to accommodate the warning label in the specified font size, the product package shall include the applicable warning in the largest achievable font and the product shall be accompanied by an attached supplemental label including the required warnings in at least [12-point] font.

II. Package and Label Approval

- A. Prior to a cannabis product being made available for sale or display, the responsible licensee must receive approval of the product's package and labels from the [insert governmental authority].
- B. The [insert governmental authority] shall develop procedures for submission and approval of product packages and labels no later than [insert date].
- C. The [insert governmental authority] shall not approve any package or label that is inconsistent with the requirements of [insert citation to packaging and label requirements section(s)].

III. Prohibited Label Content

- A. The [insert governmental authority] shall have the authority to determine if a cannabis product package or label violates any of the requirements or restrictions in this section.
- B. No cannabis product package or label shall contain any of the following:
 1. Statements that are false, misleading or deceptive;
 2. Any content or element determined by the [insert governmental authority] to be attractive to children or those under age 21, including but not limited to:
 - a. Cartoons, toys, superheros, animals, characters, or mascots;
 - b. Images of persons who are or appear to be under age 21; or
 - c. Characters, images, designs, names, celebrities, symbols, or phrases associated with non-cannabis products that are attractive to or commonly marketed to children or those under age 21; or
 3. Any element closely resembling or imitating the packaging or labeling of a non-cannabis product.
- C. No cannabis product package or label shall contain any health-related claims or statements unless such statements are supported by the totality of publicly available scientific evidence, including evidence from well-designed studies conducted in a manner which is consistent with generally recognized scientific

procedures and principles, and for which there is significant scientific agreement among experts qualified by scientific training and experience to evaluate such claims.

- D. No cannabis product package or label shall contain any statement, image, or other content that directly or indirectly creates the impression that a particular product is less harmful than other cannabis products. This includes, but is not limited to, use of terms such as “light,” “mild,” “natural,” or “organic.”
- E. No cannabis product package, label, onsert, or insert shall include any element that obscures or obstructs any label required under [insert labeling section citation(s)].

IV. Universal Warning Symbol

- A. The final retail package of all cannabis products shall include a symbol indicating that the product contains cannabis.
 - 1. The [insert governmental authority] shall determine the form and color of the symbol.
 - 2. The [insert governmental authority] shall make an electronic copy of the required symbol available to cannabis licensees for use in the packaging and labeling of cannabis products.
- B. The symbol shall appear on the product’s primary panel but shall be separate and distinct from other required warning labels.
 - 1. “Primary panel” means the part of the package most likely to be displayed, presented, shown, or examined under customary conditions of display for retail sale.
 - 2. The symbol may be printed on the product’s package or affixed as a label or sticker.
- C. The symbol shall cover at least [10%] of the primary panel or be at least [one (1) inch by one (1) inch], whichever is larger.
 - 1. “Primary panel” means the part of the package most likely to be displayed, presented, shown, or examined under customary conditions of display for retail sale.
 - 2. [Optional: In calculating the size of warning labels required by [insert section], the universal symbol shall be included as part of the warning label.]
 - 3. If a product package area is insufficient to accommodate a symbol at least [one (1) inch by one (1) inch], the symbol shall cover at least [10%] of the primary panel and the product shall be accompanied by an attached supplemental label including the universal warning symbol in a size of at least [one (1) inch by one (1) inch].

D. Neither the background color nor shape of the universal symbol, nor any similar color or shape, shall appear elsewhere on the packaging or labeling of any cannabis product unless otherwise specified by law or regulation. [This provision is not necessary if adopting plain packaging.]

V. Additional Primary Panel Labeling Requirements

- A. Edible cannabis products shall include the words “THIS PRODUCT CONTAINS [MARIJUANA/CANNABIS]” immediately above the product name or identity
1. The statement shall be in bold print and in a font larger than the product name or identity.
 2. The statement shall be printed in at least [12-point], sans-serif font and in a color that contrasts with background package color in a manner designed to ensure visibility.

