Evaluation of the Medical Marijuana Program in Washington, D.C.

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Executive Summary

When the voters of the District of Columbia passed the Legalization of Marijuana for Medical Treatment Initiative in 1998, the jurisdiction became one of the first in the nation to approve medical marijuana. Although intervention by Congress delayed further progress until July 2010, officials are now in the process of implementing the law. Goals include facilitating patient access, ensuring safety and privacy, preventing diversion of marijuana for purposes outside the allowed provisions of the law, and demonstrating sufficient care and respect to prevent interference by federal authorities.

The Office of the Attorney General and other Washington, D.C. policy makers face decisions that include a trade-off between the goal of preventing diversion, the goal of facilitating patient access and goals that seek to accomplish other objectives. In order to assist in making these decisions, this report includes an analysis and comparison of the D.C. medical marijuana program to that of other states, identification of likely points of diversion for non-medical purposes, suggested alternatives to prevent diversion, and recommendations with respect to other matters including patient access and formation of the Medical Marijuana Advisory Committee.

Findings

- In contrast to other jurisdictions where the Governor or law enforcement officials have opposed implementation of medical marijuana programs, officials in the Washington, D.C. Department of Health, Metropolitan Police, and Office of the Attorney General have all expressed agreement as to the importance of following the will of the voters, preventing diversion, and demonstrating respect for federal concerns in order to make the program a success.

- Comparison of the program in the District of Columbia with that of the 18 states that have enacted medical marijuana laws to date concludes that the D.C. program is the most regulated. In every category we examined, including qualifying medical conditions, regulation of cultivation and dispensaries, possession limits, required patient, doctor and caregiver procedures, and risk of diversion, the District of Columbia is equally or more restrictive than other jurisdictions.

- The limited number of qualifying medical conditions, along with an initial number of only three dispensaries spread out geographically in the city, provides for a relatively small program. This makes regulation economically and administratively feasible.

- We estimated that medical marijuana will initially compose approximately 3% of the total market for marijuana in Washington, D.C. This limits the impact that any amount of diversion would have on overall marijuana consumption.

- The restrictive characteristics of the program result in a trade-off between preventing diversion and providing patient access to medicine. The narrow list of qualifying conditions, lack of allowed home cultivation, and limited number of cultivation centers and dispensaries will prevent some patients from being able to obtain medicine conveniently and economically, and they may resort to the black market.
Recommendations

- While the well-regulated program is likely to deter diversion, the high-profile location in the nation’s capital suggests that every step that could reasonably prevent diversion be considered. The Department of Health should consider regularly scheduled inspections of cultivation centers and dispensaries, including a physical inventory and comparison to the recorded inventory, purchase and sales records. The inspector should also consider an occasional unannounced surprise inventory.
- Depending on perceived levels of diversion, consideration should be given to initiating undercover attempts to obtain false marijuana recommendations, or unauthorized purchases from cultivation centers, dispensaries or patients. Cultivators, dispensaries and doctors all fear any activities that will jeopardize their valuable licenses. Patients fear loss of access to medicine. Well-publicized plans for such undercover operations should make all parties additionally careful not to divert.
- Physician recommendations are required to be submitted to the Department of Health; therefore, the department should review these recommendations with particular attention to doctors with a high number of recommendations. Consideration should be given to requiring a medical marijuana training program for physicians who write more than a set number of recommendations, while also encouraging similar training for all D.C. physicians.
- As with prescription drugs, diversion by patients who choose to either share their medicine with others or consume their drug recreationally is extremely difficult to prevent from both a privacy and administrative cost standpoint. Although the restrictive nature of the program also limits the volume of patient diversion, district officials should monitor black market and medical marijuana prices to gauge the propensity to divert, and consider patient education requirements to discourage such activities.
- Consideration should be given to requiring cultivation centers and/or dispensaries to test for and label product with measures of potency such as percent THC and THC to cannabidiol ratio. This information will better enable physicians to make adjustments to their recommendations in the same way they do prescription medications, and will improve patient safety by allowing patients to know what they are taking.
- With respect to the Medical Marijuana Advisory Committee provided for under the Act, the group should be established as designated by the mayor as soon as possible. Members should include patients, physicians, officials from law enforcement, the Department of Health and experts such as those who provided the required D.C. training programs already conducted for employees of cultivation centers and dispensaries. The Committee should meet early in the implementation process to identify and resolve any problems that might jeopardize the program.

The small size of the medical marijuana program in the District of Columbia offers an opportunity for strict regulation and prevention of diversion. Continued determination to make the program a success, and cooperation among the Office of the Attorney General, the Department of Health, Metropolitan Police, providers, patients and physicians offer the potential for it to become a model program for providing safe and effective medical marijuana in the United States.
Introduction

Purpose

The purpose of this report is to provide the Office of the Attorney General for Washington, D.C. with information and options in order to make decisions with respect to the Legalization of Marijuana for Medical Treatment Initiative Act. Objectives include preventing diversion of marijuana for purposes outside the allowed provisions of the law, minimizing activities that would invite interference by federal authorities, and facilitating safe implementation of the law to provide medical marijuana to authorized patients in Washington, D.C. Included in the report is a state-by-state analysis of other medical marijuana programs; a comparison of the Washington, D.C. law to that of the states; an estimation of the size of the medical market relative to the total D.C. marijuana market; and suggestions regarding the Medical Marijuana Advisory Committee.

Background

Marijuana in its various forms has been a topic of academic and political consideration in the United States since the 19th century. Between 1840 and 1900 it was frequently mentioned in medical journals for various uses, most often as a painkiller or anesthetic.\(^1\) Its therapeutic popularity faded in the beginning of the 20th century as analgesics were formulated by pharmaceutical companies that had more consistent chemical properties and, as such, more reliable medical effects.\(^2\) The Marihuana Tax Act of 1937 placed a $1 tax on each transaction of an ounce of marijuana to individuals registered for some medical or industrial uses,\(^3\) and a $100 tax on unregistered transactions,\(^4\) as well as high fines and imprisonment if the tax was not paid, making any marijuana use prohibitively expensive or illegal.

In 1970 Congress passed the Controlled Substances Act, designating marijuana as a Schedule 1 drug, defined as having “a high potential for abuse,” “no currently accepted medical use in the United States,” and a “lack of accepted safety for use under medical supervision.”\(^5\) The Schedule 1 designation made marijuana nationally outlawed for any non-research purpose. In 1978, however, the Compassionate Investigational New Drug (IND) program began providing legal medical marijuana cigarettes to select program applicants, funded by the federal government and produced at the University of Mississippi.\(^6\) The program was closed to future applicants in 1992, but as of 2008 there were still 4 living recipients of IND marijuana.\(^7\)

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4. Ibid.
7. Ibid.
In the late 1990s individual states began legalizing medical marijuana, usually through an initiative process and running directly contrary to federal law. To date 18 states and Washington, D.C. have legalized medical marijuana. Additionally, the state of Maryland has a law that allows for medical use of marijuana to be an affirmative defense in court, which requires that courts consider medical marijuana use to be a mitigating factor in state prosecution.

