



SEPTEMBER 2020

Ohio Medical Marijuana Control Program at Two Years

Evaluating
Satisfaction
and Perception



THE OHIO STATE UNIVERSITY
MORITZ COLLEGE OF LAW

**DRUG ENFORCEMENT
AND POLICY CENTER**

Electronic copy available at: <https://ssrn.com/abstract=3688992>



DRUG ENFORCEMENT AND POLICY CENTER

Ohio Medical Marijuana Control Program at Two Years: Evaluating Satisfaction and Perception

Stephen Post, Jana Hrdinová, Dexter Ridgway

ABSTRACT

Medical marijuana became legal in Ohio on September 8, 2016 when House Bill 523 (HB 523) became effective. This bill created the framework for the Ohio Medical Marijuana Control Program (OMMCP), and the architects of HB 523 promised the program would be “fully operational” within two years. But as of July 15th, 2020, the OMMCP was still not fully operational, creating concerns around persistent delays and the overall functionality of the program.

After a year and a half of partially operating, the OMMCP continues its slow rollout. With possible future marijuana reforms on the horizon, the perceived effectiveness and success of the current system among Ohioans may shape the long-term future of the program. To our knowledge, the Harm Reduction Ohio (HRO) report¹ released in September 2019 was the first concerted effort to survey patients and potential patients to evaluate their experiences and satisfaction with the OMMCP to date. This report looks at how people potentially impacted by the OMMCP perceive its performance and whether there have been changes in their satisfaction levels as compared to last year’s survey data. Our updated survey allows for a new examination into the efficacy of the structure of Ohio’s Medical Marijuana Control Program and how this state’s initial experience with marijuana reform can inform the larger national conversations currently underway.

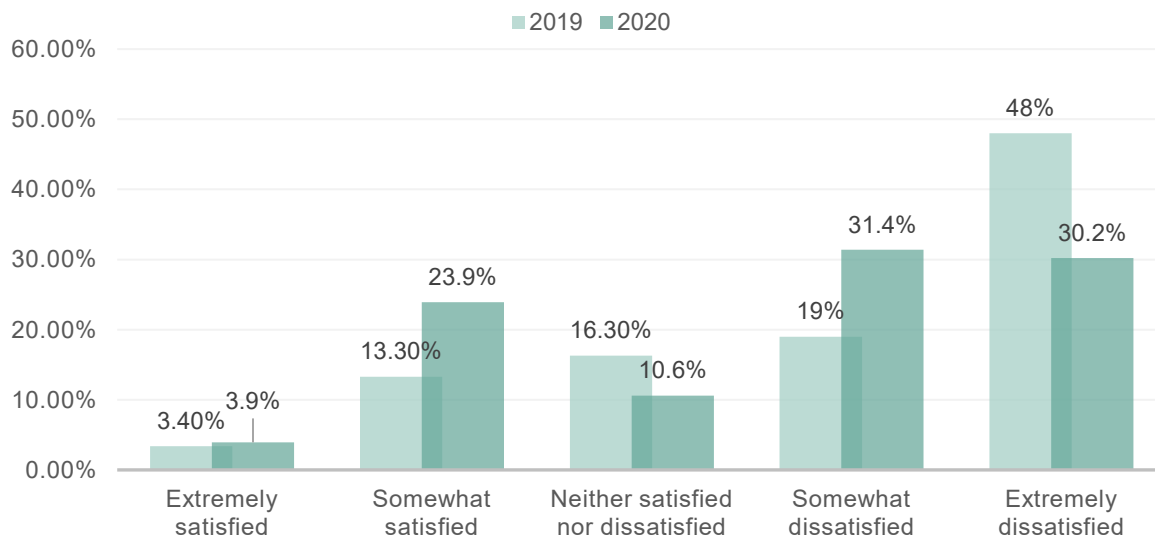
SUMMARY AND KEY FINDINGS

61.6% of survey respondents were somewhat or extremely dissatisfied with the OMMCP.

An online survey of almost 400 Ohioans, most of whom reported being regular users of marijuana, revealed remaining high levels of dissatisfaction with the Ohio medical marijuana program although some improvement as compared to 2019 survey results. Ohioans were surveyed on a range of topics, from their marijuana consumption habits to their experience with the Ohio Medical Marijuana Control Program (OMMCP). The price of medical marijuana, the cost and difficulty in obtaining a physician’s recommendation and completing the registration process were the primary drivers of respondents’ dissatisfaction. The vast majority of respondents stated that they preferred to purchase marijuana from medical dispensaries, but Ohio’s existing medical marijuana regime as well as continued federal prohibition still presented significant barriers that deterred them from doing so.

¹ Nicholas Maxwell, “Ohio’s Medical Marijuana Control Program Online Survey of Consumer Satisfaction,” 2019, <https://moritzlaw.osu.edu/depc/wp-content/uploads/sites/115/2019/09/MedMarijuana-Report-spreads-final-for-print.pdf>

Figure 1. Satisfaction Levels with the Ohio Medical Marijuana Control Program (OMMCP)



86.1% of surveyed Ohioans reported a qualifying condition under the medical marijuana program. The majority of respondents with a qualifying condition reported that they had chronic, severe, or intractable pain, which is consistent with OMMCP figures.²

51.5% of respondents with a qualifying condition reported that they currently use marijuana. When asked what is preventing them from using marijuana, the two top reasons cited were the cost of marijuana and a fear of losing employment.

84.2% of respondents indicated preference for purchasing marijuana from a legal dispensary if marijuana was made fully legal and product was similarly priced to the unregulated market. Of that 84.2%, 40.5% were willing to pay “somewhat more” than the price from an unregulated supplier.

52.8% of people who reported a qualifying condition and to be currently using marijuana have received a doctor’s recommendation under the OMMCP. In 2019, **45%** of people with a qualifying condition reported having a recommendation from a physician.

61.6% of respondents reported being “extremely” or “somewhat dissatisfied” with the Ohio medical marijuana program, and **27.8%** of people reporting being “extremely” or “somewhat satisfied”. This compares to **67%** and **16.7%** in 2019 respectively. The degree of dissatisfaction lessened significantly, with only 30.2% of respondents indicating extreme dissatisfaction with OMMCP as compared to 48% in 2019.

