

Medical Supply in Jeopardy as More States Legalize Adult-Use Cannabis



The year 2020 brought a tsunami of events that led to a rise in demand and a fall in supply of medical cannabinoid products in the United States. *AJEM* spoke with officials and physicians from 3 states that were reporting cannabis shortages—Illinois, Maryland, and Florida—about its effect on patients. Additionally, panic-related buying due to the COVID-19 crisis created supply issues in the United States and around the globe. Experts paint a cautionary tale for the medical supply as more states move toward legalizing recreational cannabis.

A Perfect Storm in Illinois

The undersupply of medical cannabis flower throughout the state of Illinois resulted from the interplay of several factors including the legalization of recreational cannabis, an increase in qualified conditions under the medical marijuana program, and a mismatch between the anticipated vs actual preferred formulation among medical patients (eg, vaping vs smokable).

The Illinois cannabis industry and administration all agree that “medical patients will always be a number 1 priority,” said former state Senator Pamela Althoff, who is Executive Director of the Cannabis Business Association of Illinois, a nonprofit statewide association that represents cannabis businesses in the state.

Ms. Althoff confirmed a shortage in cannabis flower for medical use in 2020 and said that although the shortage was initially anticipated, it was exacerbated by a number of other variables that occurred. The industry prioritized medical patients and collaborated to ensure that there were regional balances in medical and recreational cannabis supplies, with all licensed cultivators expected to reach full capacity by the end of 2020, Ms. Althoff told *AJEM*. According to an article in the *Chicago Sun Times* dated February 3, 2021, operators at dispensaries note that, for the most part, the supply issue has been resolved.¹

The bill to legalize recreational cannabis in Illinois was signed by Governor JB Pritzker on June 25, 2019, theoretically allowing for a 6-month ramp-up in production before recreational sales began on January 1, 2020. Licensed medical cannabis growers were allowed to submit applications for adult-use cultivation licenses within 60 days of the bill’s approval, with licenses distributed within 45 days thereafter.^{2,3}

Although all 21 medical growers were granted early approval of adult-use licenses,⁴ the approval process reduced the time required for cultivation, starting with obtaining cannabis clones all the way down to packaging product and disbursement, Ms. Althoff said. Before the recreational cannabis bill was approved, licensed medical growers had not built out to full capacity, but rather grew what was economically

feasible for their businesses when there were less than 80,000 medical patients enrolled in the program, she said.

The next wave of the licensing rollout allowed the Department of Agriculture to award up to 40 licenses for processors and up to 40 licenses for craft growers by July 1, 2020; this will be followed by up to 60 licenses for craft growers and up to 60 licenses for processors by December 21, 2021.³

Mismatch of Preferred Formulation and Supply

Additionally, growers and processors mistakenly anticipated that vaping would be the preferred formulation among both medical patients and recreational users, Ms. Althoff said. Thus, markedly more flower was used to create vaping products, taking away from the smokable supply. However, after the nationwide vaping crisis peaked in September 2019,⁵ patients told the General Assembly during veto sessions in October and November 2019 that they preferred smokable cannabis, she explained.

Evidence of the shortage in the medical stream in the beginning of 2020 was illustrated by the more than \$2.5 million decrease in dry flower sales to patients for the month of January 2020 compared with October 2019 (\$9,810,221.32 vs \$12,528,100.10).^{6,7} Although the number of retail dry flower sales has continued to steadily increase, so too has the number of qualifying patients.⁸

More Patients Registered for Medical Use

The number of registered medical marijuana patients in Illinois increased from 76,939 to 153,258 between July 10, 2019 and March 4, 2021—an increase of 99%.^{9,10} This significant increase was due to a number of legislative changes: First was the August 9, 2019 approval of House Bill 2023, which turned the pilot medical cannabis program into a permanent one and added 11 new qualifying conditions, many of which are highly prevalent (eg, chronic pain, osteoarthritis, and migraine).¹¹⁻¹⁴ The bill also allowed physician assistants, advanced practice nurses, and nurse practitioners to issue certification for medical cannabis.²

Second, Illinois was the first state in the nation to enact an Opioid Alternative Pilot Program (OAPP), which allows access to medical cannabis for patients who have or could receive a prescription for opioids as certified by a physician licensed in Illinois.^{15,16} The program officially launched on January 31, 2019, and, as of February 28, 2021, there were 908 OAPP patients registered and 1617 awaiting physician certification.¹⁵⁻¹⁷

Finally, the application process was streamlined, bringing the time between application and receipt of a medical cannabis card for qualified patients to less than 48 hours, Ms. Althoff said.