Internationally Canada, Israel, The Netherlands, and Czech Republic have instituted medical marijuana programs at the national level. Colorado and Washington State legalized marijuana for non-medical use as of the 2012 election. Nevertheless, medical and non-medical use of marijuana in all United States jurisdictions remains a violation of federal law.

In D.C., the Legalization of Marijuana for Medical Treatment Initiative of 1999 (Act) was originally approved by District voters as Initiative 59 in 1998. In 1999, however, Representative Bob Barr attached a rider to the congressional Washington, D.C. appropriations bill that banned the implementation of the law in D.C. The rider, which became known as the “Barr amendment,” was reauthorized in every subsequent appropriations bill until the Democratic-controlled Congress of 2010 removed it. A few weeks later the D.C. Council voted to implement the initiative. Rulemaking for the law took place in four sessions between August 6, 2010, and August 12, 2011, with the Advisory Neighborhood Councils’ recommendations received in September 2010 and incorporated into the subsequent rulemaking sessions.

Most recently, an action in the U.S. Court of Appeals attempted to change the classification of marijuana as a Schedule I drug under the Controlled Substances Act (CSA). The Coalition to Reschedule Cannabis petitioned the Drug Enforcement Agency (DEA) in 2002 to reclassify marijuana as a Schedule III, IV, or V drug. The DEA denied the petition in 2011, and the U.S. Court of Appeals upheld the denial on January 22, 2013. Subsequently, Rep. Earl Blumenauer (D-OR3) introduced House Bill 689, States’ Medical Marijuana Patient Protection Act, which would provide for the rescheduling of marijuana and for the medical use of marijuana in accordance with the laws of the various states. Additionally, Rep. Sam Farr (D-CA20) introduced House Bill 710, Truth in Trials Act, which would enable individuals facing federal prosecution for marijuana offences to provide evidence during trial that they were acting pursuant to duly enacted medical marijuana laws. The likelihood of passage of both bills is uncertain. Medical marijuana, therefore, remains a Schedule 1 prohibited drug throughout the 50 states and District of Columbia.

**Methods**

*Literature Review and Quantitative Data Analysis*

The academic literature regarding state medical marijuana programs is sparse. There have been a few studies that provide demographic information on medical marijuana patients and report for what conditions the drug is most commonly recommended. There are also limited studies to

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evaluate the effect of medical marijuana programs on reported use of marijuana among teenagers and crime rates around dispensaries.

With respect to quantitative data, all states with medical marijuana programs, with the exceptions of California and Washington, require patients to register with a state agency. As such, we were able to use state reporting of medical marijuana patients to estimate the percent of the adult population that is registered in each of the states with an operational program.

**Interviews with D.C. Stakeholders**
Our research included interviews with officials in the Washington, D.C. Department of Health, the Metropolitan Police Department, the Office of the Attorney General, patients, physicians, and medical marijuana dispensary owners. Multiple interviews were conducted both in person in Washington, D.C. and via telephone. Other interviews were conducted by telephone only. The interviews lasted anywhere from 15 minutes to an hour. The work also included a physical visit to two of the dispensaries.

**Interviews with Medical Marijuana Experts and Advocates**
Our research also included interviews with experts, activists, and medical marijuana advocates. This included representatives from Americans for Safe Access, Marijuana Policy Project, National Organization for the Reform of Marijuana Laws (NORML), and the Drug Policy Alliance. We also spoke with advocates from California, Colorado, Maine, Michigan, New Jersey, Oregon, Washington, and the District of Columbia. Interviewees included doctors, patients, field researchers, a medical marijuana grower, and a nurse. Questions covered various aspects of medical marijuana programs including successes and challenges faced by other states, methods used to control diversion to recreational use, important outcomes of implementation and effective enforcement strategies.
Section I – Multistate Comparison and Analysis

Summary
Currently 18 states have legalized the use of marijuana for medical purposes, and 16 have established program for its distribution and use. We analyzed and compared these programs to Washington, D.C. with respect to five different factors:

- Number and type of qualifying conditions
- Possession limit
- Home cultivation
- Required ID card and registration
- Percent of adult population using medical marijuana

Comparison

Number and Type of Qualifying Conditions
Each state identifies specific conditions for which a doctor can recommend marijuana. The types of qualifying conditions specified by states in their medical marijuana statutes differ from state to state. Most states include only serious, debilitating, and/or terminal illnesses for which scientific evidence supports the use of marijuana. These include intractable nausea and vomiting, wasting due to HIV/AIDS, muscle spasms due to multiple sclerosis, and glaucoma. The biggest difference among the states is the inclusion or exclusion of chronic pain and/or anxiety as qualifying conditions; this divergence is important given that these two are the most common conditions for which medical marijuana is recommended. Chronic pain for example, represents approximately 90 percent of all medical marijuana recommendations in states where it is listed as a qualifying condition for medical use.

The number of qualifying conditions specifically named range from 5 to 14 depending upon the jurisdiction. Most states restrict the use of medical marijuana to the conditions specified, though three states use broader language. In California, for example, physicians may recommend for “any other illness for which marijuana provides relief.” The three jurisdictions with the tightest regulation with respect to qualifying conditions are Washington, D.C., New Jersey, and Connecticut. These allow for 7, 10 and 11 specific conditions respectively, and all exclude chronic pain. The two states with the least strict environment with respect to qualifying conditions are California and Massachusetts. While both of these states include specific conditions, they also include a provision that leaves ultimate ability to recommend medical marijuana in the hands of physicians.

Possession Limit
States specify different limits regarding how much marijuana a patient can legally possess in a certain timeframe. The ideal amount should be just enough to address symptoms during that

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11 For a reference of data used in the state-by-state comparison, see Appendix A.
timeframe without any excess. There is a wide range of possession amounts permissible under the various state programs. Some states only limit the amount a patient can have in their possession at any time, and they conceivably could refill their supply of marijuana to that amount every day. Potential consumption could therefore be much greater in the same period of time than in those jurisdictions that do specify a time period. Other states specify a possession limit in terms of ounces plus plants.

Oregon currently has the highest possession limit of 24 oz., plus plants. Alaska, Nevada and Montana all allow 1oz. possession at any time in addition to a specified number of plants. Connecticut and Massachusetts do not specify an exact amount but allow for a 30- or 60-day supply, respectively, as determined by the implementing agency. Washington, D.C. and New Jersey appear to have the most restrictive policy by allowing only 2oz. every 30 days, with no home growing. Quantity, home cultivation, and time period are therefore all addressed simultaneously in these provisions.

**Home Cultivation**
Programs that allow home cultivation are less restrictive, as the patient’s production and consumption is more difficult for implementing authorities to track. Home cultivation by patients is currently not permitted by four jurisdictions, while fifteen state laws allow for home cultivation under some circumstances. The four jurisdictions in which it is not allowed are Washington, D.C., New Jersey, Connecticut and Delaware.

**Required ID Card and Registration**
Programs with a mandatory patient registry are considered more regulated, because the jurisdiction has the ability to monitor and track patients. Nearly all states with a medical marijuana program require patients to be registered with the state’s implementing authority. Washington, D.C. requires patient registration. The only states that do not are California and Washington, in which registration is optional or voluntary.