² State of Ohio Board of Pharmacy, *2019 Medical Marijuana Patient Annual Report*, Ohio Medical Marijuana Control Program, 2020, [https://medicalmarijuana.ohio.gov/Documents/advisory-committee/Meeting%20Materials/2020-03%20\(March\)/Presentation.pdf](https://medicalmarijuana.ohio.gov/Documents/advisory-committee/Meeting%20Materials/2020-03%20(March)/Presentation.pdf)

I. INTRODUCTION TO OHIO'S MEDICAL MARIJUANA CONTROL PROGRAM

On September 8th, 2016, HB 523 went into effect, creating Ohio's Medical Marijuana Control Program (OMMCP). As the 25th state to enact a comprehensive medical marijuana program, Ohio joined the growing list of states advancing marijuana reform nationwide³. Ohio's medical marijuana regime resembles those in other states enacted through the traditional legislative process with strict controls on access to medical marijuana and an elaborate regulatory regime. Home growing is not allowed under HB 523, and all marijuana products are manufactured and sold through state-licensed businesses. All patients must (1) receive a recommendation from a licensed physician (as of July 9th, 2020 there were 653 doctors in the state who are able to give these recommendations, as compared to 527 in July of 2019),⁴ and (2) pay an annual fee to formally register to obtain a card that enables them to legally purchase medical marijuana. With respect to the dispensaries selling marijuana products to patients, 57 have been granted provisional licenses, and 51 have received certificates of operation as of July 2020.⁵ This is a significant increase from July 2019, when only 24 dispensaries were granted certificates of operation and were allowed to sell product to patients. It has been four years since HB 523 went into effect, but just 18 months since the first sales in January 2019.

Since January 2019, the OMMCP has grossed \$151.9 million dollars through the sale of 18,412 pounds of plant material in the form of 1,153,816 units of product⁶. The state of Ohio does not have an excise tax applied to medical marijuana, and thus only receives revenue from sales taxes applied. The Ohio Department of Taxation reports that the state received \$3.8 million in sales tax on the medical marijuana program from July 2019 to March 2020. In addition, municipalities, counties, and other regional entities have collected \$942,673 in permissive sales tax.⁷ This revenue is in addition to the more than \$11 million dollars⁸ the state received via licensing fees during the program's startup. Here are some additional statistics about the functioning of the OMMCP that provide further backdrop to our survey of OMMCP patients and potential patients.

Table 1. OMMCP Licensee Breakdown as of 7/15/2020⁹

OMMCP Entity	Total Licensees
All Cultivators	33
Cultivators: Level I Provisional	19
Cultivators: Level I Operational	10
Cultivators: Level II Provisional	14
Cultivators: Level II Operational	10

³ Ann Sanner, *Ohio becomes latest state to legalize medical marijuana*, Associated Press, June 9, 2016, <https://apnews.com/28ecf9eac29e4a5f80989fa636518d4e>

⁴ Ohio Medical Marijuana Control Program, *Program Update: By The Numbers*, Ohio Medical Marijuana Control Program, August 25, 2020, <https://www.medicalmarijuana.ohio.gov/Documents/ProgramUpdate/program%20update.pdf>

⁵ Ibid.

⁶ Ohio Medical Marijuana Control Program, *Program Update: By The Numbers*, Ohio Medical Marijuana Control Program, August 25, 2020

⁷ Bonnie Meibers, *\$133M of Medical Pot Sold in 1st Year as Pandemic Legitimized Industry*, Dayton, July 15, 2020, accessed August 28, 2020, <https://www.daytondailynews.com/news/local/133m-medical-pot-sold-1st-year-pandemic-legitimized-industry/axDjQpm1Y344hQKqgViwzK/>

⁸ Randy Tucker, *How High? Ohio's Medical Weed Program Will Bring in \$11M in Fees Even before Sept. Launch*, The Enquirer, June 1, 2018, accessed August 28, 2020, <https://www.cincinnati.com/story/money/2018/06/01/how-high-ohios-medical-weed-fees-among-steepest-country/663419002/>

⁹ Ohio Medical Marijuana Control Program, *Program Update: By The Numbers*, Ohio Medical Marijuana Control Program, August 25, 2020, <https://www.medicalmarijuana.ohio.gov/Documents/ProgramUpdate/program%20update.pdf>

OMMCP Entity	Total Licensees
All Processors	45
Processors: Operational	19
Testing Labs	6
Testing Labs: Operational	3
Dispensaries	57
Dispensaries: Operational	51
Total Licensees	141

Table 2. OMMCP employment data as of March 2020¹⁰

OMMCP licensee type	Active employees
Cultivators	1,010
Processors	701
Testing labs	48
Total commerce employees	1,759
Total dispensary employees	967
Associated key employees	141
Support employees	487
Total employees	3693

Table 3. OMMCP Physician/Patients Breakdown as of 7/9/2020¹¹

OMMCP licensee type	Total
Physicians with certificates to recommend	653
Recommendations given	147,245
All registered patients	116,497
Registered patients with veteran status	8,349
Registered patients with Indigent Status	8,713
Registered patients with Terminal Illness	644
Number of Unique Patients that Purchased	91,330
Registered Caregivers	13,140

¹⁰ State of Ohio Board of Pharmacy, *2019 Medical Marijuana Patient Annual Report*, Ohio Medical Marijuana Control Program, 2020, [https://medicalmarijuana.ohio.gov/Documents/advisory-committee/Meeting%20Materials/2020-03%20\(March\)/Presentation.pdf](https://medicalmarijuana.ohio.gov/Documents/advisory-committee/Meeting%20Materials/2020-03%20(March)/Presentation.pdf)

¹¹ Ohio Medical Marijuana Control Program, *Program Update: By The Numbers*, Ohio Medical Marijuana Control Program, August 25, 2020, <https://www.medicalmarijuana.ohio.gov/Documents/ProgramUpdate/program%20update.pdf>

Table 4. OMMCP Sales Data as of 7/15/2020¹²

Sales Data	Total
Pounds of plant material	18,412 lbs
Units of Manufactured Product	1,153,816
Product Sales in Millions	\$151.9
Total Transaction Receipts	1,142,504

II. SURVEY METHODOLOGY

From May 15th, 2020 to July 10th, 2020, researchers collected responses through an online Qualtrics survey with an estimated average response time of eight minutes. Our participant sample was identified using a variety of convenience and snowballing techniques. Through the networks of the Drug Enforcement and Policy Center, Harm Reduction Ohio, Ohio Cannabis Chamber of Commerce, and other grassroots organizations involved with OMMCP we hoped to reach a large swath of people who are either current registered patients or could be considered potential patients under OMMCP. The survey link was shared via social media (Facebook, Twitter, LinkedIn), online web pages, and email campaigns from our collaborating organizations. A total of 388 respondents participated in the study. While researchers were particularly interested in the recruitment of current and potential patients, there were no exclusion criteria.

▮ “Need delivery here. High risk from COVID-19.” – 2020 survey respondent

The majority of the questions used in the survey were adopted from the 2019 Harm Reduction Ohio pilot study, exploring a number of topics related to people’s experience with OMMCP. The topics included the prevalence of the current qualifying conditions among respondents, whether they attempted to obtain a physician’s recommendation, and what barriers prevented people from using marijuana or registering with OMMCP. The survey asked for other relevant information including frequency of marijuana usage, length of marijuana use, and support for full legalization. Additionally, the survey included questions on respondents’ preferences including method of consumption, dispensary usage, and willingness to pay. Other preference questions focused on the importance of considering the cost, convenience, product variety, concerns about law enforcement, and specific seller when patients purchase marijuana. Participants also rated their satisfaction with the current state of medical marijuana in Ohio. Skip and display logic was incorporated into the survey to ensure survey flow and to allow for more detailed analysis of collected information. (See Appendix A for full survey.)