Physicians at Essential Nutrition and Wellness' Barrington and Chicago offices saw a marked increase in the number of patients seeking certification for medical cannabis in December 2019 and January 2020, according to Stephen Smith, who is Director of the Medical Cannabis Division of the practice. In addition to patients seeking cannabis for the new 11 qualifying conditions, they may have entered the program to avoid the graduated excise tax on purchase of recreational cannabis, which ranges from 10% for cannabis containing $\leq 35\%$ delta-9-tetrahydrocannabinol (THC) to as high as 25% for cannabis containing $>35\%$ THC, Mr. Smith said.¹⁸

Effect of the Shortage on Patients

Mr. Smith said that his patients reported an overall shortage in medical cannabinoid products, not only cannabis flower. At his Barrington practice, the nearest dispensary now has limited parking because of the increase in business from recreational sales. The practice focuses on patients with inflammatory and pain conditions who often cannot walk a half-mile or more from the only parking spot they can find to the dispensary.

A confounding factor is that patients in Illinois must register with a single medical dispensary when they submit an application for a medical cannabis card. Fortunately, the process to switch dispensaries recently became easier with a new online system, rather than the paper or email requests used in the past.¹⁹

As part of the recreational use legislation, medical dispensaries are required to maintain an “adequate supply” of cannabis and cannabinoid-infused products for purchase by qualified patients. Adequate supply was defined as “a monthly inventory level that is comparable in type and quantity to those medical cannabis products provided to patients and caregivers on an average monthly basis for the 6 months before the effective date of this Act.”²⁰

However, patients at Essential Nutrition and Wellness reported product shortages starting in early to mid-December, before recreational sales began, as “dispensaries that have a recreational and medical division started having less supplies available to medical patients.”

Essential Nutrition and Wellness also serves the Rockford, Illinois, area where patients reported that they had been restricted to purchasing only half the allowable supply limit for medical cannabis, according to Mr. Smith. Patients had to either formally switch dispensaries (of which there are relatively few in this area) or seek cannabis from the black market, Mr. Smith told *AJEM*.

“We, of course, advise patients not to purchase cannabis products from the street,” Mr. Smith said. “We talk about the differences between medical and street cannabis, and try to keep patients going down the medical route. For the most

Medical Supply in Jeopardy

continued from page 51

part, our patients—using their creativity and our direction—are able to find an alternative dispensary or an alternative product to treat their medical condition.”

In some cases, patients are supplementing with hemp-based cannabidiol (CBD) products sold in the consumer market, Mr. Smith said. Some patients in the northwest suburb area switched to the few dispensaries that are exclusively providing medical cannabis.

“The other noticeable change following the legalization of recreational cannabis is that the quality of service at dispensaries on the medical side sometimes has decreased,” Mr. Smith noted. Some dispensaries are spending more time with recreational cannabis users and have reduced their staff on the medical side, he noted.

A Call for Interstate Commerce of Medical Cannabis

Mr. Smith called for regulatory changes to allow full interstate commerce of medical cannabis products. He noted that states may be reluctant to allow cannabis sales across state lines as cannabis is a big revenue source, and “states like to contain the revenue inside the state across all of the channels, including growth, production, and distribution.”

To help medical patients, the recreational cannabis bill in Illinois included a stipulation allowing medical marijuana patients to grow up to 5 marijuana plants for personal use.² However, the administration has received comments from patients regarding the inability to obtain seeds, Ms. Althoff noted. Additionally, she said that the industry rarely uses seeds and instead typically starts cultivation with clones (cuttings from a cannabis plant that are used to grow new plants). The industry is in the midst of working out

whether to sell patients seeds or clones as well as packaging requirements, including how many seeds to give and how to package clones to ensure that they remain viable, Ms. Althoff said.

