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RWE Report

Lack of Experience Found Within Large Portion of Medical Cannabis Patients

CB2 INSIGHTS – PREDICTIVE ANALYTICS FOR THE GLOBAL CANNABIS INDUSTRY.
BETTER DATA. BETTER INSIGHTS.

About CB2 Insights

CB2 Insights has a mission to mainstream medical cannabis into traditional healthcare. We do so by gathering clinically-validated data and creating objective real-world evidence through our proprietary software and service brands. Leveraging our proprietary software within our wholly-owned, multi-state cannabis evaluation and education centres, CB2 Insights has become a leading force behind bringing traditional healthcare protocols to the rapidly evolving global cannabis industry. Our clinical arm, Canna Care Docs has served more than 300,000 patients looking to integrate cannabis into their treatment regimen. Sail offers a cannabis-specific clinic management platform and data collection tools to support clinics and clinicians across multiple countries. TokeIn is the industry's only customer loyalty and engagement platform built specifically for mobile app usage by cannabis retailers. The parent brand, CB2 Insights, works to build predictive analytics tools from the data ingested from its sub-brands which are used to deliver actionable insights both to its customer base and the industry at-large.

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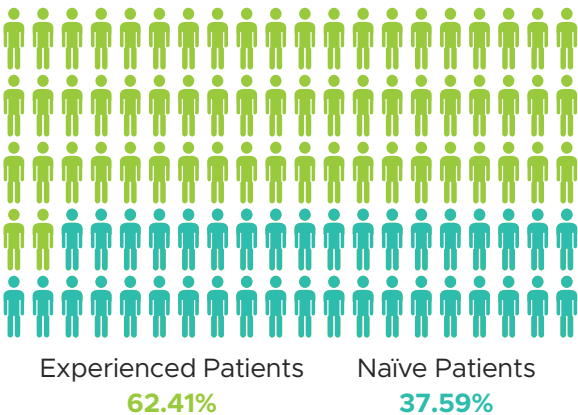
EXECUTIVE SUMMARY

With the US Food and Drug Administration having outlined its new framework for Real-World Evidence at the end of 2018, the ability to shape a greater understanding of the efficacy and trending around cannabis usage continues to grow.

In this study, we look to uncover the experience levels of those patients entering into their state's cannabis program. The study was conducted across 7 states through healthcare practitioner inputs with individual patients at the point-of-care within a clinical setting.
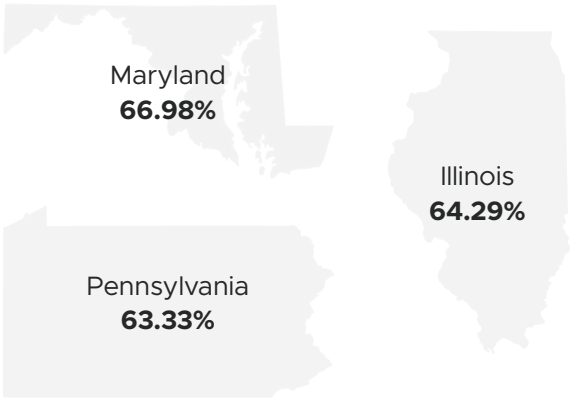
While many patients do have previous experience with cannabis, we find that a substantial portion of patients (37.59%) have little to no previous experience using cannabis. When looking on a state-by-state basis we find that several states have a significantly higher propensity for naïve patient sets. Maryland, Illinois and Pennsylvania all show ~2X the statistical average for inexperienced patients with 66.98%, 64.29% and 63.33% respectively.

This highlights that while all medical cannabis patients should seek out certified support when integrating cannabis into a treatment plan, educational resources are imperative for a substantial amount of patients who are inexperienced. That inexperience also extends to physicians, other practitioners and a wealth of other industry stakeholders as medical cannabis gains more and more traction in today's healthcare world.

New Cannabis Patient Experience Levels

Experienced Patients
62.41%

Naïve Patients
37.59%

Highly Naïve States

Maryland
66.98%

Illinois
64.29%

Pennsylvania
63.33%

LACK OF EXPERIENCE FOUND WITHIN LARGE PORTION OF MEDICAL CANNABIS PATIENTS.