A. Limitations

There were several factors that may have affected our data collection efforts. The study was conducted during the COVID-19 global pandemic, which could have affected many potential respondents’ home life, attention to different media, and the pace of the cycle of social media threads.¹³ This may have contributed to difficulties in achieving a more comparable sample size to last year’s survey (647 respondents). Additionally, due to the application of skip logic and normal rate of survey attrition, the number of responses for each question differs. A table that lists the number of responses per each survey question is included in Appendix B.

¹² Ibid.

¹³ See generally Abid Haleem et al., *Areas of Academic Research with the Impact of COVID-19*, *The American Journal of Emergency Medicine*, April 15, 2020, accessed August 28, 2020, <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7158762/>

It is important to stress this study did not randomly assemble survey participants and thus the survey sample is not entirely representative of the population of Ohio at large. This pilot study created a survey instrument that was distributed through networks of people who are typically supportive of marijuana reform and are more likely than the average Ohioan to use marijuana. Of the people surveyed, 98.3% favored the full legalization of marijuana, while recent polling has shown that roughly 67% of the US population at large supports full legalization¹⁴. While this sample is not a perfect representation of the population at large, it provides a useful window into the current view of the Ohio Medical Marijuana Control Program among those most likely interested in, and potentially affected by, the current system.

Lastly, there was a survey option error when responding to the qualifying condition question in that the “Pain: either chronic, severe, or intractable (difficult to manage)” option also included “Parkinson’s disease” in the same option. Overall, this did not affect the qualifying condition breakdown as it closely resembles conditions reported by the OMMCP.

III. RESPONDENT PROFILE

A. Eligibility for Medical Marijuana

With the recent addition of cachexia¹⁵, there are now 22 medical conditions that make a potential patient eligible to use medical marijuana under the OMMCP. Of the 388 Ohioans surveyed, 334 (86.1%) participants reported having a qualifying condition under OMMCP. Only 15 of the eligible conditions were reported by the surveyed people, the full breakdown of which along with official data reported by OMMCP can be seen in Table 5 below. A majority of respondents reporting a qualifying condition reported that they had chronic, severe, or intractable pain, followed in rate of frequency by post-traumatic stress disorder and fibromyalgia.

Table 5. Qualifying Conditions Among Respondents

Condition Reported ¹⁶	Survey - % (n)	OMMCP - % (n) ¹⁷
Pain: either chronic, severe, or intractable (difficult to manage)	53.1% (211)	86.2% (100,473)
Post-traumatic stress disorder (PTSD)	24.4% (97)	22.4% (26,146)
Fibromyalgia	12.6% (50)	11.9% (13,886)
Spinal cord disease or injury	10.3% (41)	4.5% (5,283)
Inflammatory bowel disease	5.8% (23)	1.6% (1,835)
Cancer	5.5% (22)	8.2% (9,515)
Traumatic brain injury	5.0% (20)	2.3% (2,667)
Epilepsy or other seizure disorder	3.8% (15)	3.8% (4,400)

¹⁴ Andrew Daniller, *Two-thirds of Americans Support Marijuana Legalization*, Pew Research Center, November 14, 2019, accessed August 28, 2020, <https://www.pewresearch.org/fact-tank/2019/11/14/americans-support-marijuana-legalization/>

¹⁵ Jackie Borchardt, *Ohio Medical Marijuana: Panel Recommends One New Qualifying Medical Condition*, The Enquirer, June 10, 2020, accessed August 28, 2020, <https://www.cincinnati.com/story/news/2020/06/10/ohio-medical-marijuana-panel-recommends-one-new-qualifying-medical-condition/5336697002/>

¹⁶ Participants were able to indicate more than one applicable condition.

¹⁷ State of Ohio Board of Pharmacy, *Patient and Caregiver Registry*, June 2020

Condition Reported ¹⁶	Survey - % (n)	OMMCP - % (n) ¹⁷
Glaucoma	2.5% (10)	1.9% (2,217)
Crohn's disease	2.3% (9)	2.4% (2,800)
Hepatitis C	1.5% (6)	2.6% (3,059)
Ulcerative colitis	1.0% (4)	1.3% (1,513)
Multiple sclerosis (MS)	0.8% (3)	2.6% (2,986)
Sickle cell anemia	0.5% (2)	0.1% (150)
Tourette's syndrome	0.3% (1)	0.5% (547)

B. Marijuana Usage

Of the 232 people who reported a qualifying condition and answered the question about marijuana usage, 75% (174 people) reported that they currently use marijuana for medical purposes. However, it is important to note, a significant number (106) of respondents with a qualifying condition who did not answer question about usage went on to answer a question about what was preventing them from using marijuana. Assuming these respondents do not use marijuana, the percentage of respondents with a qualifying condition who use marijuana goes down to only 51.5%.

Figure 2. Length of Usage

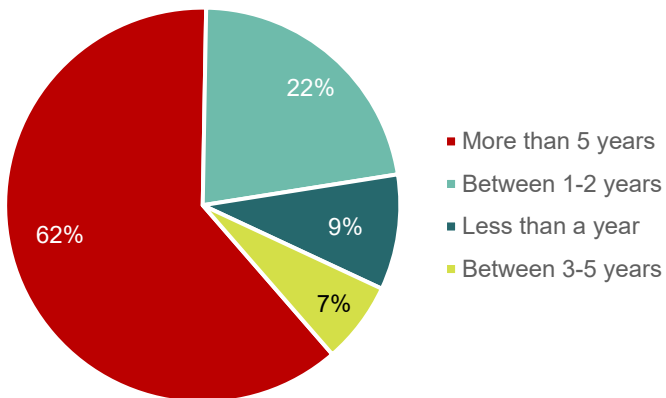
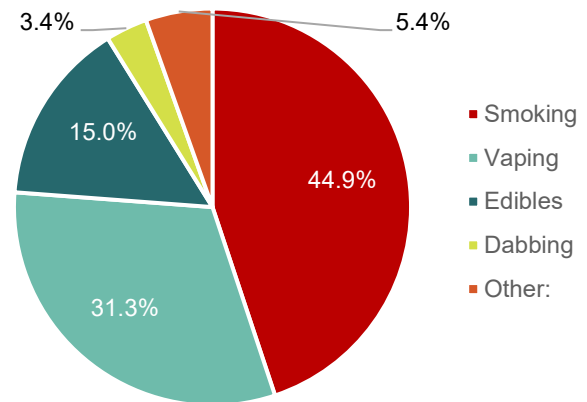


Figure 3. Preferred method of consumption



62.5% of respondents who reported a qualifying condition and use marijuana for medical reasons have used marijuana for more than 5 years dating their initial usage to before the state of Ohio created its OMMCP. 29% of the same subgroup of respondents only started using marijuana after OMMCP initiation (2 years or less). Additionally, 77.5% of those who reported using marijuana primarily for medical reasons reported using marijuana on a daily basis. Only 12.3% of people reported using marijuana two times a week or less. Unfortunately, we do not have similar information for the Ohio population at large, thus precluding us from making a judgement about the representativeness of our sample in respect to frequency of marijuana use.

