

# Appendix F: Concept Mapping Methods & Results

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## Concept Mapping Overview

Concept mapping is a mixed methods statistical approach that allows a wide array of stakeholder opinions, collected anonymously, to be interpreted and described. The benefits of this process are 1) the ability to structure ideas in response to a complex problem, 2) the reduction of uncertainty by basing decisions on a collective vision, and 3) stakeholder involvement through the integration of everyone's voice without bias. It involves two stages, 1) idea generation, and 2) sorting and rating ideas. The goal of concept mapping is to identify a "Go Zone" of policy options deemed to be most feasible and impactful to most stakeholder groups. Our team worked with experts from Polygon Research, Inc. to execute this data collection and analyses. More information about concept mapping can be found [here](#).

## Step 1: Brainstorming Ideas

### Brainstorming Ideas Recruitment

From March 8 through April 3, 2022, stakeholders and tribal partners were invited to participate in an online "brainstorming session" to generate policy solutions to the question "What can legislators do to curb the negative effects of high-THC products?" The website included a description of the problem, links to additional resources, and a list of the stakeholder groups being asked to participate. All participants were over 18 years old and provided informed consent. They then described themselves by selecting all that apply from a variety of identifiers. In addition, age, race/ethnicity, gender, and county of residence were collected.

Before generating policy ideas, participants rated how concerned they were with the availability of high-THC products in WA State on a scale from 1 to 5 (1 = not at all, 5 = very concerned). They then were prompted to list at least three policy ideas. On average participants listed 3.1 ideas. Participants could enter their email to be contacted for stage 2 and to be paid \$20 for their time; emails were not required to participate and were not linked to individual responses.

Over 340 individuals and organizations were invited to participate, including representatives of community organizations, people who have experienced harms of high THC products, tribal partners, cannabis users and advocates, cannabis industry employees, health care providers, government employees, prevention advocates, educators, researchers, and first responders.

### Brainstorming Ideas Results

Ninety-seven individuals generated 302 policy ideas. Participants represented a range of stakeholder groups: 75.2% community, 49.5% professionals, and 45.0% cannabis advocates. Totals are greater than 100% because participants could select identities from more than one stakeholder group. Participants lived across WA State (32.1% King County, 33.0% Eastern WA). They included men (24.8%), women (54.1%), and non-binary and genderfluid (4.7%) individuals (Note: 16.6% did not provide gender) of various racial and ethnic identities and ages. 63.3% identified as white, 9.2% as Asian or Asian American, 2.8% as Black or African American, 5.5% Hispanic or Latino, 2.8% Middle Eastern or North African, and 1.8% American Indian or Alaska Native. (Note: 13.8% did not provide race); Totals are greater than 100% because more than one option for race/ethnicity could be checked). Twelve individuals began the survey but did not generate policy ideas.

Overall, participants rated their concern with the availability of high THC products in WA State as 3.7 on a scale from 1 to 5. Notably, those who identified themselves as being a representative of the cannabis industry indicated a much lower level of concern, 1.4.

After removing duplicate ideas and ideas that did not pertain to high THC products and consulting with our advisory board to add five additional significant policy options, 46 unique ideas remained to be included in stage 2. For a full list of ideas, [click here](#).

## Step 2: Sorting and Rating Ideas

### Sorting and Rating Ideas Recruitment

Data collection for stage 2 ran from May 11th through June 12<sup>th</sup>, 2022. In this stage, participants were asked to describe themselves by answering demographic questions and to select all identifiers that applied to them, and then to choose one that best described how they wanted their voice to be heard for this purpose.

They then were prompted to review the list of 46 policy ideas and to sort them into categories that they created and named. Finally, they rated each idea from 1 (less impactful/feasible) to 10 (most impactful/feasible) in response to the following questions:

- How much would this policy **impact** the risks associated with the use of high THC cannabis? (In other words, how much would this policy work to reduce risk?)
- Assuming this policy is approved by our legislators, how **feasible** would it be to implement?

We reached out to over 670 individuals and organizations to participate and contacted those who asked to be included from stage 1 with invitations to participate.