At that time, Ms. Althoff said “We encouraged our long-term patients to stock up because we anticipated that there might be a shortage,” Ms. Althoff said. “We are very well aware of patients’ needs and are trying to work with the administration and state to respond in a timely fashion, while also staying within our boundaries.”

Cautionary Tale to Other States

Illinois is not alone, as physicians in medical states like Florida and Maryland have reported shortages of medical cannabinoid products, causing concern about what will happen to the medical supply as these states get closer to legalizing recreational use.

Shortage of Medical Cannabis in Maryland

In Maryland, “we cannot get the biomass to make products with high CBD levels,” said Leslie Apgar, MD, Medical Director, Greenhouse Wellness, Ellicott City, Maryland.

In the beginning of 2020, the growers currently licensed to produce medical cannabis in Maryland reportedly could not produce enough supply to serve the increasing number of patients seeking treatment in the state, Dr. Apgar said. The number of registered medical marijuana patients increased from 87,019 to 123,376 between December 26, 2019 and December 28, 2020—an increase of 41%—with a total of 17 growers.²¹⁻²³ Additionally, there is a pressure in the market for growers to produce cannabis strains that are high in THC, she believes.

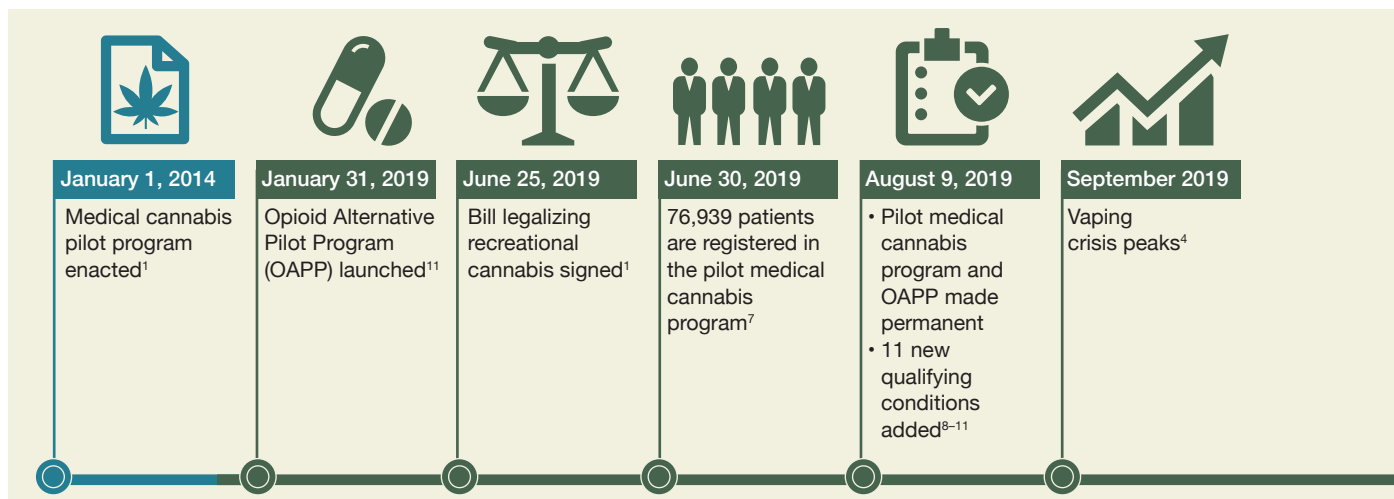


FIGURE. Timeline of events leading to medical cannabis shortage in Illinois.

“We are entering new patients into the medical cannabis program every day who need high CBD products, and I don’t have the products.” When patients come into Greenhouse Wellness requesting to stock up on 10 of a given product because they are afraid they won’t have access to it in the future, “they aren’t lying, there really isn’t enough,” Dr. Apgar told *AJEM*.

The lack of access to high CBD products “is a problem already, and we are in a medical state. Can you imagine what’s going to happen when our state approves recreational use?” Dr. Apgar said.

Expanding cultivation licenses to smaller boutique growers focused on high CBD cannabis may alleviate the access issue, Dr. Apgar suggested.