Despite a national trend in the use of edibles, tinctures, and oils¹⁸, 45% of respondents preferred smoking and 31% indicated that vaping was their preferred method of consumption (Figure 3). Technically, Ohio's medical marijuana law prohibits the smoking or combustion of medical marijuana, though it allows patients to purchase and vaporize cannabis flower.

C. Rate of Participation in OMMCP

The rate of participation can be measured in two different ways – if we consider solely respondents who had a qualifying condition and who currently use marijuana, 61.3% of them have successfully secured a physician's recommendation for medical marijuana. This is significantly higher than last year, when only 45% of respondents falling into this category reported having received a physician's recommendation. However, if we look at the total number of people with a qualifying condition, the rate of participation is significantly smaller, with only 28.4% of this group of respondents obtaining a physician's recommendation. In other words, as of July 2020 approximately 38% of surveyed potential patients who are currently using marijuana and more than 70% of all surveyed eligible patients are choosing not to participate in Ohio's regulated medical marijuana regime.

IV. ATTITUDES TOWARD MEDICAL MARIJUANA AND OMMCP

The purpose of this project was to fill a gap in our understanding of the medical marijuana program in Ohio and to find out how the people potentially impacted by the current regime perceive its performance thus far. This information was compared to results from a 2019 survey to help us assess whether the experience of those potentially impacted by the Ohio medical marijuana program has changed.

A. Factors Driving Non-Participation

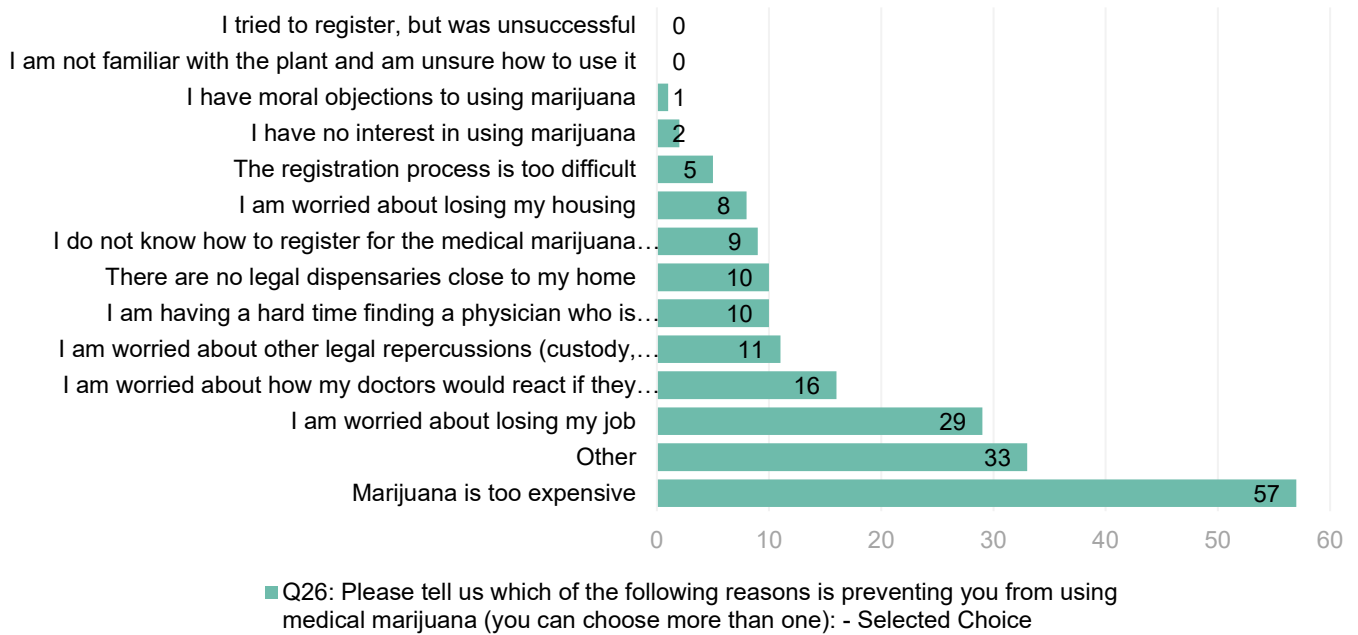
As mentioned above, a significant number of respondents who have a qualifying condition currently opt out of using marijuana under the OMMCP. The reasons for non-participation vary from having no interest in using marijuana to being worried about losing one's job. While these respondents are currently not patients, we believe it is crucial to understand reasons why people with a qualifying condition choose not to use marijuana even when under state law medical use of marijuana is now legal.

“Getting a medical marijuana card does not protect you from drug testing through employers, so there is little benefit to getting one.” – 2020 survey respondent

As we can see from Figure 4, there are two main factors preventing people with qualifying conditions from using marijuana—the price of the product and fears about losing employment. 53.8% of respondents indicated that medical marijuana is currently too expensive to use, followed by 27.4% of people who were worried about losing their jobs due to continued federal prohibition on marijuana and the uncertainty surrounding individual employers' policies regarding the use of marijuana even for legitimate medical purposes. Other concerns expressed included worries about how their doctor will react if they find out about medical marijuana use, concerns about other legal repercussions, having a hard time finding a physician who could write a recommendation, not living close to a dispensary and not knowing how to register for a medical marijuana card. A few respondents who checked the “Other” category also indicated fear of losing their ability to obtain or maintain a firearm license.

¹⁸ Dwight Blake, *Marijuana Statistics 2020, Usage, Trends and Data – American Marijuana*, American Marijuana, January 30, 2020, accessed August 28, 2020, <https://americanmarijuana.org/marijuana-statistics/>

Figure 4. Reasons for not using medical marijuana



B. Factors Influencing Purchase Preferences

To gather information on what drives people’s decisions when it comes to purchasing medical marijuana, the respondents were asked to rate the following elements on a scale from 1 (not at all important) to 5 (extremely important): price, product options, convenience, concern about law enforcement and preference for buying from a specific seller. As we can see in Table 6., the most important factor for a vast majority of respondents remains price, with 47% of respondents indicating price was “extremely important” in their decision and an additional 38% stating it was “very important”. The second most important factor was availability of product options, with 36.6% of respondents citing having different product options as “extremely important” and an additional 41.8% citing it as “very important” when purchasing marijuana. The other factors patients were asked about included convenience, concerns about law enforcement, and buying from a specific seller. These factors ranked in the same positions in 2020 as they did in 2019.

