

July | 20

# COVID-19 & the Demand for Medical Cannabis in New Mexico

## New Mexico Market Analysis

O'Donnell Economics & Strategy

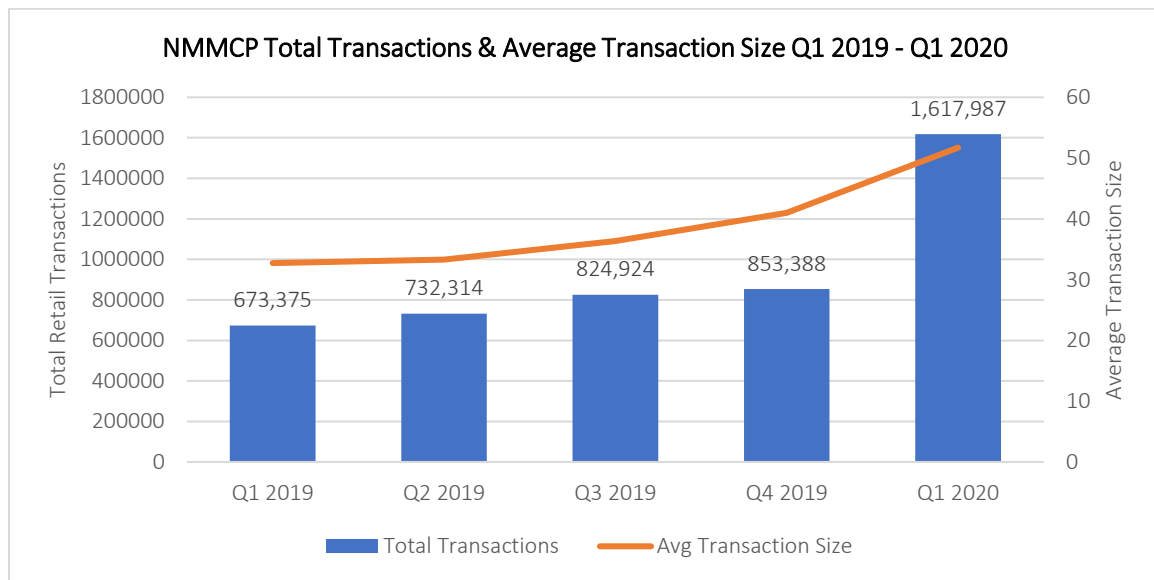
## Executive Summary

COVID-19 exposed deficiencies in New Mexico’s public health infrastructure. One such weakness is the inadequacy of New Mexico’s medical cannabis supply. The pandemic substantially increased demand for medical cannabis in New Mexico, worsening the state’s medical cannabis shortage, driving up price, and negatively impacting patients. At the end of March 2020, New Mexico LNPPs had roughly 12 days of supply in inventory and the price of New Mexico medical cannabis averaged \$11.64/gram.

### *Pandemic Prompts a Surge in Cannabis Demand*

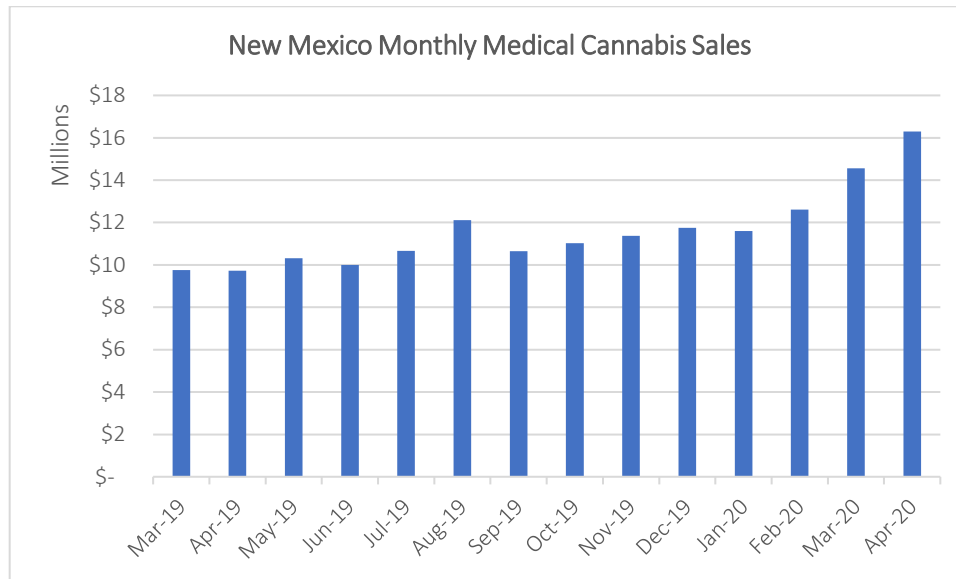
According to data from the New Mexico Department of Health, between the final quarter of 2019 and the first quarter of 2020 the number of MCP patient transactions nearly doubled and the number of units purchased per capita increased 26.2 percent (Figure 1).

Figure 1



The spike in sales was at least partly attributable to mid-March stockpiling by cannabis patients worried about possible dispensary closures or other supply chain disruptions, but sales continued to climb through April despite cancellation of 4/20 events and after it was clear that dispensaries would remain open, suggesting that stockpiling was only one of numerous factors potentially driving sales growth (Figure 2).