### Sorting and Rating Ideas Results

One hundred and forty-nine people sorted and ranked ideas in stage 2, representing the following stakeholder groups: 41.3% community, 36.3% professionals, and 22.5% cannabis advocates. Participants lived across WA State (23.1% King County, 34.4% Eastern WA). They included men (30.0%), women (54.4%), and non-binary and genderfluid (2.5%) individuals (note: 13.2% did not provide gender) of various racial and ethnic identities and ages. 69.3% identified as white, 10.0% as Black or African American, 6.3% as Hispanic or Latino, 2.5% as Asian or Asian American, 1.9% Native Hawaiian or Pacific Islander, 1.3% as American Indian or Alaska Native, and 0.6% as Middle Eastern or North African (note: 15.6% did not provide race); totals are greater than 100% because more than one option for race/ethnicity could be checked. Eleven individuals began the survey but did not sort and rate policy ideas.

**Table 4: Stakeholder Identities during Sorting and Rating Ideas**

		Primary Identity (n)	Primary Identity (%)	Select all that apply identity (n)	Select all that apply identity (%)
<b>Community</b>	Educator/school admin	9	13.6%	19	11.9%
	Prevention/treatment agency	21	31.8%	35	21.9%

	Agencies representing underserved organizations	3	4.5%	17	10.6%
	Mental illness advocacy agency	3	4.5%	16	10.0%
	Experienced harms from high THC	6	9.1%	20	12.5%
	Concerned with youth health	20	30.3%	74	46.3%
	Other	4	6.1%	12	7.5%
	Total	66		190	
<b>Professionals</b>	Government agency employee	23	39.7%	52	32.5%
	Health care provider	7	12.1%	14	8.8%
	Researcher	28	48.3%	33	20.6%
	Total	58	100.0%	99	
<b>Cannabis Advocates</b>	Cannabis industry	17	47.2%	26	16.3%
	Cannabis consumers	18	50.0%	58	36.3%
	Other	1	2.8%	12	7.5%
	Total	36	100.0%	96	

## Concept Mapping Findings

### Policy Areas

Data analysis was conducted by Polygon, Inc. using validated, open-source concept mapping algorithms to create visualizations that reveal how participants conceptualize the issue at stake. More detailed information about concept mapping can be found [here](#). First, a cluster analysis was performed to identify categories of policy ideas as grouped by participants. In this case, seven policy areas were identified by participants plus the option to “Do Nothing”.

**Figure 1: Policy Groups Identified**



**NOTE:** Chart X describes the different policy groups identified by stakeholders: restrict age, product & purchase limits, education & labeling, advertising restrictions, do nothing, taxation, ban high THC products, and licensing.

**Education and Labeling** included ideas related to ensuring that the public understands the risks associated with high THC products and included 1) information and social media campaigns targeting youth in school or on social media, 2) larger public awareness campaigns, 3) consumer education at point-of-sale, and 4) warnings on product packaging.

**Taxation** involved any policy option that would add cost to high THC products based on weight (mg of THC), concentration (% THC), or product type (dabs, vape cartridges, and concentrated oils) and including a variety of cut-off points (e.g. tax products greater than 10% THC, or 35% THC, or per mg of THC). Some suggestions included earmarking tax revenue for specific related expenditures, such as paying for educational campaigns about the risks associated with the use of high THC products.

**Advertising Restrictions** included restricting where high THC products can be advertised, restricting the content of the ads, or banning all advertising of high THC products.

**Product and Purchase Limits** are policies intended to limit THC or dose in the product or to limit the amount of THC that a single consumer is allowed to purchase. Product limits included potency (concentration) caps of 10%-60% THC or different caps for different product types (e.g. 25% cap on flower, 75% cap on concentrates etc.). Also included was limiting all products to one serving, limiting serving size to 5 or 10 mg for all product types, or requiring a consistent ratio of CBD:THC. Purchase limits restricted the number of high THC products that a single consumer could buy per day or per month, or restricted which consumers could purchase highly concentrated products (e.g. patients only).

**Banning High THC Products** included banning dabs/shatter/wax, banning cartridges, or temporarily banning all products of concern until they can be proven safe.

**Licensing** changes aimed to limit the availability and better regulate quality of high THC products either through requiring a separate retail license for stores wishing to sell high THC products, or through the creation of a new “high-THC Processor” license with distinct regulation for manufacturers of these products.