Increasing the Medical Cannabis Supply in Maryland

Officials in Maryland are working to increase the medical cannabis supply, with legislation already approved to add an additional 14 growers.²³ However, the Maryland Medical Cannabis Commission (MMCC) announced delays in awarding preapprovals for new grower and processor licenses on September 26, 2019 because of concerns raised by the Legislative Black Caucus of Maryland over alleged bias in the application evaluation processes, as well as to allow sufficient time to fully evaluate the highest-ranking applications.^{24,25} On February 21, 2020, MMCC announced that it hired an independent firm to investigate the impartiality of the application process, and expects the investigation to take at least 45 days, but there is no formal deadline.²⁴

“Maryland licensed growers cultivated greater than 50% more cannabis in 2019 Q4 compared to 2019 Q1 (29,000 lb

in Q4 compared with 18,000 lb in Q1), and the amount cultivated continues to increase significantly each month,” said William Tilburg, Executive Director of MMCC.

“Growers are continuing to build out their facilities and increase production,” said Bridget Hill-Zayat, Esq, who is Executive Director of the Maryland Wholesale Medical Cannabis Association (CANMD) and a cannabis law and hemp industry attorney at the Hoban Law Group. “The process of completing construction, inspection by the state, and then harvest is necessarily time-consuming. Even if licensees can control the buildout process, they cannot force the state to send inspectors at will. Also, at the end of the day, we are talking about a plant that requires time to grow.”

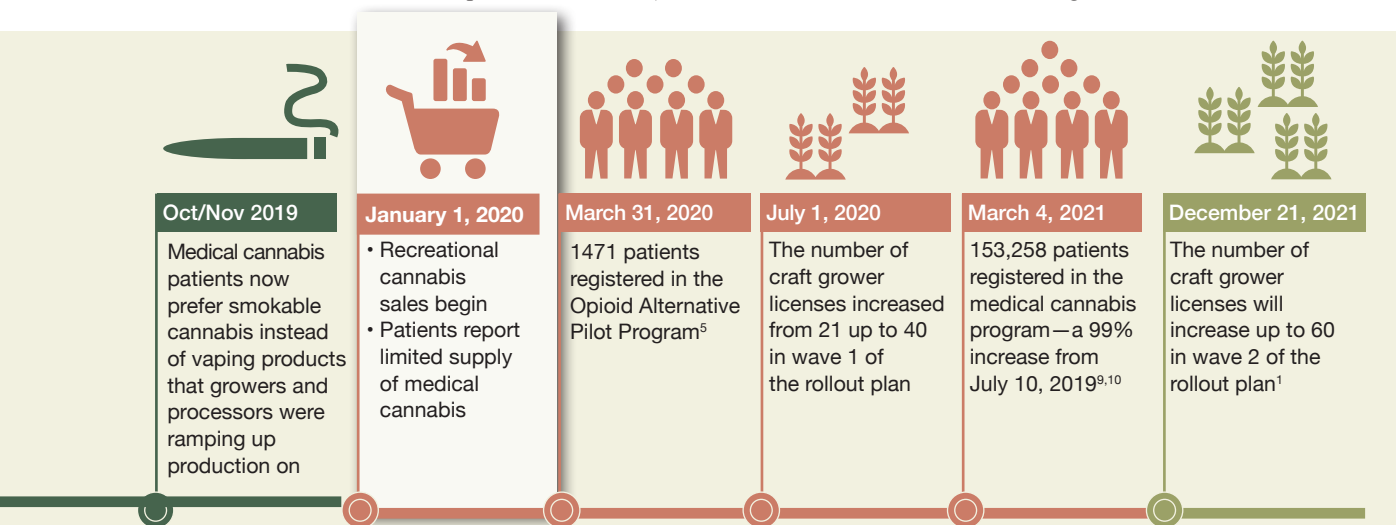
Additionally, Ms. Hill-Zayat said that the shortage in medical cannabinoid products in general might result from the “turbulent regulatory environment” in Maryland.

“If medical licensees are not grandfathered into the adult-use market, they have zero economic incentive to increase production,” Ms. Hill-Zayat said. “In effect, if the state (the General Assembly in this case) prevents medical licensees to enter the adult-use market, licensees will not be able to get the investment necessary to scale up.”