Figure 2



Source: New Mexico Department of Health Medical Cannabis Program monthly producer reports

### ***Medical Cannabis Patients are at Elevated Risk and Need More Medicine During a Pandemic***

Cannabis card holders are a medically vulnerable population. Some patients are immunocompromised and thus at greater risk from COVID-19 and the majority have qualifying conditions that are likely to be exacerbated by aspects of the pandemic and lockdown including social isolation, joblessness, restricted access to healthcare, and anxiety about the future. Anxiety is a component or secondary symptom of many qualifying conditions. Anxiety can also exacerbate the pain and other symptoms of the primary qualifying condition. Patients may increase their cannabis consumption as their symptoms intensify, their need for relief from anxiety and chronic pain escalates, and their access to other forms of treatment is diminished. In two separate nationwide surveys conducted in March 2020, 40 percent of medical cannabis consumers reported increasing their cannabis consumption since the COVID-19 pandemic began. Stress and anxiety stemming from COVID-19 were frequently cited reasons for using more cannabis.<sup>1,2</sup>

Unexplained deaths are up 20 percent in New Mexico and conditions related to the pandemic are a likely cause.<sup>3</sup> A recent national study found a significant spike in nationwide mortality during March 2020 that was not directly attributable to COVID-19. The study's authors attribute the 28 percent increase in non-COVID deaths, in part, to changes in behavior brought about by strict lockdown measures.<sup>4</sup> Researchers

<sup>1</sup> New Frontier Data. Retrieved from: <https://newfrontierdata.com/cannabis-insights/change-in-cannabis-use-since-outbreak-of-covid-19/>

<sup>2</sup> <https://finance.yahoo.com/news/goldenseed-survey-40-marijuana-users-140010998.html>

<sup>3</sup> Boetel, R. & Kaplan, E. (2020, July 5). Shadow deaths of the virus. Albuquerque Journal. Retrieved from: <https://www.abqjournal.com/1472694/shadow-deaths-of-the-virus.html>

<sup>4</sup> Weinberger DM, Chen J, Cohen T, et al.(2020) Estimation of Excess Deaths Associated With the COVID-19 Pandemic in the United States, March to May 2020. JAMA Intern Med. Published online July 01, 2020. doi:10.1001/jamainternmed.2020.3391 and Reger, M.A., Stanley, I.H. & Joiner, T. (2020). Suicide Mortality and Coronavirus Disease 2019—A Perfect Storm? JAMA Psychiatry. Published online April 10, 2020. Retrieved from: <https://jamanetwork.com/journals/jamapsychiatry/fullarticle/2764584>

also note that the mental health consequences of the pandemic, including suicidal behavior, are likely to persist well into the future and may get worse before they get better.<sup>5</sup>

### ***Inadequate Supply: a Pre-Existing Condition that Amplifies Risk***

Even prior to the pandemic, demand for medical cannabis in New Mexico greatly outpaced supply, inflating prices and limiting the variety of products and strains available to New Mexico consumers. At the end of the March 2020, New Mexico's LNPPs had roughly 2.6 million grams of flower and bud in inventory. This equates to less than 29 grams per enrollee, or about 12 days in supply statewide. Even under the best of circumstances, inventories of this size are not sufficient to ensure uninterrupted patient access. Inadequate LNPP inventories may also make it difficult for medical cannabis patients to obtain specific strains and products or amass the extra supply of medications recommended by the CDC.

The Lynn and Erin Compassionate Use Act includes language meant to ensure that patients have access to an uninterrupted three-month supply of medicine.<sup>6</sup> The CDC recommends having a three-month supply of prescription medications on hand during the COVID-19 crisis.<sup>7</sup> If all current MCP patients were to purchase their maximum 230 units, per the CDC's medication recommendation, the program would need 19.6 million grams in inventory, 750 percent more than the inventories reported for the first quarter of 2020.

The COVID-induced demand spike was accompanied by jump in price. The average price of flower and bud increased by 13 percent, from \$10.26/gram to \$11.64/gram, between December 2019 and March 2020. Comparing the average price of medical cannabis in Colorado (\$3.28/gram) to the average price in New Mexico (\$11.64, according to the most recent MCP report<sup>8</sup>) makes evident the profound impact that supply constraints imposed by NMDOH have had on price. Although enrollment in New Mexico's MCP (89,900) now exceeds that of Colorado (82,000), Colorado's medical growers have ten times more plants under cultivation than do New Mexico LNPPs (286,299 and 26,098 plants respectively at the end of 2019). It therefore comes as no surprise that In 2019, New Mexico's Medical Cannabis Program generated \$129 million in patient sales while Colorado's medical program generated sales of \$338 million – nearly three times New Mexico's sales with similar patient enrollment and much lower prices.

Prior to the recent price spike, a three-month "adequate supply" of medical cannabis cost New Mexico patients about \$2,400 or over \$10,000 a year. New Mexico's \$43,984 per capita personal income is one of the nation's lowest.<sup>9</sup> Furloughs, widespread unemployment, and escalating prices have further diminished access for the many New Mexico patients who were already struggling to afford their medicine.