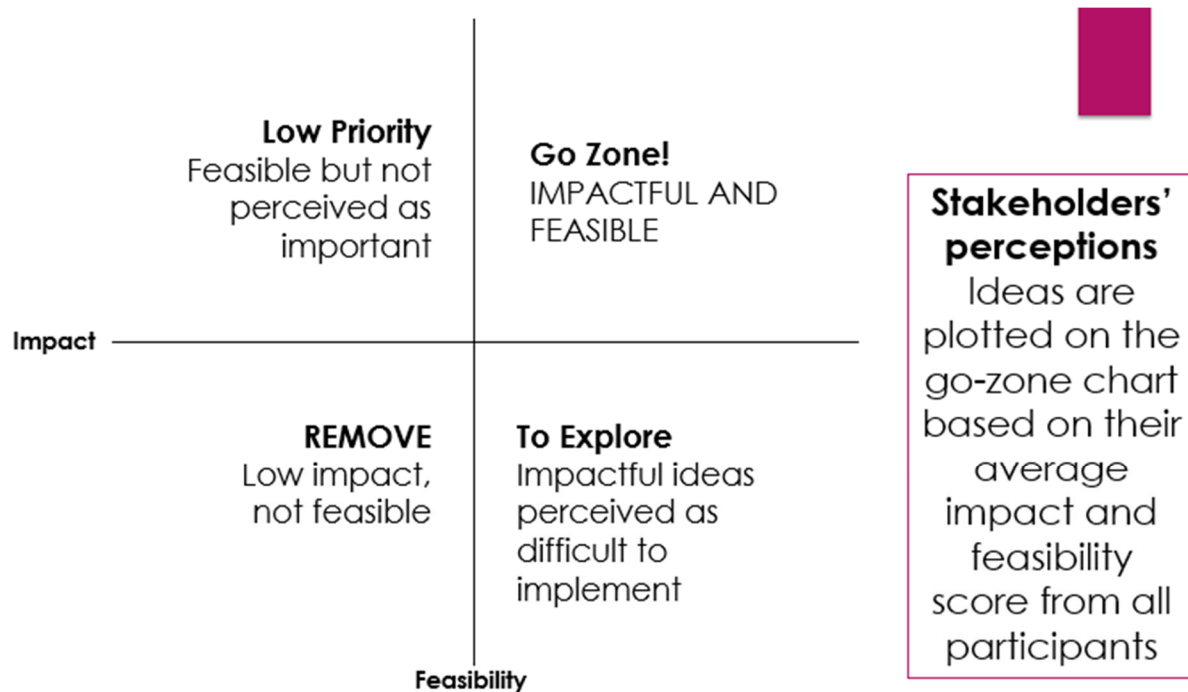
**Age Restrictions** was a single item to increase the legal age for all high THC products to 25 years old.

A complete list of policy ideas generated in Stage 1 can be found in appendix E.

## Concept Maps

Once grouped, participants rated each of the 46 policy ideas on a scale of 1-10 for importance and feasibility. Policy ideas were then placed on a concept map which provides a visual representation of the relative ratings of each policy area or cluster based on average impact and feasibility ratings (see chart X). Concept maps are divided into quadrants that indicate support for each policy idea. Ideas in the upper right corner were considered both impactful and feasible by participants and have the majority of support. This area is considered the “Go Zone” because they were viewed as both important and feasible. Items in the upper left corner were viewed as feasible but were not seen as having a large impact on risks associated with the use of high THC products. Items in the lower right corner were perceived as impactful, but not currently feasible. These ideas may deserve further consideration to better understand barriers that exist to implementation; in some cases ideas can become more feasible with some modification to the policy idea. Ideas in the lower left corner were viewed as neither impactful nor feasible and were removed from consideration.

**Figure 2: Description of Go-Zone**



## Go-Zone Policies

Three policy clusters fell partially or predominantly within the Go Zone: Education & Labeling (orange), Restricting Advertising (green), and Taxation (dark blue).

Nine of 11 policy ideas related to education and labeling fell with the Go Zone when all stakeholder groups were combined. Among cannabis advocates, all the Education and Labeling ideas fell in the Go Zone. The idea deemed most feasible and impactful of all 46 policy ideas was to include education about high THC products in schools and community centers (7). Messaging at point-of-sale for consumers and larger public health campaigns throughout the state and on social media funded by cannabis tax revenue were highly supported. Warning labels on products were also supported but seen as slightly less impactful than other ideas in this category.