**Registered Percent of Adult Population Using Medical Marijuana**
The number of registered medical marijuana patients in states with established programs ranges from 0.003% to 2.79% of the of the state’s adult population. We considered the percent of the adult population with a valid medical marijuana registration to reflect the strictness of the regulation in the state. Table 1 lists these percentages by state. Delaware, New Jersey, and Washington, D.C. were found to have the lowest percent of the adult population with a medical marijuana registration of less than one-tenth of one percent. Colorado had the highest at 2.79%.

Based on experiences in other states, Washington, D.C. Committee on Health has estimated 300 patients in the first year of the program, indicating that D.C. would have the third lowest percentage of registered adults among all jurisdictions. California and Washington percentages are not listed due to the fact that Washington has no state registry and California has a voluntary registration program, and thus the number of registered adults does not accurately reflect the actual number of persons in the state in possession of a medical marijuana card.

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Table 1 was constructed using data on the number of currently registered marijuana patients in each state. State populations and the percent of the state population under 18 years of age were taken from 2011 Census data. This was used to estimate the adult population in each state so that the percent of the adult population registered in the state could be calculated. Massachusetts and Connecticut are not included as these states passed their medical marijuana laws in 2012 and thus have no registered patients to date. The percent for Washington, D.C. is an estimate based on the anticipated number of 300 patients in the first year.

Table 1. Percent of Adult Population with a Medical Marijuana Registration by State

<table>
<thead>
<tr>
<th>State</th>
<th>% of Adult Population With a Valid Registration</th>
</tr>
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| Delaware       | 0.003  
| New Jersey     | 0.004  
| **Washington, D.C.** | **0.057**  
| Vermont        | 0.11  
| Nevada         | 0.18  
| Alaska         | 0.23  
| New Mexico     | 0.55  
| Rhode Island   | 0.58  
| Arizona        | 0.72  
| Montana        | 0.97  
| Hawaii         | 1.09  
| Maine          | 1.55  
| Michigan       | 1.64  
| Oregon         | 1.82  
| Colorado       | 2.79  
| California     |  
| Washington     |  

20 Arizona Medical Marijuana Act (AMMA) End of Year Report  
25 California and Washington Medical Marijuana Programs do not require patients to register with a state agency therefore it is difficult to know the true number of medical marijuana patients in these states.
Section II – Washington, D.C. Specific Policy Analysis

Relative Size of District Medical Marijuana Market to Overall Market

When considering the significance of patient diversion on the overall marijuana market in Washington D.C, some rough calculations may shed light on the total potential impact. Although total U.S. sales of marijuana are hard to estimate because such sales, being largely illegal, are not reported to the government, several calculations estimate the total U.S. market at $30 billion per year. Given a current U.S. population of approximately 315 million, $30 billion translates to an average of approximately $95 of marijuana sales per person per year. If sales in D.C. are proportional to that of the U.S. overall, the total D.C. market for all marijuana for the 632,000 residents of Washington D.C is approximately $60 million dollars per year.

Although no one knows how big the medical marijuana market is likely to be in D.C. given the existing limited number of qualifying conditions, the first year estimate of number of patients is 300 based upon a 2002 GAO report of early experiences in other states that allow for medical marijuana. If every patient takes the maximum quantity of 2 ounces per month for 12 months = 24 ounces at a rough estimated price of $250 per ounce, the entire medical market in the first year translates to $6000 x 300 patients = $1.8 million. Given those numbers, if every patient purchased the maximum amount allowed every month and the entire medical marijuana market was diverted 100%, it would only represent 3 percent of the overall D.C. market for marijuana, legal and illegal.

Furthermore, since some portion of the patients will be substituting legal marijuana for what they are presently obtaining on the black market, the addition of legal medical marijuana should only represent some fraction of that 3 percent. While all the numbers represent very broad estimates and the number of patients is expected to grow as the program progresses, the District of Columbia may want to consider the small impact of the medical market when deciding on policy options to prevent diversion, administrative costs and trade-offs in terms of patient access.

Outcomes for D.C. Medical Marijuana Program

From the review of literature surrounding medical marijuana programs, and discussions with community and regulatory stakeholders, we identified nine separate potential policy outcomes of concern for the District of Columbia. Diversion of marijuana from purely medical applications to non-medical is a critical issue among these outcomes, largely due to the attention from lawmakers and the affected community. As such, diversion outcomes are broken down by each node in the medical marijuana distribution chain where they could occur. The following is a list of outcomes of concern:

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26 Various studies have estimated the total market size ranging from $10 to 50 billion per year. In Marijuana Legalization, What Everyone Needs to Know, by Jonathan P. Calkins, Angela Hawken, Beau Kilmer and Mark A.R. Kleiman published in 2012 the authors suggest a range between $15 billion and $30 billion.


28 While the total size of the U.S. market is a largely unknown, a market of only $10 billion with one-third being diverted or a market of $15 billion with one-half being diverted produces a similar 3 percent figure.
1. **Patient Access**
   a) **Affordability**
   b) **Convenience**
2. **Patient Privacy**
3. **Patient Safety**
4. **Diversion to Recreational Use at Various Levels**
   a) **Cultivation Centers** – Are cultivation centers illicitly selling medical marijuana to anyone other than a registered dispensary?
   b) **Dispensaries** – Are dispensaries only selling authorized quantities to registered patients and caregivers?
   c) **Physicians** – Are physicians writing recommendations only to eligible patients as defined under D.C. regulations?
   d) **Caregivers** – Are caregivers transferring 100 percent of the medical marijuana they receive from a dispensary to the patient in their care?
   e) **Patients** – Are patients using all of the marijuana received from dispensaries solely to treat their illness, or do the patients also use it outside its intended purpose? Are they selling or distributing it to others?
5. **Diversion to Other States**
6. **Crime Surrounding Dispensaries**
7. **Driving Under the Influence**
8. **Drug Dependency and Abuse**
9. **Marijuana Use Among Teens**

Out of the nine listed, however, only the top four (Patient Access, Patient Privacy, Patient Safety, and Diversion at the various levels) proved to be significant factors when evaluating the various policy options with respect to the medical marijuana program in Washington, D.C. This is because, as previously noted, the District of Columbia’s program is so small and regulated relative to most state programs that any effects it might have on the latter five outcomes will be negligible. The following four sections explain all of the outcomes with respect to their treatment in the current District regulations, and the necessity of their consideration for potential policy options.

**Patient Access**

The intent of Washington, D.C.’s medical marijuana policy is to make marijuana available as a medicine to people with qualifying conditions. As such, it is important to examine the policy to ensure sufficient ease of patient access in terms of affordability and convenience.