“Growers would love to be on solid regulatory ground and be able to start the process of increasing production to account for medical and adult use, but given the situation, they cannot account for anything but a medical market as it exists,” Ms. Hill-Zayat added.

Shortage of Smokable Medical Cannabis Eases in Florida

A shortage of smokable medical cannabis occurred in Florida after the formulation was legalized on March 18, 2019, in the



Medical Supply in Jeopardy

continued from page 53

TABLE. Florida MMTC Dispensations for February 26–March 4, 2021

Number of MMTCs	Number of dispensing locations	Medical marijuana (mg THC)*	Low-THC cannabis (mg CBD)†	Smokable marijuana (oz)
22	322	165,039,462	4,178,856	57,964.368

CBD, cannabidiol; MMTC, medical marijuana treatment clinic; THC, delta-9-tetrahydrocannabinol.

*Medical marijuana is dispensed in milligrams of active ingredient tetrahydrocannabinol.

†Low-THC cannabis is dispensed in milligrams of active ingredient cannabidiol.

Source: Florida Health, Office of Medical Marijuana Use. *OMMU Weekly Update*. February 26-March 4, 2021. https://s27415.pcdn.co/wp-content/uploads/ommu_updates/2021/030521-OMMU-Update.pdf

state’s medical cannabis program.²⁶ Although the shortage received nationwide attention, access to smokable cannabis improved in 2020 with the state’s licensing of additional medical marijuana treatment clinics (MMTCs). The MMTCs are the only businesses authorized to cultivate, process, and dispense medical cannabis.^{26,27}

“With more dispensaries now available, the shortage in smokable cannabis has eased in Florida,” said Barry Gordon, MD, Chief Medical Officer of the Compassionate Cannabis Clinic in Venice, Florida. Patients do not have to register with a single dispensary and thus, can find flower by extending their search to other dispensaries in the state, Dr. Gordon told *AJEM*.²⁸

“It may not be from the MMTC that a patient is used to, or the same cultivar, but by widening out the search, flower can be found,” Dr. Gordon said. “In some ways, there are ‘flower wars,’ as the MMTCs are now offering ‘value products and are selling ‘mini buds’ and ‘ground flower’ at a lower price point.”

“The Medical Marijuana Business Association of Florida [MMBAFL] communicates regularly with legislators and regulators at the Office of Medical Marijuana Use to advocate to ensure that there is adequate supply of medical cannabis production and dispensing to meet the needs of Florida’s growing patient population,” said Jeffrey Sharkey, PhD, President of MMBAFL. “This advocacy has included lifting the ban on smokable flower that existed up until spring 2019, assisting with eliminating barriers at the local government level from restricting dispensary locations, and ensuring that MMTC licensees are fully operational and fulfilling their responsibility to provide product to patients throughout the state.”

Dr. Sharkey explained that several licensees have not actually opened up dispensaries and have been waiting to sell their licenses to out-of-state investors, which limits competition and lowers prices for dispensing MMTCs. “We also believe that the Florida Department of Health needs to issue the additional MMTC licenses authorized under the 2017 state law to help increase production, increase competition, and

ensure that patients have choice and affordable products,” Dr. Sharkey said.

Medical marijuana products that are high in THC still dominate the supply in Florida (Table), and Dr. Gordon confirmed an ongoing shortage of high CBD:low THC products in the state.

“I am considering carrying a hemp-based, full-spectrum CBD extract if I can properly source one because the MMTCs in Florida are having trouble keeping high-quality CBD products,” said Dr. Gordon.

How Can Florida Protect the Medical Cannabis Supply?

Doctors like Dr. Gordon believe that Florida is at least 4 years away from legal adult use, noting that the delay might be a “good thing.” For now, he is most concerned about Florida’s looming THC cap, pointing out that patients would need to use twice as much product to obtain similar relief.