Three of four policy ideas that would restrict advertising fell in the Go Zone when all stakeholder groups were combined, including prohibiting all advertising of high THC products (12). However, when stakeholder groups were separated, cannabis advocates stood out for having only one item in this cluster in the Go Zone: restricting where advertising of high THC products is allowed (10).

The third policy cluster that included policy ideas within the Go Zone involved taxation. In particular, increasing taxes on products with greater than 35% THC (19) was supported when all stakeholder groups were combined. However, individual stakeholder groups diverged on which types of taxation they would support. Professionals supported all taxation strategies, except reducing taxes on products with greater than 10% CBD or CBG (40) and increasing taxes for ONLY those under 25 years of age (27). Community viewed a variety of taxation strategies as impactful but were unsure about the feasibility of these ideas. Cannabis advocates only viewed lowering taxes on products with greater than 10% CBD or CBG as both feasible and impactful.

## Policies Outside of the Go Zone:

Restricting purchase of high THC products to adults over 25 years old (1) fell just outside of the Go Zone; however, it deserves consideration. Professionals were the only group to rate this policy as both impactful and feasible. Community saw age restrictions as having an impact, but significant feasibility concerns. Meanwhile, cannabis advocates viewed this policy as feasible but not impactful.

Banning THC products was viewed as moderately impactful and not feasible by all stakeholder groups except cannabis advocates, who viewed bans as not feasible or impactful.

Licensing policies such as limiting licensure to sell high THC products (35) and creating a high THC processor license (37) were viewed as unfeasible with mixed opinions about impact across the stakeholder groups. Community and professionals view these policies as having a moderate impact while cannabis advocates view them as unimpactful.

The majority of policies in the purchase limit group including purchase tracking and limits, serving sizes, and THC content restrictions were rated low for both impact and feasibility among all stakeholder groups. However, community and professionals believed select potency cap policies were impactful but had feasibility concerns, suggesting the need to consider this idea in the future. One exception in this policy group was requiring all products to be labeled with both weight and concentration of cannabinoids, which was rated as feasible and moderately impactful by all stakeholder groups.

“Do Nothing” was rated as extremely feasible by all stakeholder groups, but as having no impact by all groups, except cannabis users and employees.

## Feasibility Comments

Comments were also collected on barriers to policies that limit feasibility of implementation.

The most common concern was that any limit on high THC in the legal market would produce an increase in production in the illicit market where health protections do not exist. This concern was expressed by all stakeholder groups.

Many people were concerned about compliance and enforcement of any new policy, citing a need to clearly identify who would be responsible for enforcement and specifically earmarking funding for this purpose, noting that some current rules remain unenforced.

Several people felt that age restrictions on only certain products placed an undue burden on retailers and that any age restriction would not prevent 21 to 24-year-olds from accessing high THC products. Similarly, concerns existed that tracking products in the non-medical market is ineffective because purchases are being made online and people obtain products from other people. Community stakeholders expressed this concern the most.

Some respondents had concerns about the accuracy of “potency testing” due to limitations in the science of THC measurement, and several others noted a risk of an increase in additives or other forms of THC in products limited to a specified THC concentration. In a changing market, it was noted, industry adapts to regulations making some rules irrelevant. These concerns were mostly expressed by professionals and cannabis advocates.

Other concerns included the use of the DOH patient registry to create exceptions for patients, which was viewed as infeasible due to difficulty and reluctance to use the registry. A few people also noted that legislating a “serving size” for products such as dab oils was unfeasible due to the nature of use. “A gram of dab oil could be consumed at one ‘hit’ or over multiple ‘hits’.”

## Concept Mapping Limitations

Limitations of this analysis should be noted. Results are only as good as the variety of stakeholders included. Every effort was made to include the voices of a wide range of people in WA State who have been or may be affected by cannabis policy. In addition, respondents represented people with varying degrees of expertise around cannabis policy, market considerations, enforcement, public health, and lived experience. Policies that fell within the “Go Zone” in concept mapping have been discussed with experts and are informed by science in the fields of alcohol, tobacco, and food regulation prior to being recommended.