Table 6. Factors influencing purchase preferences

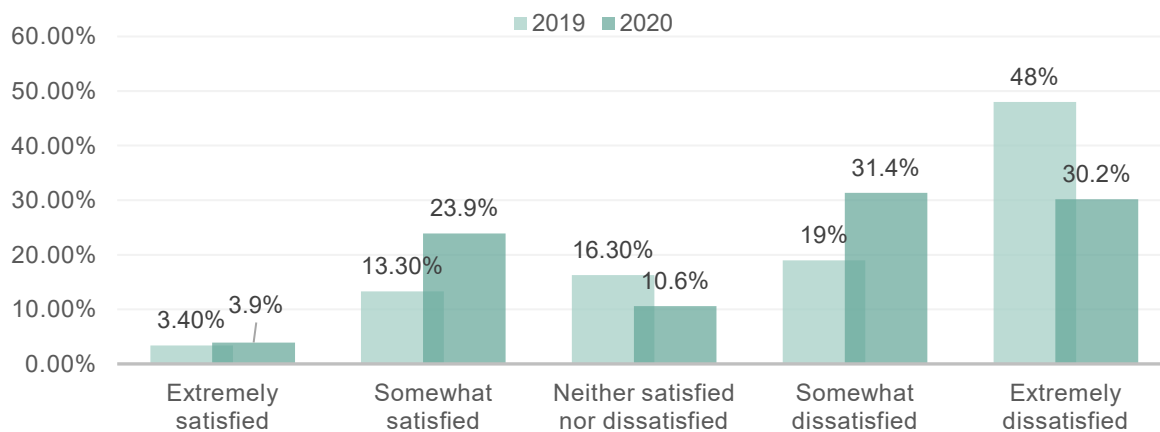
Factor	2019 Survey Importance (1-5)	2020 Survey Importance (1-5)
Price	4.74	4.29
Product options	4.48	4.05
Convenience	4.43	3.75
Concerns about law enforcement	3.63	3.07
Buying from specific seller	3.52	2.72

Despite the perceived barriers, 92.2% of respondents (142) with a qualifying condition who answered a question about whether they have ever purchased marijuana from a licensed dispensary indicated they have done so. Of those, 86.1% reported that a medical marijuana dispensary is their primary source for purchasing marijuana.

C. Continued Discontent

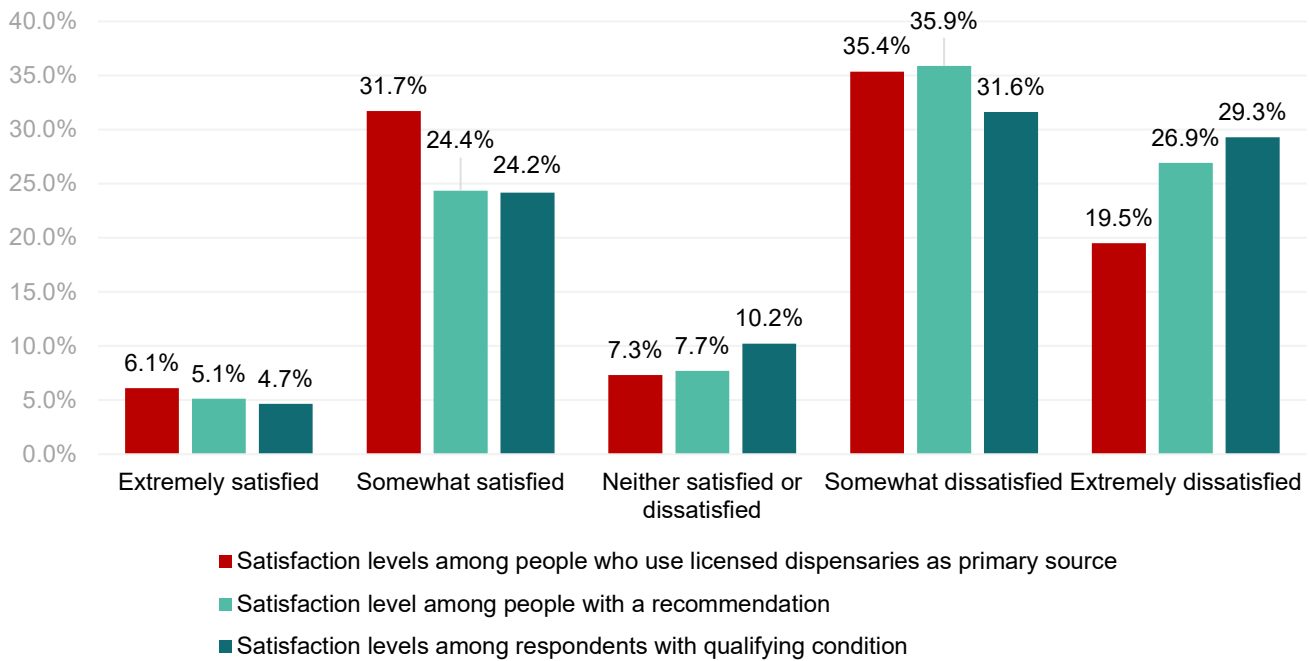
According to the data collected by the online survey, a majority of respondents (61.6%) expressed some level of dissatisfaction with the current state of OMMCP. Of those dissatisfied, 30.2% responded that they are “extremely dissatisfied” and 31.4% responded being “somewhat dissatisfied.” Compared to 2019 when 48% reported being “extremely dissatisfied” and 19% reporting being “somewhat dissatisfied” with the program, Ohioans were slightly less dissatisfied overall (61.6% vs. 67%) and their level of dissatisfaction was not as intense (-18% change in “extremely dissatisfied” and +12% change in “somewhat dissatisfied”). Notably, only 3.9% of surveyed people reported being “very satisfied” showing very little change from 3.4% in 2019. Another 23.9% reported being “somewhat satisfied,” an improvement from the 13.3% cited in 2019. The remaining 10.6 % expressed neither dissatisfaction nor satisfaction, comparable to the previous year’s 16.3%.

Figure 5. Satisfaction levels



In addition to general levels of satisfaction among all respondents, we also wanted to look in more detail at the satisfaction level of people who had various degrees of involvement with OMMCP. Specifically, we considered satisfaction levels of people for whom licensed dispensaries are their primary source of medical marijuana, followed by satisfaction levels among all people with a physician’s recommendation and lastly satisfaction levels of people with a qualifying medical condition. As we can see in Figure 6 below, satisfaction levels among the groups mirror closely the overall satisfaction levels of all respondents, with the exception of people who use medical dispensaries as their primary source for their medical marijuana. Among that group, satisfaction levels were slightly higher with approximately 38% reporting being either extremely or somewhat satisfied, and 55% reporting being somewhat or extremely dissatisfied.