Cannabis Advertising

Based on observations in states that have legalized recreational cannabis sales, cannabis advertising quickly becomes prevalent. For example, in 2015-2016 (two years after legalization), an Oregon survey of adults ages 18 and over found a majority of residents (54.8%) reporting exposure to cannabis advertising in the past month, with the most common exposures being storefront (74.5%), streetside (66.5%), and billboard (55.8%) advertising.⁷⁶ The relationship between cannabis advertising and youth use has less evidence than that for tobacco, due largely to the longstanding legal prohibition on cannabis and the corresponding lack of cannabis advertising. However, greater exposure to medical cannabis advertising has been found to be associated with higher probability of cannabis use and intention to use among middle school children.⁷⁷

State prohibition of some forms of cannabis advertising and marketing may duplicate existing restrictions in federal law (e.g., Section 843 of the Controlled Substances Act, which bans the placing of advertisements for Schedule I controlled substances.^{78,79} Redundancy in this case is beneficial because it reduces ambiguity, avoids a regulatory gap if federal policy changes, and reduces potential difficulties that may arise from federal enforcement against state-regulated cannabis entities.

Legal Authority

Restrictions on advertising and marketing are likely to face legal challenge. The issues involved in such litigation are complex, and jurisdictions should consult appropriate legal counsel prior to proceeding with development and implementation. As discussed above, the legal status of cannabis raises unresolved questions about the application of commercial speech protection under federal law, but state law may

provide a different analysis and conclusion.⁷⁰ Specifically, where cannabis is legal under state law, commercial speech protections under state law may apply even if federal commercial speech protections do not.

However, state governments (and local jurisdictions via delegation) have ample public health legal authority under the police power to act in the interest of community health, safety, morals, and the general welfare and under the *parens patriae* power to act to protect minors and others lacking legal competence.⁸⁰ With respect to cannabis and similar substances like tobacco and alcohol, the authority to prevent underage use or inducements to such use is especially salient.⁷⁰

For tobacco products, the US Surgeon General concluded that tobacco company advertising and promotional activities had a causal relationship to the onset and continuation of smoking among adolescents and young adults.⁶ The WHO concluded that one-third of youth tobacco experimentation is the result of exposure to advertising, promotion, and sponsorship and that total bans on tobacco advertising, promotion, and sponsorship are a critical component of meaningful tobacco control.⁸¹ E-cigarette marketing exposure is also associated with youth use.^{82,83} Similarly, exposure to alcohol advertising is associated with subsequent youth initiation of alcohol use, as well as binge and hazardous drinking.⁸⁴ While comparable data is limited for the effects of cannabis advertising, evidence from tobacco and alcohol control supports a guarded approach to avoid potential public health risks from cannabis advertising that are likely to follow patterns observed in related industries.

With respect to lawful adult consumers, public health-based authority to restrict cannabis advertising may be more easily defended on the grounds of a specific interest in promoting “responsible use” than the broad objective of reducing demand among consumers of legal age.⁷⁰ A 2017 survey of 18-34 year olds (a group that includes individuals both under and over legal age) found that exposure to cannabis advertising was associated with heavier use and the use of novel products with especially high THC levels (i.e., concentrates) or longer intoxication duration (i.e., edibles).⁸⁵

Electronic Media and Outdoor Advertising

Electronic media present critical challenges to the effective control of cannabis advertising and its potential impact on youth. Cigarette advertising on television has been banned since 1971.⁸⁶ Alcohol marketing on television remains commonplace (though restricted by voluntary code to media with less than 28.4% underage viewership), and there is an association between youth exposure to television alcohol advertising and youth drinking.^{87,88} Online marketing presents even more difficult challenges relating to age verification, variety of platforms, and constant evolution.⁸⁹⁻⁹¹ Such problems are compounded by the involvement of third-party platforms and social

media sites,⁹² which may not be subject to the same licensing requirements or legal standards as cannabis businesses.