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<sup>5</sup> Sher, L. (2020). The impact of the COVID-19 pandemic on suicide rates, QJM: An International Journal of Medicine, Retrieved from: <https://academic.oup.com/qjmed/article/doi/10.1093/qjmed/hcaa202/5857612>

<sup>6</sup> NM Stat § 26-2B-3 (2013)

<sup>7</sup> Miller, M. (2020, March 26). Medicare Is Updating Coverage to Help in the Coronavirus Crisis. Retrieved from: <https://www.nytimes.com/2020/03/24/business/coronavirus-medicare-elderly.html?auth=login-email&login=email>

<sup>8</sup> New Mexico Department of Health Medical Cannabis Program 2019 4<sup>th</sup> Quarter and 2020 1<sup>st</sup> quarter LNPP summary reports. Retrieved from: <https://www.nmhealth.org/about/mcp/svcs/pdb/>

<sup>9</sup> <https://fred.stlouisfed.org/series/NMPCPI>

### ***Restrictive Plant Count Constrains Supply and Impedes Access***

Medical cannabis is one of few critical commodities over which New Mexico has complete supply control. The State can help LNPPs meet the growing patient demand by increasing the number of cannabis plants under cultivation. Increasing supply would both bolster flagging inventories and reduce upward pressure on cannabis price, lessening the negative impact of COVID-19 on medical cannabis patients.

Tight plant count restrictions made New Mexico’s medical cannabis market especially vulnerable to disruption from to COVID-19. Increasing plant count is the simplest, most effective way to combat shortages and ensure access for MCP cardholders.

Even in the unlikely event that demand does not continue its rapid rate of increase, loosening supply constraints will benefit consumers. New Mexico’s medical cannabis price exceeds that of neighboring states by as much as 300 percent. High prices are one reason New Mexico patients travel to Colorado and/or obtain their medicine from unregulated (illicit) sources. Restrictive plant counts are a major contributor to price disparities.

### ***Reliable Data, Consistent Reporting, and Transparency are Needed***

Reliable data is critical to understanding New Mexico’s cannabis market. Inconsistent methodologies and data errors undermine the validity of the cannabis production data released by NMDOH and obscure the magnitude of the medical cannabis shortage. The MCP’s 2019 Q4 producer report inflated year-end inventories by over 300 percent, leading to the highly erroneous conclusion that New Mexico LNPPs had supply adequate to meet demand. After adjusting for these errors, New Mexico’s inventory of flower and bud at the end of 2019 was less than one-third the amount published by NMDOH.

Figure 3



Figure 3 depicts LNPP inventories as reported by NMDOH. The massive Q4 2019 inventory spike reported by NMDOH for some LNPPs had all but disappeared by Q1 2020, despite nearly equivalent levels of

production and sales. The data picture was further clouded by DOH's decision to change the method by which inventories were calculated in the Q1 2020 report without notifying stakeholders, once again giving the false impression of adequate supply.

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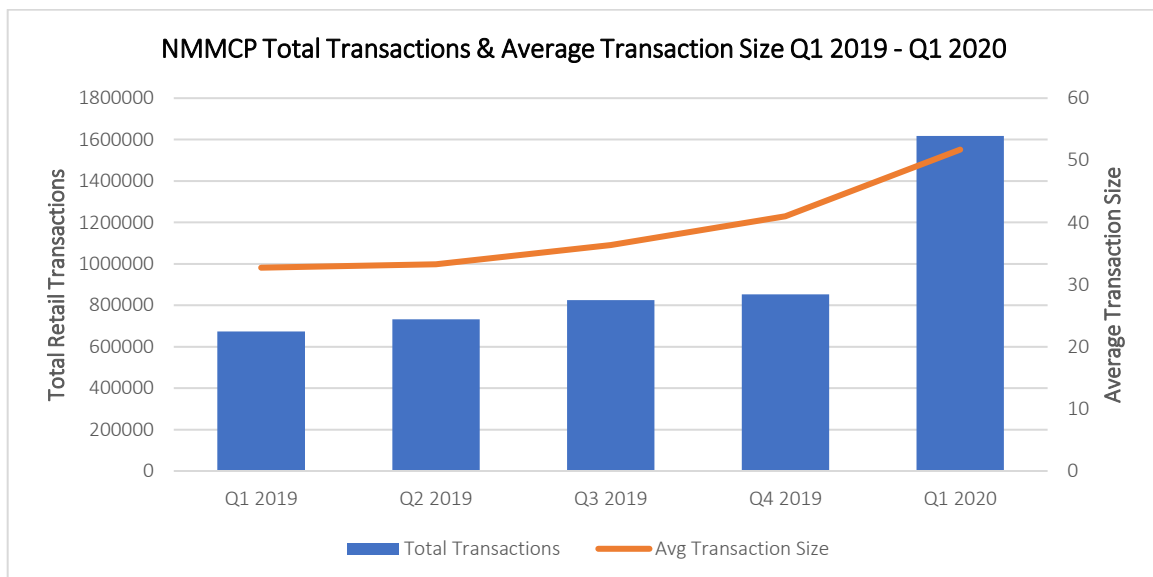
### Increased Demand Due to COVID-19

COVID-19 substantially increased demand for medical cannabis both in New Mexico and nationwide. Concerns about supply chain disruptions, the possibility of further restrictions on movement, and fear of running out of critical medications contributed to a sales spike in mid-March.