Figure 6. Satisfaction by level of involvement with OMMCP



While the survey did not include specific question about what drove respondents' dissatisfaction, the survey asked why respondents did not use a medical marijuana dispensary as their primary source of marijuana as well as reasons for opting out of using marijuana even if they had a qualifying condition. That data, in addition to respondents' rating of factors influencing their purchasing decisions, suggests dissatisfaction levels are primarily driven by the following factors: the price of medical marijuana in state-sanctioned dispensaries and the cost and difficulty associated with obtaining physician's recommendation and the program's registration process. Each of these elements is described in detail in the paragraphs below.

i. Cost and difficulty obtaining physician's recommendation and registration

When respondents were asked what their primary reasons were for not using a sanctioned dispensary as their primary source, 32.7% selected the cost and difficulty of obtaining doctor's recommendation and registration. While the state of Ohio allowed telemedicine to be used during the COVID-19 epidemic to obtain a physician's recommendation, it is possible that the ongoing crisis affected people's ability to do so. Notably, the number of certified physicians in Ohio remains very low when compared to other states. As shown in Table 7 below, Ohio ranks near the very bottom in respect to the number of participating physicians as measured by rate per 100,000 residents among states with medical marijuana programs. Ohio's rate of 5.59 recommending physicians per 100,000 residents ranks third from the bottom, with only Michigan and Massachusetts having lower rates (both states allow recreational use of marijuana). The average of all medical marijuana states (excluding Washington D.C.) is 22.96 physicians per 100,000 residents, and the vast majority of states have 12 or more recommending physicians per 100,000 residents. That is more than twice the current rate of the state of Ohio.

Under OMMCP, patients need to pay an annual fee of \$50 for their OMMCP registration card. However, that is not the only cost associated with using medical marijuana in the state of Ohio. Patients need to undergo an annual exam by a recommending physician to maintain their eligibility for the program. While there are no firm

figures on the cost of such visits, a scan of various websites shows a range of \$150-\$175 for an initial visit, and \$100 charge for follow up annual renewal visits. This of course is on top of the price of the marijuana product itself.

“Renewal and doctor visits are also extremely expensive when coupled with state registration. I don’t have to pay the state \$50 a year just to be able to fill an oxycontin prescription, and that stuff can kill you.” – 2020 survey respondent

Table 7. Number of recommending physicians per 100,000 residents

State	Physicians Registered	State Population ¹⁹	Per Capita 100,000	Adoption Year
Michigan*	416 ²⁰	9,986,857	4.17	2008
Massachusetts*	293 ²¹	6,892,503	4.25	2013
Ohio	653 ²²	11,689,100	5.59	2016
Colorado*	425 ²³	5,758,736	7.38	2000
Florida	1,941 ²⁴	21,477,737	9.04	2017
Utah	292 ²⁵	3,205,958	9.11	2018
Arizona	886 ²⁶	7,278,717	12.17	2010
New Jersey	1,194 ²⁷	8,882,190	13.44	2010
Pennsylvania	1,889 ²⁸	12,801,989	14.76	2016
New York	2,923 ²⁹	19,453,561	15.03	2014
Hawaii	294 ³⁰	1,415,872	20.76	2000
Arkansas	676 ³¹	3,017,804	22.40	2016
Nevada*	829 ³²	3,080,156	26.91	2001
Montana	288 ³³	1,068,778	26.95	2004

¹⁹ "U.S. Census Bureau QuickFacts: United States," Census Bureau QuickFacts, [PAGE], accessed August 31, 2020, <https://www.census.gov/quickfacts/fact/table/US/PST045219>

²⁰ Michigan Marijuana Regulatory Agency, *Monthly Report*, July 31, 2020

²¹ Cannabis Control Commission, *Massachusetts Medical Use of Marijuana Program Snapshot*, May 31, 2019

²² Ohio Medical Marijuana Control Program, *Program Update: By The Numbers*, August 25, 2020

²³ Colorado Department of Public Health and Environment, *Medical Marijuana Registry Program Statistics July 2020*, July 2020

²⁴ Florida Department of Health, Office of Communications, *OMMU Weekly Update - Jan. 4, 2019*, January 4, 2019, <http://www.floridahealth.gov/newsroom/2019/01/010419-ommu-update.html>

²⁵ Utah Department of Health Center for Medical Cannabis, *Monthly Report*, April 2020

²⁶ Arizona Department of Health Services: Licensing, *Arizona Medical Marijuana Program July 2020 Monthly Report*, July 2020

²⁷ Marcela Maziarz, *NJ's Medicinal Marijuana Program Triples Patient Count Since Start of Murphy Administration*, July 24, 2019

²⁸ Pennsylvania Department of Health, *Official Report*, May 15, 2020

²⁹ New York State Department of Health, *The New York State Medical Marijuana Program*, August 25, 2020

³⁰ Hawaii Department of Health, *Medical Cannabis (329) Registry Program*, July 31, 2020

³¹ Arkansas Department of Health, *Medical Marijuana 2019 Fiscal Year Report*, June 2019

³² Department of Public and Behavioral Health, *Nevada Medical Marijuana Registry Monthly Program Statistics*, May 2020

³³ Department of Public Health and Human Services, *Montana Marijuana Registry Montana Medical Marijuana Program (MMP)*, July 2020

State	Physicians Registered	State Population ¹⁹	Per Capita 100,000	Adoption Year
Oregon*	1,275 ³⁴	4,217,737	30.23	1999
Minnesota	1,770 ³⁵	5,639,632	31.39	2014
Illinois*	4,500 ³⁶	12,671,821	35.51	2014
Maine*	566 ³⁷	1,344,212	42.11	1999
Delaware	471 ³⁸	973,764	48.37	2011
New Hampshire	1,084 ³⁹	1,359,711	79.72	2012
Washington D.C.*	602 ⁴⁰	705,749	85.30	1998

*Indicates that the state has recreational marijuana law in place.

ii. Price of marijuana

The high price of medical marijuana products remains one of the key factors cited by respondents throughout the survey as a reason for not using medical marijuana altogether or not using licensed dispensaries as their source of marijuana. However, respondents are not generally unwilling to use licensed dispensaries: should marijuana become fully legal, 84.2% of 284 respondents indicated a preference for purchasing marijuana from a legal dispensary if product was similarly priced to product available via the unregulated market; this compared to 87% in 2019. Of that 84.2%, 40.5% were willing to pay “somewhat more” than the price they would pay to an unregulated supplier. As we can see in Table 8 below, relative to reported prices on the unregulated market, dispensaries are still charging more than a 100% more than Michigan dispensaries and in Ohio’s unregulated market.

Table 8. Average marijuana price (per gram)

Year	Ohio Dispensary	Ohio Unregulated Market	Michigan Dispensary
2020	\$18.18 ⁴¹	\$8.42 ⁴²	\$9.38 ⁴³
2019 ⁴⁴	\$18.47	\$8.23	\$7.94

³⁴ Oregon Health Authority Public Health Division, *The Oregon Medical Marijuana Program Statistical Snapshot*, July 2020

³⁵ Minnesota Department of Health, *Medical Cannabis Program Update*, July 2020

³⁶ Illinois Department of Public Health, *Annual Progress Report 2019 Compassionate Use of Medical Cannabis Patient Program*, June 30, 2019

³⁷ Maine Department of Administrative and Financial Services Office of Marijuana Policy, *Maine Medical Use of Marijuana Program*, April 2020

³⁸ Delaware Health and Social Services Division of Public Health, *Delaware Medical Marijuana Annual Report FY 2019*, October 2019

³⁹ New Hampshire Department of Health and Human Services Division of Public Health Services, *Therapeutic Cannabis Program 2019 Data Report*, June 2019

⁴⁰ DC Health, *Medical Marijuana and Integrative Therapy Update*, May 19, 2020

⁴¹ As reported by the Ohio Medical Marijuana Control Program, July 15, 2020. The average was calculated by dividing the total product sales by the weight of plant material sold to date.