Early cannabis-specific findings and the existing evidence bases for the effects of tobacco and alcohol marketing justify a precautionary approach to regulating cannabis advertising in the interest of public health. In addition to prohibitions on specific elements (e.g., false or misleading, attractive to minors), we present language that represents broader restrictions on outdoor advertising modeled on existing provisions in some states. We acknowledge that such restrictions are particularly likely to raise legal challenge. Compared to mandatory disclosures (e.g., warning labels) or more limited constraints (e.g., prohibiting advertising on government property), broader restrictions require a much stronger evidence base to support their effectiveness and necessity. The legal validity of broader cannabis advertising restrictions has not been challenged and resolved to date. Nor have requirements for pre-approval, such as Alaska's requirement that cannabis establishment license applicants file an operating plan that includes plans for signage and advertising.⁹³

Advertising restrictions based on content are generally legally disfavored. For example, courts have struck down prohibitions on broadcast advertisements for legal gambling⁹⁴ and on smokeless tobacco billboards and cigars within 1,000 feet of schools and playgrounds.⁹⁵ However, when serving substantial government interests, such as prevention of youth smoking, traffic safety, temperance, or gambling reduction, narrow regulation of advertising content may be constitutionally permissible when directly advancing the state interest and no more extensive than necessary.⁸⁰ In particular, restriction of advertisement of adult products to minors stands on firmer legal ground. For example, a prohibition on outdoor alcohol advertising near schools has been upheld,^{96,97} and federal law has prohibited television advertising for cigarettes since the Public Health Cigarette Smoking Act of 1970.⁹⁸ While total bans on outdoor advertising for cannabis products may not be legally sound, local advertising bans in jurisdictions that do not permit cannabis businesses may be permissible, akin to restrictions in “dry counties” that do not permit alcohol sales.⁹⁹ Additionally, alcohol control best practices indicate that restrictions on billboard advertising near areas where youth congregate, including schools, playgrounds, and similar venues – known as “youth presence laws” – are legally viable.⁹⁹

In addition to legal challenges grounded in free speech protections of the U.S. Constitution and comparable provisions of state constitutions, regulation of non-licensee businesses may face additional obstacles. For example, Section 230 of the Communications Decency Act (47 U.S. Code § 230) largely immunizes websites from liability for content posted by others and preempts contrary state and local laws. This issue has hampered broader enforcement of some laws such as those aimed at sex trafficking.¹⁰⁰ A 2018 amendment will address application to sex trafficking,¹⁰¹ but the

broader protection for websites regarding third-party content will remain and has already been raised as a defense by cannabis website Weedmaps to regulation in California.¹⁰² However, while liability for posted content is limited, potential liability for a website's own business conduct related to that content remains unclear and has been the subject of litigation.^{103,104} Additionally, Section 230's protections do not preclude regulations targeted at content producers, such as licensed and unlicensed cannabis businesses themselves.

Non-Cannabis Items, Event Sponsorship, and Product Placement

Like tobacco, legalized cannabis is an age-restricted product, and, like alcohol, it is intoxicating. As such, government has a substantial interest in preventing advertising to minors. To effectively limit cannabis advertising, cannabis regulatory frameworks must comprehensively address all forms of advertising, including more subtle forms such as brand stretching, event sponsorship, and product placement. In all such cases, tobacco control models are especially instructive, as they have generally been more effectively implemented compared to limits on alcohol advertising.

Using the branding of a company or product on an unrelated item is a commonplace form of corporate advertising. For example, consider the number of clothing items available that prominently bear the logo of a company or product unrelated to clothing (e.g., beverages, television programs, etc.). Such "brand extension" or "brand stretching" may associate a brand with an attractive lifestyle or simply increase the number and diversity of locations in which branding is viewed. Age-restricted products also engage in this practice. The FTC implementing guidelines specifically recognize brand stretching by tobacco companies as a form of tobacco advertising and recommend banning use of this tactic.¹⁰⁵ Pursuant to the Family Smoking Prevention and Tobacco Control Act of 2009, US federal regulations also prohibit tobacco branding of nontobacco products.¹⁰⁶ Similar restrictions are reasonable for cannabis, as non-cannabis products with cannabis branding serve a similar advertising purpose and carry similar risks of circumventing other restrictions on advertising to youth.

Event sponsorship is a related advertising device that may skirt advertising restrictions if not well-regulated. Tobacco companies have frequently used event sponsorship and other forms of corporate social responsibility as a means of direct or indirect corporate promotion.¹⁰⁵ The FTC requires, to the extent possible, a complete ban on tobacco event sponsorship as part of a comprehensive tobacco advertising ban.^{8,105} FDA regulations pursuant to the Family Smoking Prevention and Tobacco Control Act of 2009 prohibit tobacco brand-name sponsorship of cultural, athletic, and social events (though companies may continue to sponsor under their corporate names).¹⁰⁷ The cannabis industry has not yet developed the size, capital, or influence of the tobacco industry, but cannabis regulatory frameworks should be designed to adopt lessons from the regulation of other industries proactively, before the cannabis industry engages in similar harmful behavior, rather than after the harm has already been done.