High prices and limited product availability have long restricted the size of New Mexico's regulated cannabis market and prevented it from capturing a larger share of the state's overall cannabis demand. Patients priced out of New Mexico's regulated cannabis market obtain their medicine at lower cost from illicit suppliers or dispensaries in neighboring states. Travel restrictions and social distancing implemented in response to the COVID19 pandemic made these lower-cost sources more difficult to access, increasing the number of patients utilizing New Mexico dispensaries and further depleting already low inventories.

The influx of new customers coincided with an increase in the number and size of purchases by existing medical cannabis patients. Like consumers of many other commodities, MCP participants responded to the prospect of COVID-related supply disruptions and the CDC's recommendation that patients stockpile necessary medications<sup>10</sup> with larger, more frequent purchases. According to NMDOH, between Q4 2019 and Q1 2020 the number of patient transactions nearly doubled, from 853,388 in Q4 2019 to 1,617,987 in Q1 2020, and the number of units purchased per capita increased 26.2 percent, from 40.99 in Q4 2019 to 51.72 in Q1 2020.<sup>11</sup>

Figure 4



<sup>10</sup> <https://blogs.cdc.gov/publichealthmatters/2017/10/preparing-your-medicine-cabinet-for-an-emergency/>

<sup>11</sup> New Mexico Department of Health Medical Cannabis Program 2019 4<sup>th</sup> Quarter and 2020 1<sup>st</sup> quarter LNPP summary reports. Retrieved from: <https://www.nmhealth.org/about/mcp/svcs/pdb/>

The New Mexico experience is consistent with trends observed nationwide. Between February and March 2020, retail cannabis sales in the U.S. rose roughly 90 percent,<sup>12</sup> fueled, in large part, by concerns about disruptions in supply and access.<sup>13</sup> Large spikes in demand for medical cannabis and long lines at dispensaries were reported in numerous states including California, New Jersey, Pennsylvania,<sup>14</sup> and Nevada.<sup>15</sup>

As the pandemic took hold, Colorado medical cannabis patients bought 42 percent more products per transaction and made purchases that were an average of 36 percent larger than purchases earlier in the year.<sup>16</sup> During the week of March 23, medical cannabis sales in Colorado increased 57 percent over the 2020 weekly average and in Denver sales were 392 percent higher than those the previous week.<sup>17</sup>

In Oklahoma, medical cannabis sales grew from \$48.9 million in February to \$73.8 million in May. Patient enrollment continued to rise throughout the pandemic, hitting 297,000 at the end of May. Purchase size also increased during the pandemic, with average monthly cannabis spending by Oklahoma patients growing 35 percent, from \$184 in March to \$249 in May.<sup>18</sup>

### *Impact on Inventories*

LNPPs reported 2.6 million grams of flower and bud in stock at the end of March 2020. Dividing this amount by the April patient count (89,922) yields 28.85 grams or about 11.8 days of supply per cardholder. This amount is less than 13 percent of the 8 ounces deemed “adequate” 3-month supply by NMDOH.<sup>19</sup> Inventories of this size are not sufficient to ensure access for patients under the best of circumstances, and do not allow medical cannabis patients to amass the extra supply of medications recommended by the CDC.

New Mexico is one of a number of states experiencing steep declines in cannabis inventories due to rapidly escalating purchases. On March 24, cannabis analytics company Headset reported a 17 percent nationwide decline in inventory levels due to larger and more frequent purchases by cannabis consumers in most states. Headset reported that US cannabis retailers had average inventories equal to 5.2 weeks of demand prior to COVID and 4.5 weeks of demand at the end of the third week of March.<sup>20</sup> Inventories have been hit even harder in California where average supplies fell from 4.7 weeks of inventory prior to the pandemic to 3.3 weeks of inventory in late March.<sup>21</sup>

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<sup>12</sup> Kryptoszene. Retrieved from: [https://kryptoszene.de/rising-cannabis-demand-in-eye-of-the-coronavirus-sales-up-to-90/?\\_cbnsid=660bcd4089866e64fd0e.158638676562f57](https://kryptoszene.de/rising-cannabis-demand-in-eye-of-the-coronavirus-sales-up-to-90/?_cbnsid=660bcd4089866e64fd0e.158638676562f57)

<sup>13</sup> <https://www.globenewswire.com/news-release/2020/03/27/2007847/0/en/Akerna-Flash-Report-Medical-Cannabis-Sales-in-CO-Up-57-During-Week-of-Panic.html>.

<sup>14</sup> <https://www.inquirer.com/health/coronavirus/coronavirus-medical-marijuana-sales-dispensaries-pennsylvania-nj-20200320.html>

<sup>15</sup> <https://www.nevadacurrent.com/blog/americans-stocking-up-on-cannabis-as-advocates-work-to-ensure-medical-supply/>

<sup>16</sup> <https://www.globenewswire.com/news-release/2020/03/27/2007847/0/en/Akerna-Flash-Report-Medical-Cannabis-Sales-in-CO-Up-57-During-Week-of-Panic.html>. March 27, 2020 14:04 ET | Source: Akerna Corp.