**Affordability**

With respect to affordability of the medication, the current regulations address prohibitively high pricing by providing discounts to low-income patients. They do not address the possibility that the small number of dispensaries (currently there are only 3 approved) could encourage oligopolistic behavior resulting in high prices and restricted supply. This type of behavior could be made worse by the fact that patients cannot easily switch dispensaries and, therefore, the dispensaries are not necessarily in competition the way suppliers usually are in the market.
**Convenience**

Once patients have obtained a written recommendation from their physician, they must provide a form of government-issued identification, show proof of residence in Washington, D.C., and pay an application fee. Low-income patients may qualify to have the fee reduced or waived. We were unable to identify significant problems of convenience with respect to obtaining a registration card. As it stands, the law requires patients to specify a single dispensary from which they will purchase marijuana. The name and address of the dispensary will then appear on the patient’s registration card. This procedure provides for easier tracking of patient purchasing trends, as it is much easier to track the quantity of marijuana that an individual patient is buying if he or she is only buying from a single place.

From a regulatory standpoint, allowing patients to purchase from only one dispensary is likely to decrease the chance that patients will be able to obtain more than the legal amount, ultimately decreasing the probability that there will be diversion. From a patient-access standpoint, however, this restriction may pose problems because patients lose their freedom as consumers. They cannot easily choose to go to another dispensary if, for example, their chosen dispensary runs out of product. In order to detect such problems, regular monitoring and evaluation of the program by the Medical Marijuana Advisory Committee should include testimony by patients.

Convenience is determined by ease of obtaining a physician recommendation, a valid registration card, and marijuana from dispensaries. The ability of patients to obtain a recommendation from their physician is dependent upon how willing physicians are to write such recommendations. Physicians may not be familiar enough with the pharmacology of medical marijuana to feel comfortable recommending it to patients, or they may fear prosecution from federal authorities even if they are following the law of the District. Consideration should be paid to whether the number of providers willing to recommend the medication is not so few that qualifying patients do not have sufficient access to the medication.

**Patient Privacy**

Another consideration is the issue of patient privacy and the possible problematic nature of keeping patient illnesses and medical diagnoses as public record. This problem is adequately addressed by the law, which states that “patient applications and supporting information are subject to the protections of the federal Health Insurance Portability and Accountability Act (HIPAA) of 1996”. The Department of Health will maintain a confidential list of persons who have been issued registration cards, but this information is not considered public record, nor “shall it be subject to disclosure except to authorized employees of the DOH as necessary to perform [their] official duties”.

**Patient Safety**

A final concern is that of patient safety. While the law requires testing of marijuana for contaminants, it makes no mention of testing and labeling of any measure of potency.
refers to the strength of the drug. Marijuana contains many chemicals, including at least 61 different cannabinoids that have been identified.\textsuperscript{31} One of these is Δ-9-tetrahydrocannabinol (THC), which produces most of the characteristic effects of smoked marijuana including relaxation, and changes in mood, perception and motivation. THC also provides pain relief, stimulates appetite and decreases nausea. With higher doses of Δ-9-THC and with oral ingestion, unpleasant reactions including panic, hallucinations and even acute psychosis can occur.\textsuperscript{32} The percent of THC is often used as one measurement of marijuana potency.

Cannabidiol (CBD) is another cannabinoid of importance which has antianxiety and anticonvulsive effects.\textsuperscript{33} It is also believed that CBD has antipsychotic effects and for this reason might decrease the likelihood that negative side effects such as anxiety and psychosis will occur.\textsuperscript{34} The percent of CBD relative to the percent of THC in a particular strain of marijuana is referred to as the CBD: THC ratio. Marijuana with a higher ratio is considered to be safer, given that a higher CBD content is associated with lower risk for negative effects.\textsuperscript{35} Therefore the CBD: THC ratio can be used to help patients select a strain that is both efficacious and minimizes unwanted side effects. The potential for negative side effects makes patient safety a legitimate concern. An appropriate testing and labeling system that includes both the percent THC and the ratio of CBD to THC should be considered in order to help patients select a strain that is potent enough to address symptoms but does not cause adverse effects.

**Diversion**

A primary objective among all the stakeholders in D.C.’s medical marijuana program is the prevention of diversion of cannabis for use outside of the proscribed medical conditions provided for in the law. Cultivators, dispensaries, and doctors fear activities that will jeopardize their licenses. Patients fear activities that will prevent them from obtaining their medicine. D.C. executive department officials and the Metropolitan Police all have expressed a desire to implement the program without demonstrating disrespect for federal law. For these reasons stakeholders wish to prevent diversion of cannabis for any purpose. The following is a description of potential areas of diversion from the initial points of cultivation until final consumption.

**Cultivation Centers**

Unlike most states with laws allowing medical marijuana, the District of Columbia does not presently allow home cultivation. Instead, the D.C. law provides for a limited number of cultivation centers licensed by the Department of Health. Despite the fact that the lack of home cultivation and tough licensing process makes D.C.’s cultivation procedures among the strictest in the nation, preventing diversion remains a challenge. Although each cultivation center is


\textsuperscript{32} Ibid.


\textsuperscript{34} Schubart CD, Sommer I, van Gastel W, Goetgebuer R, Kahn R, Boks M. Cannabis with high cannabidiol content is associated with fewer psychotic experiences. Schizophrenia Research. 2011;216-221.

\textsuperscript{35} Ibid.
subject to a 95-plant limit, wide ranges in plant size result in a large variation in yield, and could prove difficult for even the most vigilant inspector to verify production and estimate diversion.

**Dispensaries**
Washington, D.C currently has three separately owned dispensaries each located in a different Ward within the city. One is located in the northernmost section of the city near the Maryland border, another is located near the center of the city, and a third is located in a southeast section of the city.

In addition to a rigorous process to obtain a dispensary license, the District of Columbia also is the only medical marijuana jurisdiction that requires training of dispensary owners, managers and employees. These procedures suggest perhaps the toughest dispensary requirements in the nation.

**Physicians**
For patients to obtain a medical marijuana registration they must complete a patient application submitted along with a physician’s recommendation to the Department of Health. Once approved, patients are issued an identification card, which includes a current photo of the patient, the name and address of their chosen dispensary, and an expiration date. Under the current law, recommending physicians are required to be in a bona-fide relationship with patients. A recommendation for medical marijuana includes the physician’s contact information and medical license number, specifies the condition of the patient, and includes the length of time the patient has been under his or her care. Physicians must also verify that they have discussed the potential risks and benefits with the patient.

Diversion at the physician level is of highest concern in states that give physicians full discretion to recommend the medication to any and all patients. As it stands, the program in Washington, D.C. very clearly specifies the conditions for which marijuana can and cannot be recommended by physicians, leaving little for leeway for misinterpretation. Furthermore, any recommendation made by physicians is still subject to approval by the Department of Health. An additional concern is that all of the marijuana recommendations will come from a few select providers. In Colorado for example, in 2009 only 15 doctors accounted for 75 percent of patient recommendations.³⁶

**Caregivers**
With respect to caregivers, the law requires caregivers to register in the same way patients do. Caregivers must provide the DOH with proof of identification and must obtain a valid caregiver card that includes the full name of the patient, his or her registration number and the dispensary from which medical marijuana will be obtained. Caregivers may only be registered to provide care to a single medical marijuana patient at a time.