When patients ask about whether legalized cannabis will be beneficial for medical cannabis patients, “I point to Illinois as an example of how legal adult use equals high taxes. Our medical cannabis products are untaxed and will remain so, and our supply of medical cannabis is guarded for now. The Florida MMTCs are not ready for an adult-use market, and we would greatly suffer from a shortage of medication. Thus, allowing MMTCs to ramp up production while we protect our patients is appropriate,” Dr. Gordon said.

For now, “If and when the adult-use ballot initiative gets on the ballot—in 2022 probably—it is imperative that additional cultivation, processing, and retail dispensing licenses be made available to meet the demand of adults in a state with 21 million people,” Dr. Sharkey said. “Currently, the Florida medical marijuana license is vertically integrated, meaning that each MMTC must perform all aspects of the supply chain, cultivation, testing, extraction, product development, and dispensing. Each dispensary sells only the products from the MMTC, there are no wholesale sales between licensees.”

However, if adult use becomes law, a decoupling of the vertical integration would need to occur, according to

Dr. Sharkey, to allow for diversity and specialization, which would give patients more choices. Additionally, “the regulatory framework would need to allow some oversight of out-of-state capital investment and public company ownership in the licenses,” he said.

“Furthermore, the legislature would have to address the potential for taxing the industry to help provide adequate regulatory and public safety oversight of the industry,” Dr. Sharkey concluded. “Currently, the only tax is sales tax, and it is not dedicated to funding the regulatory agency or law enforcement.”

Future Outlook

Physicians in the United States continue to grapple with a shortage of medical cannabinoid products and the impact it has on patients, as it relates to the legalization of recreational cannabis. Additionally, the medical supply chain is undoubtedly being affected by panic buying and workforce shortage related to the COVID-19 pandemic (see **COVID-19**, page 33). *AJEM* will continue to follow these stories as they develop.