<sup>17</sup> Mitchell, Thomas (March 29, 2020). "Denver Pot Sales Jump 392 Percent During March 23 Shutdown Scare". Westword. Denver.

<sup>18</sup> [https://mjbizdaily.com/chart-medical-marijuana-sales-in-oklahoma-near-300-million-in-first-five-months-of-2020/?utm\\_medium=email&utm\\_source=newsletter&utm\\_campaign=MJD\\_20200609\\_News\\_Daily](https://mjbizdaily.com/chart-medical-marijuana-sales-in-oklahoma-near-300-million-in-first-five-months-of-2020/?utm_medium=email&utm_source=newsletter&utm_campaign=MJD_20200609_News_Daily)

<sup>19</sup> 7.34.4.7(D) NMAC

<sup>20</sup> Headset. <https://www.headset.io/posts/headset-coronavirus-and-its-effects-on-cannabis-markets>

<sup>21</sup> Headset <https://www.headset.io/posts/headset-coronavirus-and-its-effects-on-cannabis-markets>

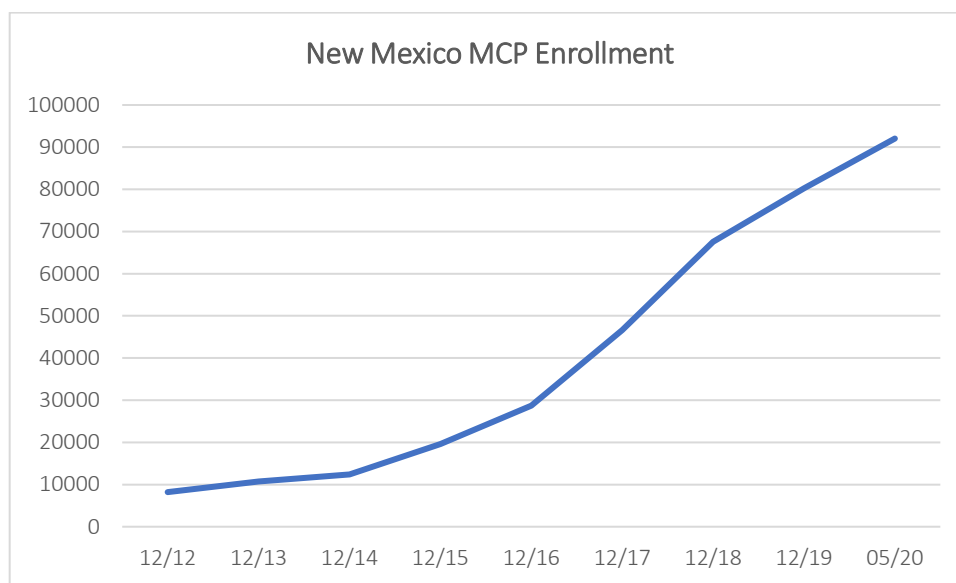


## Inadequate Supply: A Pre-Existing Condition

Even prior to the current crisis, demand for medical cannabis in New Mexico greatly outpaced supply, inflating prices and limiting the variety of products and strains available to New Mexico consumers.

Enrollment in New Mexico’s medical cannabis program increased by over 1,000 percent between December 2012 and May 2020 (Figure 5). Increased enrollment has been accompanied by growth in the number of purchases and the amount purchased per transaction. New Mexico LNPPs experienced a 44 percent increase in sales in the 12 months between Feb 2019 and Feb 2020.

Figure 5



In large, robust, and appropriately regulated legal markets intense competition results in lower prices. Comparing the average price of medical cannabis in Colorado (\$3.28/gram) to the average price in New Mexico (\$11.64/gram) makes evident the profound impact that supply constraints imposed by NMDOH have had on price. Although enrollment in New Mexico’s MCP (89,900) now exceeds that of Colorado (82,000), in 2019 producers of medical cannabis in Colorado had 286,299 plants under cultivation, ten-times more than the 26,098 plants New Mexico LNPPs were authorized by state regulators to cultivate.

It is important to note that patient enrollment and sales statistics do not reflect demand that is never evidenced in the legal marketplace due to limited product variety and inflated prices. MCP enrollment does not equal access for many New Mexico patients, due to high prices and limited supply. The “silent demand” of New Mexico patients is instead expressed in the illicit cannabis market and at Colorado dispensaries.<sup>22</sup>

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<sup>22</sup> Ruling in *Nicole Sena and New Mexico Top Organics - Ultra Health v. New Mexico Department of Health and Lynn Gallagher*, case no. D-101-CV-2016-01971, Judge David K. Thompson acknowledged the existence of “‘pent-up’ demand from patients who are not enrolled in the program precisely because they do not have access to medicine,” further noting that, because it is not evident in the legal marketplace, “this demand is essentially silent.”

