

2023 Minnesota Medical Cannabis Program Petition to Add an Approved Delivery Method

Making Your Petition

Any person may petition the Minnesota Department of Health (“the Department” or “MDH”) to add an approved delivery method (the form in which medication is taken) to those listed in subdivision 14 of Minnesota Statutes section 152.22. Petitions will be accepted only between June 1, 2023, and July 31, 2023. Petitions received outside of these dates will not be considered.

Use this online form to submit the requested information.

Instructions

Complete each section of this petition and attach all supporting documents where noted in this form. Clearly indicate which section of the petition an attachment is for. You can save your petition in a PDF, which you can print or keep for your records. Each petition is limited to one proposed delivery method. If you want to request more than one delivery method be added, you must submit a petition for each delivery method. Delivery methods pertain to the form in which medication is taken (pill, liquid, tablet, etc.). Petitions that do not relate to the topic (for example, allowing home delivery for medicine or home grow) will not be accepted. If you are petitioning for the addition of a delivery method that was considered but not approved in a prior year's petition process, you must include new scientific evidence or research to support your petition or describe substantially different therapeutic benefits. Please refer to our website to see which delivery methods were reviewed in prior years. See [Petitions to Add Delivery Methods](#). If a petition does not meet the standards for submission, it will be dismissed. You may withdraw your petition by submitting a written statement to the Department of Health stating that you wish to withdraw it.

Section A: Petitioner’s Information

Timothy Casey (NOTE: Address and other contact information has been redacted.)

Section B: Delivery Method You Are Requesting Be Added

Please specify and provide a brief description of the proposed delivery method (the form in which medication is taken). Be as precise as possible in describing the delivery method you are requesting to be added.

A dry herb vaporizer is a device that heats air using electrical means and pumps that air through a chamber containing dried cannabis plant material that contains THC, CBD, other cannabinoids, and terpenes. These components are vaporized into the heated air and then inhaled or collected by the end user. This leaves the majority of the non-active ingredients still in the dried herb, reducing or eliminating smoke, tar, and other toxic byproducts of combustion.

Section C: Anticipated Benefits from the Proposed Delivery Method

Describe the anticipated benefits from the proposed delivery method and why it is better than currently approved delivery methods. Identify patient populations that do not benefit from current delivery methods.

Vaporizer users are only 40% as likely to report respiratory symptoms as users who do not vaporize. [1]

Conventionally smoking cannabis produces approximately 65mg of byproducts per gram of cannabis. Vaporizing using a commercially available dry herb vaporizer produces nearly 70% less byproducts. [2]

“Available evidence shows that, compared with smoking, vaping cannabis can reduce: exposure to several toxins, carbon monoxide, and chronic respiratory symptoms while producing similar subjective effects, and hence might have the potential of harm reduction among habitual cannabis smokers. Moreover, vaping is proposed to be an effective way of delivering therapeutic doses of cannabis as compared with oral route and smoking.” [3]

Currently in the medical program, we only have three fast acting, short acting options for patients: Sublingual tinctures, oil-based vaporizers, and combustible smoking. For many patients, the alcohol content in the sublingual tinctures makes them unusable (mouth sores are common with certain types of chemotherapy that would prohibit a patient from using tinctures/sublingual sprays, and then there are also patients who would not use them for personal reasons such as religious beliefs or a history of alcohol dependency). As a practitioner in the Minnesota Medical Program, it is my experience that there is a subset of the patient population that is aware of the black-market vitamin E acetate vaporizers that caused “popcorn lung” a few years ago and will under no circumstance be willing to use oil-based vaporizers. Lastly, many patients are just simply interested in the most effective and least unhealthy way to reliably get fast acting results and are simply unaware that dry herb vaporizing exists because cannabis pharmacists such as myself are prohibited from educating them about it.

Section D: How Current Delivery Methods Are Inadequate

Provide information regarding the extent to which the currently approved delivery methods are unable to meet the needs of patients enrolled in the medical cannabis program.

Combustion smoking is objectively more unhealthy than dry herb vaporizing.[3] We are failing to meet the needs of patients by not offering this healthier alternative. Combustion smoking leads to greater reporting of respiratory symptoms than dry herb vaping and produces more byproducts than dry herb vaporizing.[1, 2]

Section E (Optional): Scientific Evidence of Support for the Delivery Method

Strengthen your petition by including evidence generally accepted by the medical community and other experts that addresses the effectiveness of the proposed medical cannabis delivery method and discusses its potential risks and benefits. Please include citations and links (if available) to peer-reviewed published journals or other completed medical studies.