Part of the 1998 Tobacco Master Settlement Agreement (MSA), which settled claims against the five largest cigarette manufacturers in the U.S. by the Attorneys General of 46 states, 5 territories, and the District of Columbia,¹⁰⁸ specifically bars tobacco companies from continuing the practice of paying for product placement in popular media.¹⁰⁹ However, other industries, including alcohol, continue to commonly employ product placement as an advertising tactic.

Unlike tobacco, alcohol product placement is restricted only by industry self-regulation, and the difference in practice is stark. For example, a study of 1400 top films from 1996 to 2009 found that while tobacco brand appearances declined dramatically following the MSA, alcohol brand appearances held steady overall and actually increased in youth-rated movies.¹¹⁰ While cannabis product placement does not yet appear to be significant, cannabis regulatory frameworks should be forward-thinking, and the divergent trajectories of tobacco and alcohol product placement illustrate the utility of formal regulation over industry self-regulation.

Implementing Language

I. Cannabis Advertising Generally

A. No advertising or promotion associated with a cannabis product or cannabis business shall, as determined by the [insert governmental authority]:

1. Be false or misleading;
2. Depict, promote, or encourage excessive or rapid consumption;
3. Depict, promote, or encourage intoxication or use for intoxicating effects;
4. Depict cannabis use;
5. Represent that the use of cannabis has curative or therapeutic effects;
6. Directly or indirectly encourage cannabis use by persons under 21 years of age;
7. Be attractive to minors;
8. Contain any cartoon, cartoon-like figure, superhero, animal, character, mascot, or other element associated with or attractive to minors;
9. Offer any prize, award, or inducement related to the purchase of any cannabis product, including but not limited to: sales, “happy hours,” other time-specific or date-specific discounts, volume-based discounts such as “buy one, get one”; or
10. State or imply that any government agency or official has approved or endorsed any cannabis product, other than inclusion of an assigned license number or other identifier.

B. All advertising or marketing associated with a cannabis product or cannabis business shall include:

1. The license number of the associated cannabis business, as issued by the [insert governmental authority]; and
 2. Warning statements as specified by the [insert governmental authority]. These warning statements shall be in the form determined by the [insert governmental authority], including minimum size and placement. Statements may include, but are not limited to:
 - a. Health risks associated with cannabis use, including those in [insert reference to health warning label content];
 - b. That cannabis use may result in dependence; and
 - c. That cannabis is impairing and users should not operate vehicles or machinery under its influence.
- C. All advertising or marketing associated with a cannabis product or cannabis business shall be submitted to the [insert governmental authority] for approval according to procedures to be adopted by the [insert governmental authority].

II. On-Site Advertising and Signage

- A. Licensed cannabis retailers may place up to one (1) sign on the licensed premises, provided that the sign:
1. Is not larger than [1600 square inches];
 2. Includes only the name of the licensed establishment and/or identifying information such as address or phone number;
 3. Does not include depictions of cannabis, cannabis use, cannabis paraphernalia, or brand names;
 4. Does not include any cartoon, cartoon-like figure, superhero, animal, character, mascot, or other element associated with or attractive to minors
 5. Contains only freestanding black text without background or black text on a white background;
 6. Is not externally or internally illuminated; and
 7. Complies with any applicable local ordinances.
- B. Plans for on-site outdoor signage must be filed with the [insert governmental authority] as part of the license application process.