There is potential for diversion by caregivers who can either use the medication themselves or choose to sell it elsewhere. While the caregivers’ decision to sell will be influenced by the

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street-value of the product and the amount in the caregiver’s possession, this potential is decreased by the limitation that one caregiver may only be associated with one patient at a time.

**Patients**
Diversion of cannabis from patients to others is an important risk that needs to be estimated and evaluated. The District of Columbia initially has provided for a two-ounce limit within a 30-day period, which puts D.C. among the more restrictive jurisdictions in the country. While two ounces per month could be considered a large quantity for a recreational user, the adequacy for medical purposes will vary depending on the qualifying condition and medical needs of the patient.

Diversion from the patient may come in a number of ways. Although the strict and limited number of conditions under which patients may qualify to obtain medical marijuana may limit the frequency of diversion, some patients may find themselves in a position in which they are authorized to purchase more than they require for their own use, and diversion to others may result. Patients who have suffered economically from severe illnesses may be additionally vulnerable to reselling in order to supplement their income. Furthermore, as often occurs with prescription drugs, some patients may simply offer to share their medicine (illegally) with others, or use it for their own recreational purposes. Like other prescription drugs with the potential for abuse, it is most likely politically and economically unfeasible to prevent this kind of diversion.

**Other Outcomes**
Other concerns beyond patient needs and diversion risks are involved with implementing medical marijuana programs, such as the safety of neighborhoods around dispensaries and the well-being of the larger Washington, D.C. community and its neighbors. However, the existing body of regulation and its small and restrictive nature appears to minimize the significance of these concerns. The following is a description of each of these other concerns, along with an explanation of why they did not ultimately factor into the recommendations of potential policy options for consideration by District officials.

**Diversion to Other States**
Washington, D.C. is bordered by Virginia and Maryland, two states that do not have established medical marijuana programs. Therefore, diversion to these states from D.C. is a potential concern. Use of marijuana for medical purposes is currently not legal under state law in Virginia, while in Maryland the General Assembly passed a 2003 bill that allows for a medical necessity defense for patients who use marijuana for specific illnesses. The bill does not actually create a structured medical marijuana program, but rather offers patients a legal defense in court. While we considered the risk of diversion from the District to these states, the regulations as written require all patients to show valid proof of Washington, D.C. residence in order to obtain a registration. Furthermore, dispensaries in the District are prohibited from selling to patients who possess out-of-state registrations. These provisions should deter persons from out state coming to Washington, D.C. for the sole purpose of obtaining medical marijuana. As previously calculated, if every patient in Washington, D.C. sold his or her entire allowable supply to persons in other states, it would result in $1.8 million worth of medical marijuana entering the illicit market in these states. This would account for approximately 0.2% and 0.3% of the illicit marijuana market in Virginia and Maryland respectively. As a result, the current regulations in
Washington, D.C. are sufficient to combat high levels of diversion to neighboring states, and thus it is not a problem that requires additional policy solutions.

**Crime Surrounding Dispensaries**

One of the greatest concerns communities have in accepting a medical marijuana dispensary into their neighborhood is that, due to the illicit nature of marijuana, it will attract seedy elements to the area and increase criminal activity. The dispensaries themselves are also an attractive target for criminals who might try to break in and steal the drug. Though break-ins remain a concern for owners of these facilities, some studies have suggested that crime might potentially be reduced in the immediate vicinity around dispensaries because of the heightened awareness of the authorities and communities, and the security measures most dispensaries take without any direction from government officials. During a visit to two of the dispensaries we observed that the locations had a high level of security, including significant camera presence and security equipment. Owners also stated that they intend to have a security guard on hand.

Given this information, it seems unlikely that crime will increase significantly around Washington, D.C.’s dispensaries as long as owners, authorities, and community members remain vigilant. The heightened risk of being caught after break-ins and other crimes associated with dispensaries will offset their attractiveness as targets to criminals.

**Driving Under the Influence**

The Subtitle C regulations do not offer any special protections to medical marijuana patients who drive while experiencing the effects of the drug. The stance of the Washington, D.C. Metropolitan Police Department has been one of zero-tolerance for DUI, and that will continue. Individuals pulled over for reckless driving who pass a breathalyzer test may be taken in at the officer’s discretion for urine testing, the results of which can be used to determine whether the suspect will be charged with driving under the influence of marijuana or other drugs. This test is inaccurate, however, as urine will test positive several weeks after marijuana was consumed, and a driver who tests positive may not actually be under the influence when apprehended.

While there is not enough empirical evidence on the subject at this time to be able to know that DUI rates will actually change as a result of a medical marijuana program, they remain a concern to the public and their elected representatives. Although driving under the influence is a politically sensitive issue, the relatively small nature of the medical program compared to the overall D.C. marijuana market, the low likelihood of seriously ill qualifying patients driving, and the problematic nature of existing methods of testing for driving under the influence of marijuana all indicate that the impact that D.C.’s medical marijuana program will have on DUI rates will probably be negligible.

**Drug Dependency and Abuse**

A common concern among critics of medical marijuana programs is that the rates of drug dependency and abuse will go up if marijuana is legally available for patients. Estimates from the National Survey of Drug Use and Health (NS-DUH) in 2011 suggest that adults in states with medical marijuana programs have higher self-reported rates of illicit drug use than the national

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average. Rates of illicit drug use are determined by asking participants whether they have used illicit drugs in the past month. It is difficult to determine whether rates of drug use or rates of dependency increase after a state legalizes and implements a medical marijuana program. However, because of the small size of the medical marijuana program relative to the estimated overall volume of marijuana use in Washington, D.C., changes in rates of drug dependency and abuse are likely to be negligible. Still, there is an increased risk of dependency among patients, and it will be important for doctors to include screening and discussion of dependency as part of their follow-up.

Teen Marijuana Use
There is concern that any legalization of marijuana, even just for medical use, will soften the general conception of marijuana and encourage young people to try it who otherwise would not have. This belief places an added concern among the public, and by extension federal lawmakers and agencies, over the effect a medical marijuana program might have on increasing use among teens and young adults. Furthermore, some portion of the medical patients will be teens, subject to parental approval.

However, the medical marijuana program in Washington, D.C. will only increase the available marijuana in the District by a small amount relative to the current estimated volume and teen patients will be a minimal fraction of the entire patient population. As such, an increase in teen marijuana use should not be a major concern for the purposes of implementation or regulation, and should only be addressed if related political pressure threatens the program.

Major Policy Option Choices for Washington, D.C.39

Inspection Protocols
Although medical marijuana is anticipated to have an insignificant impact on the total medical plus illicit market in Washington DC, the high profile nature of the program in the nation’s capital suggests that certain procedures be implemented that can be done with nominal administrative costs and with minimal effects on patient accessibility. The small size of the program makes it administratively feasible for an inspector or administrative person to review every single transaction in the course of a year. Using a calculation based upon the Washington, D.C. Committee on Health estimate of 300 patients in the initial year,40 if each patient were to make 12 purchases, the total number for the entire District would be an administratively reviewable 3600 transactions per year.