## Escalating Economic Hardship Will Further Limit Patient Access

COVID-19 has had a profound impact on the New Mexico economy. Medical cannabis is already unaffordable for many New Mexico cardholders, with a three month “adequate supply” costing about \$2,400 or over \$10,000 a year. The most recent quarterly data from DOH shows prices increasing by 13 percent, from \$10.26/gram to \$11.64/gram in first three months of 2020. Furloughs and widespread unemployment will further impede access for many New Mexico patients who struggle to afford their medicine under ordinary circumstances.

## Access to Medication is More Critical Than Ever

The State of New Mexico has recognized the state’s licensed cannabis producers as providers of “essential services.”<sup>23</sup> Cannabis is used to treat a variety of physical and behavioral health conditions. It is also widely used to combat anxiety and stress.

MCP participants are a medically vulnerable population. Some are immunocompromised and thus at greater risk from COVID-19 and the majority have qualifying conditions that are likely to be exacerbated by features of the pandemic including social isolation, joblessness, restricted access to healthcare, and anxiety about the future.

Unexplained deaths are up 20 percent in New Mexico and conditions related to the pandemic are a likely cause.<sup>24</sup> A recent national study found a significant spike in nationwide mortality during March 2020 that was not directly attributable to COVID-19. The study’s authors attribute the 28 percent increase in non-COVID deaths, in part, to changes in behavior brought about by strict lockdown measures.<sup>25</sup> In a poll conducted by the Kaiser Family Foundation in April 2020, 45 percent of U.S. adults reported that the pandemic has negatively impacted their mental health<sup>26</sup> and the 11.7 percent year-over-year increase in U.S. opioid fatalities observed in the first four months of 2020<sup>27</sup> appears to bear this out. Importantly, researchers note that the mental health consequences of the pandemic, including suicidal behavior, are likely to persist well into the future and may get worse before they get better.<sup>28</sup>

Cannabis is widely used to treat the anxiety that is a primary or secondary symptom of the chronic health conditions that qualify patients for enrollment in the Medical Cannabis Program. Anxiety can also exacerbate the pain and other symptoms of qualifying conditions. Patients may increase their cannabis consumption as their symptoms intensify, their need for relief from anxiety and chronic pain escalates, and their access to other forms of treatment is diminished. In two separate nationwide surveys

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<sup>23</sup> <https://www.leafly.com/news/health/covid-19-and-medical-marijuana-patients-what-you-need-to-know>

<sup>24</sup> Boetel, R. & Kaplan, E. (2020, July 5). Shadow deaths of the virus. Albuquerque Journal. Retrieved from: <https://www.abqjournal.com/1472694/shadow-deaths-of-the-virus.html>

<sup>25</sup> Weinberger DM, Chen J, Cohen T, et al.(2020) Estimation of Excess Deaths Associated With the COVID-19 Pandemic in the United States, March to May 2020. JAMA Intern Med. Published online July 01, 2020. doi:10.1001/jamainternmed.2020.3391 and Reger, M.A., Stanley, I.H. & Joiner, T. (2020). Suicide Mortality and Coronavirus Disease 2019—A Perfect Storm? JAMA Psychiatry. Published online April 10, 2020. Retrieved from: <https://jamanetwork.com/journals/jamapsychiatry/fullarticle/2764584>

<sup>26</sup> Kirzinger, A., Kearney, A., Hamel, L. & Brodie, M. (2020, Apr 02) KFF Health Tracking Poll - Early April 2020: The Impact Of Coronavirus On Life In America <https://www.kff.org/coronavirus-covid-19/report/kff-health-tracking-poll-early-april-2020/>

<sup>27</sup> <https://www.politico.com/news/2020/06/29/pandemic-unleashes-a-spike-in-overdose-deaths-345183?cid=apn>

<sup>28</sup> Sher, L. (2020). The impact of the COVID-19 pandemic on suicide rates, QJM: An International Journal of Medicine, Retrieved from: <https://academic.oup.com/qjmed/article/doi/10.1093/qjmed/hcaa202/5857612>

conducted in March 2020, 40 percent of medical cannabis consumers said they had increased their cannabis consumption since the COVID-19 pandemic began, with many citing stress and anxiety about the pandemic as reasons increased use.<sup>29, 30</sup>

## Supply Limitations Undermine COVID19 Containment Measures

Increasing the supply of medical cannabis would support COVID-19 containment measures by reducing dispensary foot traffic, intra- and inter-state travel, and illicit market activity.

Limitations on the quantities and varieties of available cannabis products make it necessary for some patients to visit multiple dispensaries to obtain the products that they need. Traveling to multiple dispensaries puts these patients at heightened risk for contracting and spreading COVID-19. This is particularly problematic for the many immuno-compromised patients and caregivers in New Mexico's MCP who are more vulnerable than the general population to COVID-19 and its potential complications.