⁴² *What Is Marijuana Really Worth?*, The Price of Weed, Marijuana, Cannabis - PriceOfWeed.com, accessed August 28, 2020, <http://www.priceofweed.com/>

⁴³ MRA, *Michigan Marijuana Regulatory Agency Monthly Report: June 1, 2020 - June 30, 2020*, June 30, 2020, https://www.michigan.gov/documents/mra/Monthly_Report_-_June_2020_696933_7.pdf

⁴⁴ Nicholas Maxwell, *Ohio’s Medical Marijuana Control Program Online Survey of Consumer Satisfaction*, 2019, <https://moritzlaw.osu.edu/depc/wp-content/uploads/sites/115/2019/09/MedMarijuana-Report-spreads-final-for-print.pdf>

V. CONCLUSION

Ohio's medical marijuana program has grown substantially over the last 12 months and as more dispensaries and growers became operational, dissatisfaction has slightly diminished as compared to data from the 2019 survey. Nevertheless, some of the concerns related to the price of medical marijuana as well as the cost and difficulty of obtaining a patient card remain, driving continued high levels of dissatisfaction. Additionally, the data suggests that the continued federal prohibition presents a barrier to participation in the medical marijuana program, with respondents noting their fear of losing employment and other legal repercussions stemming from the use of marijuana. People also expressed a desire to procure marijuana from a licensed dispensary over the unregulated market, with 84.2% stating that they would prefer purchasing marijuana from a dispensary should the product be similarly priced as in the unregulated market.

While more robust surveys of existing and potential patients would be beneficial in gauging the success of OMMCP, the current report suggests that improvements are necessary for OMMCP to be perceived as a well-functioning program serving Ohio's patients. Main areas of improvement should focus on pricing, increasing number of recommending physicians, decreasing barriers to access such as requirements for annual recommendations and annual fees and increasing the variety and quality of product in licensed dispensaries.

APPENDIX A. 2020 SURVEY

Evaluating the Ohio Medical Marijuana Control Program: Satisfaction and Perception

Start of Block: Consent Form

Q28

Q1 Study Title:

Evaluating the Ohio Medical Marijuana Control Program: Satisfaction and Perception

The purpose of this project is to survey medical marijuana patients and potential patients to evaluate their experiences and satisfaction with the Ohio Medical Marijuana Control Program to date. The survey will take approximately 5-15 minutes to complete. Your participation is completely voluntary, and you may discontinue your participation at any time. You are able to take the survey in the private area of your choice. Your responses are completely anonymous and there are no expected risks for participation. We will work to make sure that no one sees your survey responses without approval. But, because we are using the Internet, there is a chance that someone could access your online responses without permission. In some cases, this information could be used to identify you. If you would like to find out more about the project, please visit the [project website](#). If you have any questions or concerns about the study, you may contact Douglas Berman at berman.43@osu.edu. For questions about your rights as a participant in this study or to discuss other study-related concerns or complaints with someone who is not part of the research team, you may contact Ms. Sandra Meadows in the Office of Responsible Research Practices at 1-800-678-6251. **By clicking the button below, you voluntarily give your consent to participate in this study. If you do not wish to participate, please close out your browser window.**

Page Break

Q25 Do you have a condition that makes you eligible to use medical marijuana?

Yes (1)

No (2)

Skip To: Q3 If Do you have a condition that makes you eligible to use medical marijuana? = Yes

Skip To: Q4 If Do you have a condition that makes you eligible to use medical marijuana? = No

Q3 What condition makes you eligible? (you can select more than one)

- HIV/AIDS (1)
- Amyotrophic lateral sclerosis (Lou Gehrig's disease) Alzheimer's disease (2)
- Cancer (3)
- Chronic traumatic encephalopathy (4)
- Crohn's disease (5)
- Epilepsy or other seizure disorder (6)
- Fibromyalgia (7)
- Glaucoma (8)
- Hepatitis C (9)
- Inflammatory bowel disease (10)
- Multiple sclerosis (MS) (11)
- Pain: either chronic, severe, or intractable (difficult to manage) Parkinson's disease (12)
- Post-traumatic stress disorder (PTSD) (13)
- Sickle cell anemia (14)
- Spinal cord disease or injury (15)
- Tourette's syndrome (16)
- Traumatic brain injury (17)



Ulcerative colitis (18)

Q4 Do you currently use marijuana (in any form and with or without medical marijuana card)?

- Yes, primarily for medical reasons (1)
- Yes, for recreational use only (2)
- No (3)

Skip To: Q26 If Do you currently use marijuana (in any form and with or without medical marijuana card)? = No

Skip To: Q21 If Do you currently use marijuana (in any form and with or without medical marijuana card)? = Yes, for recreational use only

Skip To: Q5 If Do you currently use marijuana (in any form and with or without medical marijuana card)? = Yes, primarily for medical reasons

Q26 Please tell us which of the following reasons is preventing you from using medical marijuana (you can choose more than one):

- I am not familiar with the plant and am unsure how to use it (1)
- I do not know how to register for the medical marijuana program (2)
- The registration process is too difficult (3)
- I tried to register, but was unsuccessful (4)
- I am having a hard time finding a physician who is willing/able to write me a recommendation (5)
- There are no legal dispensaries close to my home (6)
- I am worried about losing my job (7)
- I am worried about losing my housing (8)
- I am worried about other legal repercussions (custody, violating parole, etc.) (9)
- I am worried about how my doctors would react if they found out I was a medical marijuana patient (10)
- Marijuana is too expensive (11)
- I have moral objections to using marijuana (12)
- I have no interest in using marijuana (13)
- Other (14) _____

Skip To: Q21 If Please tell us which of the following reasons is preventing you from using medical marijuana (you... = I am not familiar with the plant and am unsure how to use it

Skip To: Q21 If Please tell us which of the following reasons is preventing you from using medical marijuana (you... = I do not know how to register for the medical marijuana program

Skip To: Q21 If Please tell us which of the following reasons is preventing you from using medical marijuana (you... = The registration process is too difficult

Skip To: Q21 If Please tell us which of the following reasons is preventing you from using medical marijuana (you... = I tried to register, but was unsuccessful

Skip To: Q21 If Please tell us which of the following reasons is preventing you from using medical marijuana (you... = I am having a hard time finding a physician who is willing/able to write me a recommendation

Skip To: Q21 If Please tell us which of the following reasons is preventing you from using medical marijuana (you... = There are no legal dispensaries close to my home

Skip To: Q21 If Please tell us which of the following reasons is preventing you from using medical marijuana (you... = I am worried about losing my job

Skip To: Q21 If Please tell us which of the following reasons is preventing you from using medical marijuana (you... = I am worried about losing my housing

Skip To: Q21 If Please tell us which of the following reasons is preventing you from using medical marijuana (you... = I am worried about other legal repercussions (custody, violating parole, etc.)