Dispensaries and cultivation centers should be regularly inspected, including the taking of a physical inventory and a comparison of the physical to recorded inventory, with attention to possible diversion. Inspections should include examination of purchase records, noting agreement with product description and quantity to cultivation sales and dispensary sales records. Similarly, dispensary sales records should be compared to patient records licensed through the Department of Health.

38 State Estimates of Substance Use and Mental Disorders from the 2010-2011 NSDUH. Available at: http://www.samhsa.gov/data/NSDUH/2k11State/NSDUHsaeTOC2011.htm.
39 For a quick-reference of all major policy option choices, see Appendix B
The inspector should also consider conducting an occasional unannounced surprise inventory to ascertain that dispensaries and cultivation centers do not hide or otherwise misstate inventory in anticipation of inspections. Policies should also provide that inspectors actually take their vacation each year, enabling a different person to do the inspector’s duties, minimizing likelihood of collusion between the inspector, dispensaries and cultivation centers.

Water and electricity are important factors in cultivation of marijuana. Significant fluctuations in utility usage can be indicative of diversion. Because of this cultivation centers should be required to provide monthly water and electricity bills to aid the inspector in identifying aberrations. This procedure should be of nominal cost, both to cultivation centers and to the inspector, who could review the records once annually per cultivation center.

The Department of Health should compare the number of patient recommendations to product on hand at cultivation centers and dispensaries. Providers will have little incentive to divert product if there is simply an adequate supply or a shortage of medical marijuana, since providers will be able to sell their entire product to the legal medical market. If, however, inventory grows at either the cultivation center or dispensary level beyond the needs of the patients, there will be more incentive to divert.

**Undercover Operations**
Consideration should be given to initiating undercover attempts to buy product from the cultivation centers and dispensaries. A well-publicized intention of conducting such undercover operations will make the cultivation centers and dispensaries doubly careful to sell to no person outside of the approved system in order to retain their valuable licenses. Such undercover operations should include those in which patients who do not qualify for a medical marijuana recommendation attempt to obtain it from providers. Like the inspections, undercover operations aimed at cultivation centers or dispensaries are unlikely to reduce accessibility of patients who meet the qualifications to obtain medical marijuana.

Undercover operations can also be aimed at patients and physicians. In this case, however, there may be a trade-off in terms of both patient accessibility and political feasibility. Physicians who make a frequency of recommendations above some specified threshold could be identified and undercover enforcement officials could target those specific providers. While targeting the frequent recommenders with undercover operations is more cost-effective than randomly selecting physicians as targets for undercover action, careful consideration should be given to conducting such undercover operations, as they are likely to decrease the willingness of physicians to recommend marijuana even to qualifying patients. Since the list of qualifying conditions is quite narrow, undercover actions focused on physicians also may not yield many offenders.

Similarly, undercover attempts to buy from patients remain an option. Here, however, efforts to engage in such activities could be both practically and politically unfeasible given the potentially intrusive nature of such a procedure and the severe medical condition of the patients.
Track Physician Recommendations
Since all physician recommendations are submitted to the Department of Health, a DOH official should keep an ongoing record of all physicians in order to identify those who most frequently provide recommendations. There is some concern that financially desperate or less reputable doctors could be more willing to give patients access medical marijuana to earn a reputation as a “pot doctor” and draw in business. They might write recommendations for unqualified patients, thus creating diversion. Keeping track of which doctors recommend and how frequently safeguards against this problem by providing an early warning system, and can be especially effective to prevent physician-level diversion if used to direct undercover action to suspect medical practices. It will have no particular impact on diversion at other levels.

In terms of patient access, tracking recommendations by physicians could make it less convenient for patients to obtain medical marijuana if this policy deters some doctors from considering marijuana for their patients at all. But since this is only a recommendation for a DOH procedure based on information the physicians would already be submitting, the risk of this harming physician participation in the medical marijuana program is small; it becomes much greater when used to target undercover action. This option should have no foreseeable impact on patient safety, privacy, or the affordability of the drug.

Physician Training
Requiring physicians who are found to be making more than a specified number of recommendations to undergo a medical marijuana training program will further ensure that diversion by physicians is minimized. Physician education regarding marijuana will also ensure that doctors are capable of appropriately educating patients regarding the appropriate use of marijuana, especially with respect to quantity and frequency of use. Thus this option is also expected to increase patient safety. Physicians can also emphasize to patients the importance of complying with the law and thus physician training could potentially also decrease diversion at the patient level. In terms of patient access, it is possible that requiring physician training could deter some physicians from wanting to write recommendations for patients in order to avoid having to train. The effect on access is most likely to be minimal though, because if training were made available as an option to all District physicians then this could increase the number of doctors willing to recommend medical marijuana to patients.

Monitor Illicit Market Price
Monitoring the price of medical marijuana on the illicit market as well as the dispensary is important in order to evaluate the incentive for caregivers and patients to sell. If the street value of marijuana is higher than what patients are paying at dispensaries, this difference in relative price creates an incentive for diversion. Monitoring the black market and medical cannabis market price will allow authorities to gauge the risk of diversion. Conversely, if the dispensary price is higher than the illicit price, this creates the incentive for some patients to bypass the dispensaries entirely and purchase on the black market. The ideal dispensary price, therefore, is slightly less than that of the illicit market, and interviews with Washington, D.C. dispensary owners indicated this would be their approximate price range. Simply monitoring prices will not have any impact on patient access, privacy, or diversion, nor will it affect diversion in any way, but will provide useful information to District officials.
If a significantly higher black market price is resulting in diversion, the District of Columbia could consider imposing an excise tax or price controls to increase the price paid at dispensaries and decrease the incentive to divert. This will make marijuana less affordable for patients by definition, but should have no impact on convenience of access, patient safety, or privacy. More expensive dispensary marijuana will decrease diversion for anyone that would sell it on the black market, including both patients and caregivers. Artificially inflated prices may also encourage dispensary and cultivation center diversion through off-the-books selling, if the higher prices reduce total sales to patients. Artificially decreasing dispensary prices through subsidies or price controls will have the opposite diversion risks: higher for patients and caregivers, lower for dispensaries and cultivation centers.

Finally, particular attention should be given to patients who qualify for a discounted medical cannabis price. Their low-income status and cheaper access to medical marijuana gives them the greatest incentive to divert some of their medical marijuana to the black market for profit. Because it is still important that low-income patients have access to medical marijuana, the District of Columbia may need to find a way to monitor and, if necessary, prevent this specific avenue of patient diversion without altering the discount.

**Drug Potency Testing/Labeling**

Requiring drug potency testing and labeling should be seriously considered by the Washington, D.C. Department of Health in order to increase patient safety and decrease diversion. As it stands, the law allows patients to receive up to 2 oz. of marijuana per month. A quantity limit in ounces is problematic because it does not take into consideration the variation in potency that is possible. In other words, 2 oz. of 4% THC is notably different than 2 oz. of 18% THC. Limiting only the ounces that patients can possess could result in cultivators growing higher potency strains in order to compete with the strains that are available on the illicit market and maximize profit. This is problematic because higher potency product is likely to endanger patient safety.