III. Advertising in Other Locations

A. Outdoor Advertising

1. Except for on-premises signage permitted by [insert citation to above section, "On-Site Advertising and Signage"], no outdoor advertisement associated with any cannabis product or cannabis business may be placed within [one thousand (1,000)] feet of any of the following locations:
 - a. Library;
 - b. Public park;

- c. School providing instruction in grades K-12;
 - d. Preschool or daycare;
 - e. Other child-centered facility; or
 - f. Substance abuse or treatment facility.
2. Outdoor advertisements include, but are not limited to:
- a. Billboards;
 - b. Free-standing signs such as sandwich boards;
 - c. Signs of any type held by a person or affixed to any object or structure;
 - d. Signs, stickers, magnets, vehicle wraps, or any other object affixed or applied to a vehicle parked for more than [one (1) hour] and visible from outside the vehicle;
 - e. Leaflets distributed in any location other than inside a licensed cannabis business or permitted cannabis event; and
 - f. Signs of any type affixed or applied to a window of the licensed premises and visible from the outside.
- B. Government Property and Transit
- 1. No advertisement associated with any cannabis product or cannabis business may be placed on government property or on or in any public transit vehicle, including but not limited to buses, trains, light rail, subway, or ferry, whether such vehicle is operated by a public or private entity.
- C. Internet and Social Media Advertising
- 1. No advertisement associated with any cannabis product or cannabis business shall be advertised on any internet website, service, or application unless the person or entity authorizing the advertisement has reliable evidence that no more than 15% of the audience is reasonably expected to be under the age of 21.
 - 2. No advertisement associated with any cannabis product or cannabis business shall be 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 who is at least 21 years of age and the application includes a permanent and easily accessible opt-out feature.
 - 3. No advertisement associated with any cannabis product or cannabis business shall be advertised using an unsolicited pop-up advertisement on any internet website, service, or application.
 - 4. A cannabis licensee may operate a website, provided that:
 - a. Access requires verification or affirmation of age using a process consistent with practices to be determined by the [insert governmental authority];

- b. No content authorized or approved by the licensee includes any element prohibited by [insert citation to advertising content restrictions (false/misleading, cartoons, etc.)]; and
 - c. The licensee regularly monitors all content added or uploaded by others to ensure that no content includes any element prohibited by [insert citation to advertising content restrictions (false/misleading, cartoons, etc.)] and that any content including prohibited elements is removed promptly.
 - 5. No advertisement associated with any cannabis product or cannabis business may use any form of direct, individualized communication unless preceded by verification or affirmation that the recipient is at least 21 years of age using a verification method consistent with practices to be determined by the [insert governmental authority].
 - 6. No technology platform shall publish, display, or disseminate an advertisement for any cannabis product or cannabis business unless the advertisement includes a license number issued by the [insert governmental authority].
- D. Other Electronic and Print Advertising
 - 1. **[Option A:** No advertisement associated with any cannabis product or cannabis business shall be placed in broadcast media, including but not limited to radio and television.]
[Option B: No advertisement associated with any cannabis product or cannabis business shall be placed in broadcast media unless:
 - a. The advertisement airs only between the hours of [10:00pm and 4:00am]; and
 - b. At least 85% of the audience is reasonably expected to be at least 21 years of age, as determined by reliable and up-to-date audience composition data.]
 - 2. No advertisement associated with any cannabis product or cannabis business shall be placed in any print media, including but not limited to newspapers and newsletters, unless at least 85% of the audience is reasonably expected to be at least 21 years of age, as determined by reliable and up-to-date audience composition data.
- E. Advertising by Non-Licensees
 - 1. No individual or entity other than a business currently licensed by the [insert governmental authority] shall place or cause to be placed in any medium or location an advertisement for cannabis, any cannabis product, or any cannabis business.
- F. No restrictions in this [Section/Article] shall be construed to limit advertising or speech that merely advocates a position or practice and does not offer to

receive, buy, sell, or distribute cannabis or a cannabis product.¹¹¹ Nor shall any restrictions be construed to impose liability on a provider or user of an interactive computer service as the publisher or speaker of any information provided by another information content provider, consistent with 47 U.S. Code § 230.

IV. Sponsorship and Product Placement

A. Non-Cannabis Items¹⁰⁶

1. Other than cannabis or a cannabis product subject to the authority of the [insert governmental authority], a cannabis licensee may not market, license, distribute, sell, produce or authorize or cause to be marketed, licensed, distributed, sold, or produced any item that includes the brand name, logo, symbol, motto, selling message, recognizable color pattern of colors, or any other indicia of product identification identical to, similar to, or identifiable with, those used for branded cannabis or cannabis products, including but not limited to clothing or novelty items.