[1] Earlywine et al. (2007) Decreased respiratory symptoms in cannabis users who vaporize DOI: 10.1186/1477-7517-4-11

[2] Pomahacova et al. (2009) Cannabis smoke condensate III: The cannabinoid content of vaporized Cannabis sativa DOI: doi:10.3109/08958370902748559

[3] Chaiton et al. (2022) Are vaporizers a lower-risk alternative to smoking cannabis? DOI: 10.17269/s41997-021-00565-w

Section F (Optional): Letters of Support

Attach letters of support from persons knowledgeable about the use of the delivery method with medical cannabis. (Please combine letters of support into one file before you upload.)

Attached at the end of this document.

Section G: Acknowledgment and Signature

Please note: Any individually identifiable health information relating to any past, present, or future health condition or health care contained in this petition is classified as a health record under Minnesota Statutes §144.291, and is not subject to public disclosure.

I certify that the information provided in this petition is true and accurate to the best of my knowledge.

This information has been redacted. (Submitted July 30, 2023)

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To Whom It May Concern:

My name is Tim Casey, Pharm.D. I am one of the current medical cannabis pharmacists working for Rise Dispensary, one of the two dispensaries in the Minnesota Medical Cannabis Program. I am writing this letter to show my support for the approval of dry herb vaporizers as a method of consumption within the Minnesota Medical Cannabis Program. To explain why this method is objectively less unhealthy than combustible smoked cannabis, I would like to step back and explain how vaporizer oil is made and how vaporizing works. I will then tie it back to dry herb vaporizers by explaining how similar dry herb vaporizers are to oil based vaporizers. I promise that if you stick with me and read along, you will come out with a greater understanding of the benefits of vaporizing and dry herb vaporizing have over combustible smoking.

A common method for making cannabis vaporizer oil is called “supercritical carbon dioxide extraction”. This is also the method used to create the Tangerine vaporizer oil product line used by Minnesota patients at Rise Dispensary. Essentially, we take carbon dioxide, the same gas you and I exhale, and put it under super high pressure to turn it into a hybrid between gas and liquid. Carbon dioxide is a great solvent for extracting THC because carbon dioxide is chemically nonpolar just like fat molecules are nonpolar. As you may know, THC is fat soluble for this same reason. This liquid-like carbon dioxide is then pumped through the ground up cannabis flower, extracting out the THC, any other cannabinoids, terpenes, and flavonoids, as well as a very small amount of other plant material. We then change the pressure to precipitate out the extracted compounds and what we end up with is 100% natural cannabis oil. Any remaining carbon dioxide evaporates off, leaving no solvent in the oil, and no other additives go into the product. What is left behind and not extracted into the oil is the majority of the carbon heavy material (such as plant cell walls) that produces soot and tar when burned. If you have ever seen the chimney of a wood burning fireplace be swept, you have seen the soot and tar that combustible smoking produces. When a patient uses a vaporizer, a heating element inside the vaporizer oil turns on, and heats up the oil to the point of evaporation, producing vapor filled with the THC, other cannabinoids, terpenes, and flavonoids that they inhale. What patients’ lungs are spared are the soot and tar that combustible smoke produces. Now let me explain how this directly relates to dry herb vaporizing.

Dry herb vaporizing is essentially the same process as extracting out the THC, other cannabinoids, terpenes, and flavonoids as in the carbon dioxide example but with hot air instead of carbon dioxide, and then instead of condensing it into an oil and then re-evaporating it, its directly inhaled by the patient. Dry herb vaporizer machines are essentially over-engineered space heaters or easy bake ovens. For the space heater models, hot plates heat air up to a specific temperature set by the user and can usually be adjusted in one-degree intervals. Typical temperature ranges are 320-400 degrees Fahrenheit, well above the temperature THC evaporates, but well below the temperature the plant would spontaneously combust to produce the soot and tar. The hot air is then blown gently past the ground flower the patient would place in a chamber, evaporating the THC into it. The air can be directed down a hose directly to the user’s mouth, or it can be collected in a large balloon, to allow the air to cool down before being inhaled. Once again, the carbon heavy plant material responsible for soot and tar is left behind and thrown into the garbage rather than inhaled.

Common sense tells us this is healthier than smoking. Most of you have primary care doctors or have physicians as friends, relatives, or neighbors, ask them: Would you rather have a patient combustible smoke or vape? Their answers will be unanimous: “I would rather a patient

do neither if possible, but if the benefits outweigh the risks, I would rather they vape over combustible smoke.” As a practitioner in the Minnesota Medical Cannabis Program and as a patient in the Minnesota Medical Cannabis Program, dry herb vaporizing is the method of consumption I choose for myself and it is the method of consumption I recommend to close friends and family. However, at present time, it is a method of consumption I am unable to recommend to my patients. Please add dry herb vaporizing as an approved method of consumption in Minnesota so I can inform my patients of the least unhealthy way to inhale cannabis.

Thank you for your time,

Tim Casey, Pharm.D