In contrast, if the levels and ratio of marijuana’s active chemicals, THC and cannabidiol, are accurately measured and included on the label, patients may be better informed to purchase the specific strain that best relieves symptoms and minimizes side effects. It would also give doctors a better base of knowledge as to the expected treatment results produced by the various levels and ratios, and enable their recommendations to be more akin to prescriptions. The District could later decide whether it would like to attach restrictions on the potency that can be cultivated, and set possession limits in terms of both ounces and potency. Requiring additional testing of plants would mean a minimal if any, increase in cost for cultivation centers or dispensaries. Testing for potency can be done for approximately $200 per kilogram of cannabis, or roughly 20 cents per gram. Cultivators are currently required to test product for contaminants; therefore, testing for potency could be done at the same time. Requiring cultivators and/or dispensaries to test for and label product with potency measurements will increase patient safety.

As more scientific evidence becomes available on appropriate dosing of medical marijuana, consideration should be also given to including a specific quantity and potency of marijuana on the physician recommendation form, as well as directions for use, similar to formal prescriptions.
Other Policy Options

While no one knows what the eventual size is likely to be for the medical marijuana program in Washington, D.C., the following are some additional options to be considered as the program grows and matures:

- The wide range of weight variation in individual plant size results in a wide range of weight variation for the 95 plant limit per cultivation center. In the event the inspectors are not satisfied with risks of diversion from cultivation centers using the 95 plant limit, the city may wish to consider changing the rule to impose a square footage limitation which some consider easier to gauge production.

- The District could consider a system of dispensing marijuana exclusively by delivery; this would eliminate storefront dispensaries completely in favor of patients ordering marijuana by phone or online directly from the growers and having it delivered by unmarked couriers. This would require restructuring a significant portion of the medical marijuana program and could result in retaliatory legal action from the existing dispensaries. Note that this option is presented in the event that dispensary-related crime becomes a major threat to the safety of surrounding communities, or if public opinion in those communities turns drastically against the dispensaries relative to the current status quo. Based on the research and analysis presented in this report, however, these outcomes are not anticipated.

- The Department of Health can consider requiring physicians to have some form of follow-up with patients to whom they have filled out a recommendation for medical marijuana. This would decrease the tendency of physicians to establish themselves as so-called “pot doctors” where patients can go to easily obtain recommendations. The DOH can then conduct random audits of physician charts of medical marijuana patients to verify that appropriate follow-up has been conducted.

- The District should consider citywide standards for specific packaging and sealing requirements. This would decrease the ability of caregivers to tamper with the product prior to its being administered to patients, as patients would know what a pristine package should look like. The District would not incur any additional costs, but dispensaries would be responsible for following the standards that are set and may face some small costs of compliance, and inspectors visiting dispensaries would need to ensure that the standards are being followed.

- The District could similarly require patient signatures acknowledging the receipt of medicine handled by a caregiver. This would require dispensaries to provide a receipt to caregivers obtaining medical marijuana on a patient’s behalf specifying the amount received. Caregivers would then be required to obtain the patient’s signature on the receipt as verification that the entire amount taken from the dispensary was in fact dispensed to the patient. Receipts would be held by caregivers and subject to random audits, or turned into the DOH for review.

- The Department of Health could consider requiring patient education and written acknowledgement during the application process or when receiving marijuana from dispensaries that a consequence of diversion is the loss of their ability to stay in the program.
• The District of Columbia Metropolitan Police Department should monitor crime around cultivation centers and dispensaries, and if it becomes a problem the city can consider requiring additional security as necessary.

• While the expectation is that teen use will not increase after the medical marijuana program is implemented, having the Medical Marijuana Advisory Committee, the Department of Health, or some other body in District government monitor teen use rates will not only allow the District to address the public’s scrutiny, but also gauge the situation in the event that future circumstances really do require intervention with teens. This may in fact be important to prevent the intervention of Congress, the DEA, or FBI. Effective measurement techniques will require the development of working surveys or discovery of some other form of measurement.

• The District may want to consider educating teens and young adults about the effects and drawbacks of medical marijuana, as well as education of the medical marijuana program and the illnesses that qualify a person to receive medical marijuana. This could change the youth perception of marijuana from a recreational activity to a medication for the very sick, and may decrease their willingness to obtain marijuana in such a way that could deprive someone of their medicine.

Medical Marijuana Advisory Committee

Sec. 10 of the Legalization of Marijuana for Medical Treatment Amendment Act calls for the creation of a Medical Marijuana Advisory Committee, to be established by the Mayor and which shall monitor:

• Best practices in other states that allow the use of medical marijuana;
• Scientific research on the medical use of marijuana; and
• The effectiveness of the District’s medical marijuana program

To create an effective committee, members should include a broad range of stakeholders. Patients, physicians, Department of Health officials, residents of the community surrounding dispensaries and cultivation centers, law enforcement, and other experts such as Americans for Safe Access who provided the required D.C. training programs for employees of cultivation centers and dispensaries should all be represented. The advisory committee should evaluate the consequences of any significant growth in the number of registered patients. The committee should also be formed as soon as possible and meet early in the implementation process to identify and resolve any problems that might jeopardize the program.
Conclusions on Washington, D.C. Medical Marijuana Program

The medical marijuana program in the District of Columbia may be the most strict in the nation, in terms of a narrow list of qualifying conditions, regulation of cultivation centers and dispensaries, personnel training requirements, possession limits, required identification and physician recommendation requirements. Because of the high profile nature of the program located in the nation’s capital, it is imperative for all stakeholders that the program proceeds carefully and deliberately without flaunting the federal law.

We estimated that medical marijuana will initially comprise approximately 3% of the total market for marijuana in Washington, D.C. While the small and restrictive nature of the program makes regulation to prevent diversion economically and administratively feasible, policy makers will need to consider trade-offs between preventing diversion and facilitating patient access to medicine.

Determination of best practices in D.C. will remain an evolving process. To identify problems as early as possible in the implementation process, both the Department of Health and Medical Marijuana Advisory Committee should begin the evaluation process as quickly as possible. Active and early participation and communication between the Office of the Attorney General, Metropolitan Police, cultivation and dispensary personnel, patients, physicians and community members offers the best approach to successfully implementing the medical marijuana program in Washington, D.C.
# Appendix A: State Policies Comparison Chart