Supply constraints may also encourage patients who typically obtain cannabis from regulated sources to seek out illicit suppliers. Forty-five percent of cannabis consumers surveyed said that they would seek alternative supplies if access to their regular sources was cut off due to the pandemic.<sup>31</sup>

## New Mexico's Regulated Cannabis Market is Vulnerable to Disruption

The relatively small number of producers and tight plant count restrictions make New Mexico's medical cannabis market especially vulnerable to disruption from COVID-19. Exit from the market by even one or two LNPPs could dramatically curtail supply. In addition, New Mexico's cannabis producers, like businesses nationwide, face a number of challenges due to COVID-19 including disruptions in the supply of critical commodities such as packaging, cleaning supplies and protective gear. Staffing shortages and limitations on contact further threaten to slow supply by impeding retail, harvest, and manufacturing. Unlike most other businesses impacted by the COVID-19, medical cannabis providers do not qualify for federal relief programs or loans from traditional financial institutions, leaving them ill-equipped to financially weather the pandemic.

## Increase Plant Count to Stabilize Market and Protect Patients

The most obvious solution to New Mexico's medical cannabis shortage is to allow LNPPs to produce more by loosening restrictions on plant count. An increase in supply would also help bring New Mexico's prices more into line with those of neighboring states that have not restricted supply to the degree that New Mexico has.

Binding restrictions on plant count, such as those imposed in New Mexico encourage producers to make adaptations to maximize yield per square foot. To maximize yield from the limited number of plants they are allowed to cultivate, New Mexico producers grow in 14-16 week cycles, producing large plants with

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<sup>29</sup> New Frontier Data. Retrieved from: <https://newfrontierdata.com/cannabis-insights/change-in-cannabis-use-since-outbreak-of-covid-19/>

<sup>30</sup> <https://finance.yahoo.com/news/goldenseed-survey-40-marijuana-users-140010998.html>

<sup>31</sup> <https://finance.yahoo.com/news/goldenseed-survey-40-marijuana-users-140010998.html>

high yields. While shorter life cycles are possible and even preferable, they yield less product per plant. Increased plant count will enable LNPPs to respond to heightened demand by growing in shorter cycles, harvesting more plants at a faster rate, and decreasing the amount of time it takes to make usable flower accessible to patients.

Medical cannabis is perhaps the only commodity over which New Mexico has complete supply control. The state therefore has the power to mitigate the negative impact of shortages on the patient population.

Even in the unlikely event that demand does not continue its rapid rate of increase, loosening supply constraints will benefit medical cannabis patients. As noted previously, New Mexico's medical cannabis price exceeds that of neighboring states by as much as 300 percent. High prices are one reason New Mexico patients travel to Colorado and/or obtain their medicine from unregulated (illicit) sources. Restrictive plant counts are a major contributor to the price disparity. **As has been the case in other states, allowing commercial producers to produce enough cannabis to meet patient demand will likely result in lower prices.**

## Conclusion

Medical cannabis is one of few essential commodities over which New Mexico has complete supply control. The State of New Mexico has recognized LNPPs as providers of essential services and it is critical that medical cannabis remains available to qualified patients throughout the pandemic and recovery. Current inventories are not adequate to assure uninterrupted access and recent price spikes further restrict access for many patients. It is also important that LNPPs be able to maintain inventories sufficient to assure supply in the event of another public health crisis. The State can help LNPPs meet the growing patient demand by increasing the number of cannabis plants under cultivation. Increasing supply would both bolster flagging inventories and reduce upward pressure on cannabis price, lessening the negative impact of COVID-19 on medical cannabis patients.

## Appendix: Data Issues at NMDOH Obscure A Serious Problem

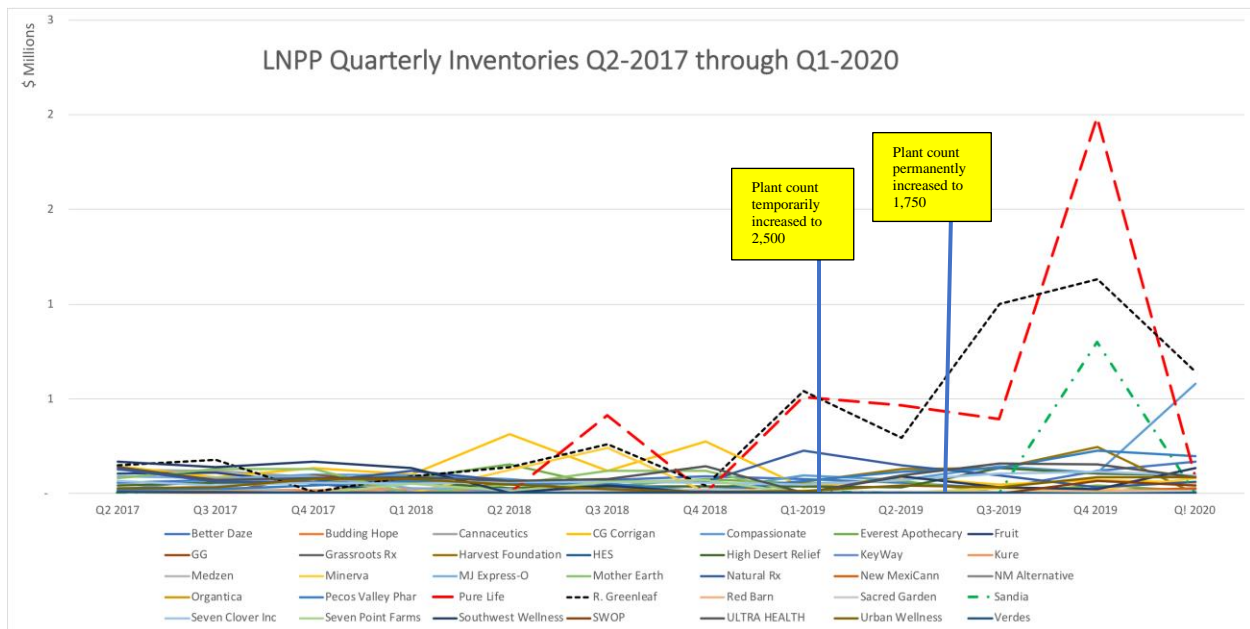
Erroneous and misleading data published by the New Mexico Department of Health has helped to obscure the magnitude of New Mexico’s medical cannabis shortage and fostered a false sense of complacency among regulators and industry stakeholders.