References

- Schuba T. Illinois dispensaries sold record \$88 million in January after massive first year of recreational weed sales. Chicago Sun Times. March 10, 2021. Accessed February 22, 2021. <https://chicago.suntimes.com/cannabis/2021/2/3/22264379/illinois-recreational-weed-sales-record-january-2021-pot-marijuana-cannabis>
- Illinois Department of Public Health. Medical cannabis patient registry program. Accessed March 10, 2021. <http://www.dph.illinois.gov/topics-services/prevention-wellness/medical-cannabis>
- Illinois Department of Agriculture. Adult use cannabis summary. Accessed March 10, 2021. https://www2.illinois.gov/ISNews/20242-Summary_of_HB_1438_The_Cannabis_Regulation_and_Tax_Act.pdf
- Illinois Department of Agriculture. Adult use of cannabis: application submission update. Accessed March 10, 2021. <https://www2.illinois.gov/sites/agr/Plants/Pages/Adult-Use-Cannabis.aspx>
- Centers for Disease Control and Prevention. Outbreak of lung injury associated with e-cigarette, use, or vaping. Updated February 25, 2020. Accessed March 10, 2021. https://www.cdc.gov/tobacco/basic_information/e-cigarettes/severe-lung-disease.html#map-cases
- Medical Cannabis Patient Program. MCPP update February 18, 2020. Accessed March 10, 2021. https://www2.illinois.gov/sites/mcpp/Pages/update02182020_mcpp.aspx
- Medical Cannabis Patient Program. MCPP update November 7, 2019. Accessed March 10, 2021. https://www2.illinois.gov/sites/mcpp/Pages/update11072019_mcpp.aspx
- Medical Cannabis Patient Program. Updates. Accessed March 10, 2021. <https://www2.illinois.gov/sites/mcpp/Pages/Updates.aspx>
- Medical Cannabis Patient Program. MCPP update March 4, 2021. Accessed March 10, 2021. https://www2.illinois.gov/sites/mcpp/Pages/update03042021_mcpp.aspx
- Medical Cannabis Patient Program. MCPP update July 10, 2019. Accessed March 10, 2021. https://www2.illinois.gov/sites/mcpp/Pages/update07102019_mcpp.aspx
- Chicago Sun Times. Pritzker makes medical marijuana program permanent, adds list of new conditions. Accessed March 10, 2021. <https://chicago.suntimes.com/cannabis/2019/8/12/20802391/pritzker-makes-medical-marijuana-program-permanent-adds-list-new-conditions>
- Illinois Senate Bill 2023. Accessed March 10, 2021. <https://legiscan.com/IL/bill/SB2023/2019>
- ABC News. Illinois medical marijuana: new qualifying conditions added as program becomes permanent. Accessed February 19, 2021. <https://abc7chicago.com/5373720/>
- State of Illinois list of qualifying conditions. Accessed March 10, 2021. <https://www.dph.illinois.gov/topics-services/prevention-wellness/medical-cannabis/debilitating-conditions>
- Illinois Department of Public Health. Opioid alternative pilot program. Accessed March 10, 2021. <http://www.dph.illinois.gov/topics-services/prevention-wellness/medical-cannabis/opioid-alternative-pilot-program>
- Illinois General Assembly. Public Act 100-1114. Accessed March 10, 2021. <http://www.ilga.gov/legislation/publicacts/100/PDF/100-1114.pdf>
- OAPP Update. March 4, 2021. Accessed March 10, 2021. https://www2.illinois.gov/sites/mcpp/Pages/update02032021_oapp.aspx
- Illinois revenue. Cannabis tax frequently asked questions. Accessed March 10, 2021. <https://www2.illinois.gov/rev/research/taxinformation/other/Pages/Cannabis-Tax-Frequently-Asked-Questions.aspx>
- Illinois Department of Public Health. Select or change a medical cannabis dispensary. March 10, 2021. <http://www.dph.illinois.gov/topics-services/prevention-wellness/medical-cannabis/select-a-medical-cannabis-dispensary>
- Illinois General Assembly. Cannabis regulation and tax act. Accessed March 10, 2021. <http://www.ilga.gov/legislation/ilcs/ilcs5.asp?ActID=3992&ChapterID=35>
- Maryland Medical Cannabis Commission. Current grower licenses as of January 2021. Accessed March 10, 2021. [https://mmcc.maryland.gov/Documents/Licensees%20\(Dispensaries,%20Growers,%20Processors\)/GROWERLICENSEE%20LIST%20JAN2021.pdf](https://mmcc.maryland.gov/Documents/Licensees%20(Dispensaries,%20Growers,%20Processors)/GROWERLICENSEE%20LIST%20JAN2021.pdf)
- Maryland Medical Cannabis Commission 2020. Total Certified Patients. Accessed March 10, 2021. <https://mmcc.maryland.gov/Documents/Data,%20Stats,%20Resources%20Page%20Docs/2020%20pt.%20cg.%20prov.%20charts%20vertical.pdf>
- National public radio. Admid Maryland’s medical marijuana boom, minority growers say they are still shut out. Accessed March 10, 2021. <https://www.npr.org/local/305/2019/10/10/768869090/amid-maryland-s-medical-marijuana-boom-minority-owners-say-they-re-still-shut-out>
- Maryland Medical Cannabis Commission. Medical cannabis grower and processor license update. Accessed March 10, 2021. [https://mmcc.maryland.gov/Documents/MMCC%20Application%20Communication%20\(Feb.%202021,%202020\).pdf](https://mmcc.maryland.gov/Documents/MMCC%20Application%20Communication%20(Feb.%202021,%202020).pdf)
- Maryland Medical Cannabis Commission. Letter to the Governor and General Assembly. Accessed March 10, 2021. [https://mmcc.maryland.gov/Documents/MMCC%20Letter%20to%20the%20Governor%20and%20General%20Assembly%20\(October%208,%202019\).pdf](https://mmcc.maryland.gov/Documents/MMCC%20Letter%20to%20the%20Governor%20and%20General%20Assembly%20(October%208,%202019).pdf)
- Florida Health Medical Quality Assurance. Medical use of marijuana in a form for smoking. Accessed March 10, 2021. <http://flhealthsource.gov/mum/>
- Office of Medical Marijuana Use. March 5, 2021 Update. Accessed March 10, 2021. https://s27415.pcdn.co/wp-content/uploads/ommu_updates/2021/030521-OMMU-Update.pdf
- Florida Health. More medical marijuana licenses will increase access. Accessed April 5, 2020. <http://www.floridahealth.gov/newsroom/2018/07/071318-ommu-press-release.html>