<table>
<thead>
<tr>
<th>Jurisdiction</th>
<th>Number of Qualifying Conditions</th>
<th>Notes on Conditions</th>
<th>Possession Limit</th>
<th>Home Cultivation</th>
<th>Dispensaries</th>
<th>Required ID and Registration</th>
<th>Most Prescribed for Condition</th>
<th>2nd Most Prescribed for Condition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Maryland</td>
<td>5</td>
<td>&quot;or any other condition that is severe and resistant to conventional medicine&quot;</td>
<td>1 oz</td>
<td>No</td>
<td>Not allowed</td>
<td>No</td>
<td></td>
<td></td>
</tr>
<tr>
<td>D.C.</td>
<td>7</td>
<td>2 oz every 30 days</td>
<td>No</td>
<td></td>
<td>Regulated by Department of Health, max 5 dispensaries and 10 cultivation centers</td>
<td>Yes</td>
<td></td>
<td></td>
</tr>
<tr>
<td>New Jersey</td>
<td>10</td>
<td>2 oz every 30 days</td>
<td>No</td>
<td></td>
<td>Regulated by the state, currently 1 has final approval</td>
<td>Yes</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Connecticut</td>
<td>11</td>
<td>PTSD</td>
<td>1 mo supply</td>
<td>No</td>
<td>Number set by Dept. Of Consumer Protection, only pharmacists can file dispensary applications</td>
<td>Yes</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Nevada</td>
<td>8</td>
<td>Severe pain</td>
<td>1 oz, 3-4 plants</td>
<td>Yes</td>
<td>Not allowed</td>
<td>Severe/chronic pain (89.8%)</td>
<td>Muscle spasms (48.2%)</td>
<td></td>
</tr>
<tr>
<td>Alaska</td>
<td>9</td>
<td>Severe pain</td>
<td>1 oz MJ, 6 plants</td>
<td>Yes</td>
<td>Not allowed</td>
<td>Yes</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Jurisdiction</td>
<td>Number of Qualifying Conditions</td>
<td>Notes on Conditions</td>
<td>Possession Limit</td>
<td>Home Cultivation</td>
<td>Dispensaries</td>
<td>Required ID and Registration</td>
<td>Most Prescribed for Condition</td>
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</tr>
<tr>
<td>Vermont</td>
<td>7</td>
<td>Severe pain</td>
<td>2 oz, 2-7 plants</td>
<td>Yes</td>
<td>State regulated, 2 approved, max of 4</td>
<td>Yes</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Arizona</td>
<td>12</td>
<td>Severe pain</td>
<td>2.5 oz MJ, 12 plants</td>
<td>Yes (if not within 25 mi)</td>
<td>Regulated by Dept. of Health Services</td>
<td>Yes</td>
<td>Severe/chronic pain (87.7%)</td>
<td>Muscle spasms (16.1%)</td>
</tr>
<tr>
<td>R.I.</td>
<td>10</td>
<td>Severe pain</td>
<td>2.5 oz, 12 plants</td>
<td>Yes</td>
<td>Regulated by health department- with caps of 150 plants and 1,500 oz, 3 have been approved</td>
<td>Yes</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hawaii</td>
<td>5</td>
<td>Severe pain</td>
<td>3 oz, 3-4 plants</td>
<td>Yes</td>
<td>Not allowed by state, some cities allow under local ordinance</td>
<td>Yes</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Michigan</td>
<td>13</td>
<td>Severe chronic pain</td>
<td>2.5 oz, 12 plants</td>
<td>Yes</td>
<td>Regulated by the state health department</td>
<td>Yes</td>
<td></td>
<td></td>
</tr>
<tr>
<td>N.M.</td>
<td>14</td>
<td>Severe chronic pain</td>
<td>6 oz, 4-12 plants</td>
<td>Yes with permit</td>
<td>Regulated by the state health department</td>
<td>Yes</td>
<td>PTSD (38.5%)</td>
<td>Severe/chronic pain (28.1%)</td>
</tr>
<tr>
<td>Oregon</td>
<td>9</td>
<td>Severe pain</td>
<td>24 oz, 6-18 plants</td>
<td>Yes at registered grow sites</td>
<td>Not allowed</td>
<td>Yes</td>
<td>Severe/chronic pain (90%)</td>
<td>Muscle spasms (22.8%)</td>
</tr>
<tr>
<td>Jurisdiction</td>
<td>Number of Qualifying Conditions</td>
<td>Notes on Conditions</td>
<td>Possession Limit</td>
<td>Home Cultivation</td>
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</tr>
<tr>
<td>Delaware</td>
<td>10</td>
<td>Debilitating pain unresponsive to other therapies</td>
<td>6 oz</td>
<td>No</td>
<td>Regulated by state but currently on hold by Governor</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Maine</td>
<td>13</td>
<td>Intractable pain</td>
<td>2.5 oz, 6 plants</td>
<td>Yes</td>
<td>Regulated by health department, 8 currently registered</td>
<td>Yes</td>
<td></td>
<td>Severe/chronic pain (94.3%)</td>
</tr>
<tr>
<td>Colorado</td>
<td>8</td>
<td>Severe pain</td>
<td>2 oz MJ, 6 plants</td>
<td>Yes</td>
<td>Regulated by Dept. of Revenue and local govt.</td>
<td>Yes</td>
<td>Severe/chronic pain (95.2%)</td>
<td>Muscle spasms (17.5%)</td>
</tr>
<tr>
<td>Montana</td>
<td>11</td>
<td>Severe pain</td>
<td>1 oz, 4-12 plants</td>
<td>Yes</td>
<td>Not allowed</td>
<td>Yes</td>
<td></td>
<td>Severe/chronic pain (95.2%)</td>
</tr>
<tr>
<td>Massachusetts</td>
<td>8</td>
<td>&quot;Other conditions as determined in writing by a patient's qualifying physician&quot;</td>
<td>60-day supply determined by Dept. of Health</td>
<td>Only for financial hardship or if a dispensary is too far away</td>
<td>Regulated by health department</td>
<td>Yes</td>
<td></td>
<td></td>
</tr>
<tr>
<td>California</td>
<td>Unspecified</td>
<td>&quot;Any other illness for which MJ provides relief&quot;</td>
<td>8 oz, 6-12 plants</td>
<td>Yes</td>
<td>No state licensing</td>
<td>Optional</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Washington</td>
<td>10</td>
<td>Intractable pain</td>
<td>24 oz, 15 plants</td>
<td>Yes</td>
<td>No</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Sources
### Appendix B: Major Policy Choice Suggestions Matrix

<table>
<thead>
<tr>
<th>Washington D.C. Policy Options</th>
<th>Patient Access</th>
<th>Diversion</th>
<th>District Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Convenience</td>
<td>Affordability</td>
<td>Privacy</td>
</tr>
<tr>
<td>Facility Inspection Protocols</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>(Cultivation Centers, Dispensaries)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Undercover Operations</td>
<td>▼</td>
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<tr>
<td>(Cultivation Centers, Dispensaries, Physicians, and Patients)</td>
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<tr>
<td>Track Physician Recommendations</td>
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<tr>
<td>Physician Marijuana Training</td>
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<tr>
<td>Monitor Illicit Marijuana Market Price w/ Dispensary Excise Tax</td>
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<tr>
<td>Drug Content Testing/Labeling/Dosing</td>
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<tr>
<td>(Cultivation Centers, Dispensaries, Physicians)</td>
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**Legend:**
- = Desirable policy outcome
- = Undesirable policy outcome
- = Neutral impact on policy outcome, or no effect
- = Increase in Access/Diversion for Category
- = Decrease in Access/Diversion for Category

*This chart is only meant as a quick reference; please consult the “Major Policy Option Choices for Washington, D.C.” section for a detailed explanation of each of the potential policy options, as well as their advantages and disadvantages.