The MCP’s Q4 2019 quarterly report, issued in February 2020, reported 6,248,514 grams of usable flower and bud in stock as of December 31, 2019. This amount, if accurate, would equate to nearly 14,000 pounds and constitute more than half of the amount of flower and bud sold to patients for the entirety of 2019.

The inventory section of the Q4 report contained at least seven significant errors that inflated the statewide inventory total by over 300 percent. Inconsistencies between amounts reported to NMDOH and the aggregated totals reported by the Department point to aggregation errors by NMDOH, while incongruous self-reported inventories point to the need for standardization and administrative review of LNPP self-reports prior to aggregation.

Although at least 7 LNPPs are mis-represented in the Q4 totals published by NMDOH, three LNPPs – Sandia Botanicals, R. Greenleaf, and Purlife - account for the majority of the inventory overage.

Figure 6



The original Q4 2019 report submitted by Sandia Botanicals to the Department of Health shows a year-end inventory of 4,479 grams. In contrast, the NMDOH report that aggregated the self-reported data shows Sandia Botanicals with 801,700 grams of flower and bud in inventory at year end, an amount that exceeds the LNPP’s total 2019 sales. A comparison of the original Q4 LNPP reports to the numbers

reported by NMDOH in the 2019 Q4 report highlights several additional aggregation errors that are detailed in Table 1.

LNPP	Self-Reported to DOH	Aggregated & Reported by DOH
Better Daze	121,000	623,000
CG Corrigan	71,000	107,000
Seven Clover	118,000	166,000
Southwest Wellness	23,000	186,000
Sandia Botanicals	4,479	801,700
<b>Total</b>	<b>337,479</b>	<b>1,883,700</b>
<b>Percent</b>	<b>100%</b>	<b>18%</b>

Profound inconsistencies between Q4 2019 inventories, prior quarter inventories, and production reported by R. Greenleaf and Purlife suggest self-reporting errors that NMDOH did not catch prior to publishing the data. LNPP PurLife reported over 1.9 million grams in inventory at the end of 2019. Purlife acknowledged the error in the Q4 report and estimated that their actual Q4 inventory was between 300 and 400 lbs (134,400 to 179,200 grams). RGO provided no supplementary information, so the highest seemingly accurate quarterly inventory reported by any LNPP in 2019 was substituted to correct for their apparent error. Table 2 shows original and corrected self-report errors.

	Reported	Corrected	Difference
Purlife	1,131,030	156,800	974,230
RGO	1,987,265	227,000	1,760,265

After correcting for the myriad errors in the Q4 2019 report, the actual inventory at the end of 2019 was approximately 1.9 million grams of useable flower and bud, a value that is comparable to the average supply in the first three quarters of 2019.

Some have attributed the anomalous inventory growth reported by Purlife and R. Greenleaf to plant count increases first authorized by NMDOH in March 2019. However, all 31 LNPPs increased plant count in response to the change and only Purlife and R Greenleaf reported massive Q4 inventory growth. Further, R Greenleaf was among the 19 LNPPs that did *not* take full advantage of the increased plant count, but reported inventory growth well in excess of the 12 LNPPs that did.

In February of 2019, a New Mexico district court ruling nullified the 450 maximum plant count previously imposed by NMDOH. In March of 2019, NMDOH adopted an emergency rule that temporarily increased the maximum plant count to 2,500. In August of the same year, NMDOH adopted a permanent rule that lowered the plant cap to 1,750. Annual licensure fees, which are based on the number of plants, increased accordingly.

Although all 31 LNPPs increased plant count in response to changes, only 12 paid the \$180,000 annual fee required to take full advantage of the higher maximum plant count. Purlife was among the LNPPs that became licensed to grow the full 1,750 plants, but R. Greenleaf, licensed for only 1,000 plants, was not. Q4 inventories reported by the eight LNPPs other than Purlife licensed for the maximum number of plants were an average of 44 percent higher than average inventories for the first half of the year.

Rather than correct the Q4 2019 report, the MCP changed the definition of “inventory” in the Q1 2020 in an apparent effort to better comport with the previous quarter’s erroneous numbers. Users of the Q1 report were not notified of the change, the nature of which could only be ascertained by analyzing the raw data submitted to DOH by producers, which is not available to the public and must be obtained via a written request under the New Mexico Inspection of Public Records Act.