B. Event Sponsorship¹⁰⁷

1. A cannabis licensee shall not sponsor or cause to be sponsored any charitable, sporting, musical, artistic, or other social or cultural event or any team or individual entry in such event unless one of the following applies:
 - a. Entrance to the event is limited to persons verified to be at least 21 years of age, and neither the event nor any recognition of sponsorship is visible from outside the perimeter of the event; or
 - b. The licensee's name, logo, symbol, motto, selling message, recognizable color or pattern of colors, or any other indicia of product identification does not appear on or in any advertisement, leaflet, sign, banner, ticket, website, or other medium associated with the event.

C. Product Placement

1. A cannabis licensee shall not make or cause to be made any payment or other consideration to any other person or entity to use, display, make reference to, or use as a prop cannabis, any cannabis product, or any item bearing the licensee's name, logo, or other branding element in any live or recorded production or performance, including but not limited to motion pictures, television programs, video games, theatrical productions, musical performances, or videos or live streams posted on any website or other hosting service.

Public Use and Social/On-Site Consumption

Pressing concerns surrounding public use and social/on-site consumption of cannabis include normalization of cannabis consumption, renormalization of smoking behavior, and the effect of secondhand and third-hand cannabis smoke or vapor exposure.¹¹² The cannabis health research base is currently limited, though it will undoubtedly expand over the next several years. Nevertheless, existing evidence is sufficient to support a restrictive approach to cannabis consumption consistent with best practices creating environments free of tobacco smoke. Cannabis use in public places (e.g., parks, sidewalks) remains illegal in all states that have legalized recreational cannabis to date.

Social or on-site consumption (i.e., use in commercial establishments, as opposed to private residences) is a separate but related concern. California, for example, allows local jurisdictions to authorize use in certain licensed cannabis businesses, such as on-site lounges at cannabis retail stores.¹¹³

The NASEM Report found substantial evidence for a relationship between cannabis use and worsened respiratory symptoms, problem use and dependence, motor vehicle accidents, lower birth weight when used during pregnancy, and development of schizophrenia and other psychoses.² Other evidence also exists supporting associations with cardiovascular disease,^{45,49,50} respiratory disease,⁵¹ neurological disease,⁵² and cancer.^{53,54} A 2016 study found that one minute of secondhand cannabis smoke exposure produced adverse vascular effects in rats that lasted three times longer than the effects of tobacco smoke.⁴⁵ Secondhand exposure can also produce detectable cannabinoid levels in nonusers,¹¹⁴ though this is affected by factors such as ventilation,¹¹⁵ product potency,¹¹⁴ and number of smokers.¹¹⁴

Evidence for the harms of secondhand cannabis exposure is underdeveloped, but the potential for such harms is immense. Aside from the presence of nicotine and cannabinoids, cannabis smoke is very similar in composition to tobacco smoke.⁴⁶ Therefore it is likely that cannabis smoke will demonstrate many risks similar to those of tobacco smoke, for which the research base is robust and extensive. Tobacco smoke exposure causes diseases of nearly every organ, diminished health status, fetal harm, cancer, inflammation, and impaired immune function.⁵⁵ Secondhand tobacco smoke exposure causes premature death and disease in children and adults who do not smoke; increases risk for sudden infant death syndrome (SIDS), acute respiratory infections, ear problems, and more severe asthma in exposed children; causes respiratory symptoms and slows lung growth in children when parents smoke; and has immediate adverse cardiovascular effects and causes coronary heart disease and lung cancer in exposed adults.⁵⁵

There is no risk-free level of tobacco smoke exposure, and exposure cannot be eliminated by separating smokers and nonsmokers, cleaning the air, or ventilating buildings.⁵⁵ The known health risks of cannabis smoke and its similarity to tobacco smoke provide ample justification for policies to limit secondhand cannabis smoke exposure for the protection of public health. This can be best accomplished by restricting public use and social/on-site consumption consistent with established best practices from tobacco control.

As such, the outlined approach adds cannabis in all inhaled forms to existing comprehensive smokefree laws, based on the language in the model available from Americans for Nonsmokers' Rights (ANR).¹¹⁶ In jurisdictions that do not yet have comprehensive smokefree laws,¹¹⁷⁻¹¹⁹ cannabis regulation may provide an opportunity to create or strengthen smokefree laws, as restrictions on cannabis use may be more politically feasible than restrictions on tobacco use due to industry influence and other factors.