Skip To: Q21 If Please tell us which of the following reasons is preventing you from using medical marijuana (you... = I am worried about how my doctors would react if they found out I was a medical marijuana patient

Skip To: Q21 If Please tell us which of the following reasons is preventing you from using medical marijuana (you... = Marijuana is too expensive

Skip To: Q21 If Please tell us which of the following reasons is preventing you from using medical marijuana (you... = I have moral objections to using marijuana

Skip To: Q21 If Please tell us which of the following reasons is preventing you from using medical marijuana (you... = I have no interest in using marijuana

Skip To: Q21 If Please tell us which of the following reasons is preventing you from using medical marijuana (you... = Other

Q5 How long have you been using marijuana?

- Less than a year (1)
 - Between 1-2 years (2)
 - Between 3-5 years (3)
 - More than 5 years (4)
-

Q6 On average, how often do you consume marijuana in any form?

- I do not consume marijuana on a regular basis (1)
 - Once a month or less (2)
 - Once a week (3)
 - Twice a week (4)
 - Three times a week (5)
 - 4-5 times a week (6)
 - On a daily basis (7)
-

Q7 What is your preferred method for consuming marijuana?

- Smoking (1)
 - Vaping (2)
 - Edibles (3)
 - Dabbing (4)
 - Other: (5) _____
-

Q8 When purchasing marijuana, how important is convenience?

- Not at all important (1)
 - Slightly important (2)
 - Moderately important (3)
 - Very important (4)
 - Extremely important (5)
-

Q9 When purchasing marijuana, how important is the price you pay?

- Not at all important (1)
 - Slightly important (2)
 - Moderately important (3)
 - Very important (4)
 - Extremely important (5)
-

Q10

When purchasing marijuana, how important is it to have different product options?

- Not at all important (1)
 - Slightly important (2)
 - Moderately important (3)
 - Very important (4)
 - Extremely important (5)
-

Q11 When purchasing marijuana, how important are concerns about law enforcement?

- Not at all important (1)
 - Slightly important (2)
 - Moderately important (3)
 - Very important (4)
 - Extremely important (5)
-

Q12 When purchasing marijuana, how important is it to you to buy from a specific seller?

- Not at all important (1)
 - Slightly important (2)
 - Moderately important (3)
 - Very important (4)
 - Extremely important (5)
-

Q13 Have you ever tried to obtain a recommendation from a doctor and register to purchase medical marijuana?

- Yes, and was successful (1)
- Yes, but was unsuccessful (2)
- No (3)

Skip To: Q16 If Have you ever tried to obtain a recommendation from a doctor and register to purchase medical mar... = Yes, but was unsuccessful

Skip To: Q16 If Have you ever tried to obtain a recommendation from a doctor and register to purchase medical mar... = No

Q14 Have you ever purchased marijuana from a licensed medical dispensary?

- Yes (1)
- No (2)

Skip To: Q16 If Have you ever purchased marijuana from a licensed medical dispensary? = No

Q15 Is a medical dispensary your primary source for marijuana?

- Yes (1)
- No (2)

Skip To: Q19 If Is a medical dispensary your primary source for marijuana? = Yes

Q16 If legal dispensaries are not your primary source of medical marijuana, what is the primary reason? (You can choose more than one.)

- Price of marijuana in dispensaries (1)
 - Cost/difficulty of obtaining doctor's recommendation and registration Lack of diverse products in medical dispensaries (2)
 - Distance to your nearest dispensary (3)
 - Lack of interest (4)
 - It is easier for me to obtain it from other sources (5)
 - Transportation Issues (6)
 - Other: (7) _____
-

Q17 Would you obtain marijuana from a medical dispensary instead of unregulated sellers if it was easily accessible and similarly priced?

- Yes (1)
 - No (2)
 - Unsure (3)
-

Q18 What is the average price you pay now for marijuana in the unregulated market? (You can disclose in multiple quantities.)

- Per Gram (1) _____
 - Per Ounce (2) _____
 - Per 1/8th of an Ounce (3) _____
 - Per 1/4 of an Ounce (4) _____
 - Per 1/2 of an Ounce (5) _____
-

Q19 What is the most you would be willing to pay for legal marijuana from a medical dispensary? (You can disclose in multiple quantities.)

- Per Gram (1) _____
 - Per 1/10 of an Ounce (2) _____
 - Per Ounce (3) _____
 - Per 1/8 of an Ounce (4) _____
 - Per 1/4 of an Ounce (5) _____
 - Per 1/2 of an Ounce (6) _____
-

Q20 How close do you live to your closest medical dispensary?

- 0-5 miles (1)
 - 5-15 miles (2)
 - 15-30 miles (3)
 - 30-50 miles (4)
 - 50-100 miles (5)
 - 100+ miles (6)
 - I do not know (7)
-

Q21 Do you support the full legalization of marijuana?

- Yes (1)
 - No (2)
-

Q23 Would you be more likely to buy marijuana through regulated suppliers if it was fully legal?

- Yes, even if it cost somewhat more (1)
 - Yes, but only if the cost was the same (2)
 - No (3)
 - Unsure (4)
-

Q24 Overall, how satisfied or dissatisfied are you with the current state of medical marijuana in Ohio?

- Extremely satisfied (1)
- Somewhat satisfied (2)
- Neither satisfied nor dissatisfied (3)
- Somewhat dissatisfied (4)
- Extremely dissatisfied (5)

End of Block: Consent Form

APPENDIX B. FREQUENCY OF RECORDED ANSWERS

Survey question text	Number of Responses
Do you have a condition that makes you eligible to use medical marijuana?	388
What condition makes you eligible? (you can select more than one)	317
Do you currently use marijuana (in any form and with or without medical marijuana card)?	232
Please tell us which of the following reasons is preventing you from using medical marijuana (you can choose more than one): - Selected Choice	132
Please tell us which of the following reasons is preventing you from using medical marijuana (you can choose more than one): - Other - Text	36
How long have you been using marijuana?	180
On average, how often do you consume marijuana in any form?	169
What is your preferred method for consuming marijuana? (Select choice)	147
When purchasing marijuana, how important is convenience?	137
When purchasing marijuana, how important is the price you pay?	134
When purchasing marijuana, how important is it to have different product options?	134
When purchasing marijuana, how important are concerns about law enforcement?	134
When purchasing marijuana, how important is it to you to buy from a specific seller?	133
Have you ever tried to obtain a recommendation from a doctor and register to purchase medical marijuana?	133
Have you ever purchased marijuana from a licensed medical dispensary?	154
Is a medical dispensary your primary source for marijuana?	144
If legal dispensaries are not your primary source of medical marijuana, what is the primary reason? (You can choose more than one.)	52
Would you obtain marijuana from a medical dispensary instead of unregulated sellers if it was easily accessible and similarly priced?	45
How close do you live to your closest medical dispensary?	152
Do you support the full legalization of marijuana?	294
Would you be more likely to buy marijuana through regulated suppliers if it was fully legal?	284
Overall, how satisfied or dissatisfied are you with the current state of medical marijuana in Ohio?	255