Implementing Language

I. Definitions¹¹⁶

- A. "Enclosed area" means all space between a floor and a ceiling that is bounded on at least two sides by walls, doorways, or windows, whether open or closed. A wall includes any retractable divider, garage door, or other physical barrier, whether temporary or permanent and whether or not containing openings of any kind.
- B. "Employee" means a person, business, partnership, association, corporation, including a municipal corporation, trust, or non-profit entity that employs the services of one or more individual persons.
- C. "Place of employment" means an area under the control of a public or private employer, including, but not limited to, work areas, private offices, employee lounges, restrooms, conference rooms, meeting rooms, classrooms, employee cafeterias, hallways, construction sites, temporary offices, and vehicles. A private residence is not a "place of employment" unless it is used as a child care, adult day care, or health care facility.
- D. "Public place" means an area to which the public is invited or in which the public is permitted, including but not limited to, banks, bars, educational facilities, gambling facilities, health care facilities, hotels and motels, laundromats, parking structures, public transportation vehicles and facilities, reception areas, restaurants, retail food production and marketing establishments, retail service establishments, retail stores, shopping malls, sports arenas, theaters, and waiting rooms. A private residence is not a "public place" unless it is used as a child care, adult day care, or health care facility.
- E. "Smoking" means any of the following:¹¹⁶

1. Inhaling, exhaling, burning, or carrying any lighted or heated cigar, cigarette, or pipe, or any other lighted or heated tobacco, cannabis, or other plant product, extract, or concentrate intended for inhalation, whether natural or synthetic, in any manner or in any form; or
2. Using an electronic or other smoking device which creates an aerosol or vapor, in any manner or in any form, or using any oral smoking device, including for the purpose of circumventing a prohibition on smoking.

II. Smoking Prohibited

A. Smoking, as defined in [insert citation], is prohibited in the following locations:¹²⁰

1. Enclosed public places;
2. Enclosed areas of places of employment;
3. Outdoor places of employment where two or more employees are required to be in the course of their employment;
4. Multi-unit housing, including apartments, condominiums, and dormitories, and other enclosed residential facilities; and
5. Areas within [15] feet of building entrances, operable windows, and ventilation systems.

B. The penalty for violation of this section by a business or other entity shall be the same as for [insert citation to tobacco smokefree law].

C. The penalty for violation this section by an individual shall be confiscation of the product used. [See *discussion below*].

III. Possession in Vehicle¹²¹

A. No person shall have in their possession while driving a motor vehicle any cannabis or cannabis product that has been opened or the seal broken or the contents of which have been partially removed, unless the product is in the trunk of the vehicle or another area not normally occupied or accessible by the driver or passengers, not including a utility compartment or glove compartment.

B. The penalty for violating this section shall be the same as for [insert citation to alcohol open container law].

C. Nothing in this section shall affect penalties for violating [insert citation to driving under the influence].

IV. Non-Preemption

A. No part of this [section] shall be interpreted or construed to limit or preempt the authority of any town, city, county, or city and county to adopt ordinances that are no less restrictive than the provisions of this [section].

V. Funding for Research and Review

A. [Insert amount] shall be [appropriated/disbursed] to the [insert governmental authority] from the [insert citation to cannabis tax fund] for the purpose of monitoring scientific and policy developments in cannabis health effects (positive

and negative), pharmacokinetics, intoxication, drugged driving, development of effective cannabis prevention messaging, and other relevant research.

1. The [insert governmental authority] shall update this research and publish findings at least once every [two (2)] years.
2. Based on the findings of this research, the [insert governmental authority] shall update applicable regulations regarding cannabis consumption in public places and places of employment.

This approach is designed to avoid rapid normalization of cannabis use, re-normalization of smoking behaviors generally, and erosion of existing smokefree provisions via indoor cannabis smoking and vaping. Among other concerns, the creation of cannabis lounges and similar businesses may inadvertently allow tobacco use in these locations (e.g., as blunt wraps if customers are permitted to consume cannabis not purchased on-site) and may more broadly create an exception to smokefree laws that the tobacco industry may use to further weaken these protections. Given the similarities between cannabis smoke and tobacco smoke, it is essential to apply equivalent smokefree policies to protect the public from secondhand exposure risks.

However, while tobacco smokers may generally consume in many non-enclosed public spaces (e.g., sidewalks away from doors and windows), cannabis users may not, under prohibitions on public use in all states that have legalized cannabis to date. As such, we are sensitive to social equity arguments based on the fact that under the provided language for smokefree rules some individuals (e.g., private homeowners) would have considerably easier access to locations where they could lawfully consume cannabis compared to other individuals (e.g., renters in multi-unit housing), and that the latter group contains many members of populations that have been most directly impacted by discriminatory criminal enforcement of cannabis prohibition. This supports making the goal of enforcement eliminating the harms of behavior normalization and secondhand exposure,¹¹² rather than use per se.

Enforcement policies should be designed to recognize these issues and avoid perpetuation of existing inequities. For example, confiscation of cannabis used in a smokefree area ends the act and the exposure of others. Additional penalties (e.g., fines) or the use of violation as a pretext to initiate additional law enforcement activity does not provide additional public health protection and carries serious risks of further community harm.¹²² These concerns also attach to enforcement of other aspects of cannabis regulation (e.g., driving under the influence¹²²) and should be approached with due consideration, meaningful engagement, and incorporation of other reforms.

As additional research develops, it may be the case that allowing some form of on-site consumption (e.g., with extensive ventilation, limited to non-combusted products,

or with other restrictions) or even allowing open public use with restrictions modeled on modern tobacco control may prove to be a better long-term policy approach. If so, a variety of other considerations must be addressed in state and local law. For example, allowing indoor consumption requires reconciling existing smokefree laws for tobacco products and application of American Society of Heating, Refrigerating and Air-Conditioning Engineers (ASHRAE) Standard 62 regarding ventilation and indoor air quality.¹²³

Additionally, because cannabis use can result in intoxication and impairment, allowing on-site consumption raises issues commonly encountered in alcohol regulation,⁴ including:

- intoxicated driving prevention¹²⁴
- designated driver programs
- server and retailer liability¹²⁵
- server training requirements
- outlet density¹²⁶⁻¹³⁰
- proximity to sensitive locations (e.g., schools, substance abuse treatment centers).¹²⁶

Several of these concerns apply to retailers even in the absence of on-site consumption, but commercial venues for consumption exacerbates such existing issues while also creating new public health challenges. A conservative approach to public consumption and social/on-site consumption in the initial phase of recreational cannabis legalization preserves the opportunity to reduce or eliminate some restrictions at a later date if supported by adequate evidence. In contrast, the history of tobacco control demonstrates that weak restrictions may take years or decades to strengthen even with compelling supporting evidence. This outcome would be likely to repeat in the case cannabis control if the cannabis industry develops significant political influence.

Conclusion

Recreational cannabis legalization is already a reality in several states and is likely to continue diffusing to other jurisdictions, driven by a well-organized and well-funded advocacy movement. Regulating this nascent legal industry for the protection of public health is of paramount importance in preventing repetition and exacerbation of the public health harms caused by the tobacco and alcohol industries and to protect and advance existing public health achievements in these areas. The evidence base regarding the effects of cannabis on human health is underdeveloped, but public health risks based on what is known about cannabis and what is expected based on the

similarities of cannabis to other substances, especially tobacco, supports a precautionary regulatory approach.

In addition to well-crafted public health education campaigns and other measures, efforts to mitigate the public health risks of cannabis legalization should include strong regulations on product appearance, advertising, and locations of use. Packaging is a powerful marketing tool easily misused to target children and youth; plain packaging is an effective tool to prevent such misuse and augment other consumer education efforts. On-package warnings are critical tools for regulation of products like tobacco and alcohol and are most effective when highly visible, rotated to mitigate familiarity, and inclusive of both text and pictorial elements. Advertising recruits new product users and drives consumption among existing users, justifying strict limitations on cannabis marketing and advertising to reduce risks of misuse, overuse, and youth initiation. Where cannabis is used will strongly impact how the drug is socially perceived and who is exposed to smoke and vapor. Given the similarities between cannabis and tobacco smoke, tight limits on public use and social/on-site consumption sites are necessary to protect existing public health gains in the creation of smokefree environments and smoking denormalization. Regulatory frameworks applying these public health best practices will mitigate several potential harms that may arise from legalizing recreational cannabis.

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