Since 1937, the US government classified cannabis as a Schedule I narcotic, blocking any legitimate medical cannabis research in the country for nearly a century. But after enduring decades of restrictions on usage, commercialization and traditional clinical trials, cannabis is now entering the healthcare market in a substantial way. That said, within this new trajectory there still exists a dichotomy between the millions of people finding a new sense of wellness and a lag in understanding of how cannabis should be effectively integrated into a treatment plan.

While cannabis is considered one of the world's oldest drugs, the truth is that a substantial portion of society has little to no experience with cannabis. A 2017 Yahoo News study shows that 52% of Americans have tried cannabis at least once in their lifetime, and of that, 44% continue to use[1] on a regular basis. While this number is often used to show that many Americans have, in fact, tried cannabis, it also reveals that nearly half of Americans have never tried cannabis.

Therefore, what this perpetual history of legal limitations has done – and even the limitations that currently exist within the US federal narcotic classification – is provide years of deep-rooted misinformation to the public. Not only through an intrinsic stigma related to cannabis, but even more so from the overtly negative cannabis campaigns that have played in the background of our lives – think Just Say No.

The Public Now Says Yes

Times though, they are changing. When comparing the number of Americans who have tried cannabis with those that agree with its legalization, the support for new regulations becomes very clear.

A Pew Research poll conducted during the 2018 Midterm Elections revealed that 62% of voters agree with legalization of cannabis for recreational purposes[2]. That lands 10 percentage points higher than those that Yahoo News found to have tried cannabis in the past. And a Harris Poll / Health Day study found that 85% of Americans believe medical cannabis should be legal[3]. That lands more than 30 percentage points higher than those who have admitted to using cannabis even once in the past. That resounding sentiment has been reflected fully in the voting booth.

In 2018, Michigan became the 10th state to legalize recreational usage during the midterms and Utah and Missouri also passed medical cannabis legalization. This followed Oklahoma's vote to legalize medical cannabis in June. And at the start of 2018, Vermont was the first state to legalize cannabis strictly through the legislature rather than a ballot initiative.

The midterms also resulted in a shift in many state governorships that experts believe will translate into new cannabis regulations over the next 12 months. Newly elected Governor Ned Lamont of Connecticut has pledged to make legalization a priority in 2019[4]; Illinois' incoming Governor J.B. Pritzker confirmed he wants to pursue full legalization "nearly right away"[5] and Minnesota's new Governor Tom Walz has pledged similar sentiment for 2019[6]. New Jersey[7], New Mexico[8], New York[9] and Rhode Island[10] also fall into that bucket and while New Hampshire's Governor has gone on record saying he will veto any pro-cannabis legislation, with Democrats now taking over both chambers of the state legislature, the incoming House speaker believes there is enough support to override any veto brought by the Governor[11].

In the medical space, two newly appointed Governors in Kansas[12] and Wisconsin[13] also appear to be heading towards legalization of medicinal cannabis within the year.

A Patient's Need for Real Education

So where does this newfound momentum in the industry leave us? A history of misinformation; a near 50/50 split on usage experience throughout the US; an overwhelming acceptance that cannabis is here to stay; new state regulations and frameworks being created on a near-quarterly basis. The need for real, data-driven education to all industry stakeholders is imperative – now more than ever. Whether education directly at regulatory bodies, physicians, the patient community, pharmaceutical companies, academia, law enforcement, cannabis producers, the list goes on. The industry has crossed the proverbial tipping point, and the lack of information, research and educational services has become glaring.

Make a quick Google search and you'll find there are countless websites, blogs and news articles that try to tackle the *What Should I Know* for first-time medical cannabis users. And while you can find plenty of writings by well-intentioned healthcare professionals and other industry experts, the reality is that the effects and benefits of cannabis can only be found on an individualized basis.

A patient's existing condition, other secondary conditions, previous or current medications, hundreds of strains and many consumption methods, various ratios of CBD to THC within each product are all factors in how one should integrate cannabis into their treatment plan. There are so many variables that self-medicating through strain reviews and cannabis 101 blogs has a very slim chance of actually providing maximum medicinal benefits.

Compound that with a study released by the Journal of Pharmacy Practice in December 2018 that states that 76% of claims related to cannabis on the internet were inaccurate[14] and only 10% made appropriate cause and effect conclusions. So it becomes easy to see that the chances are more likely that patients will find misinformation online than receiving any true medical assistance.

And although for years public perception has been that many medical cannabis patients were simply regular cannabis users that are looking for a legal path to access, as you will see below, the data shows the truth sits far away from that assumption.
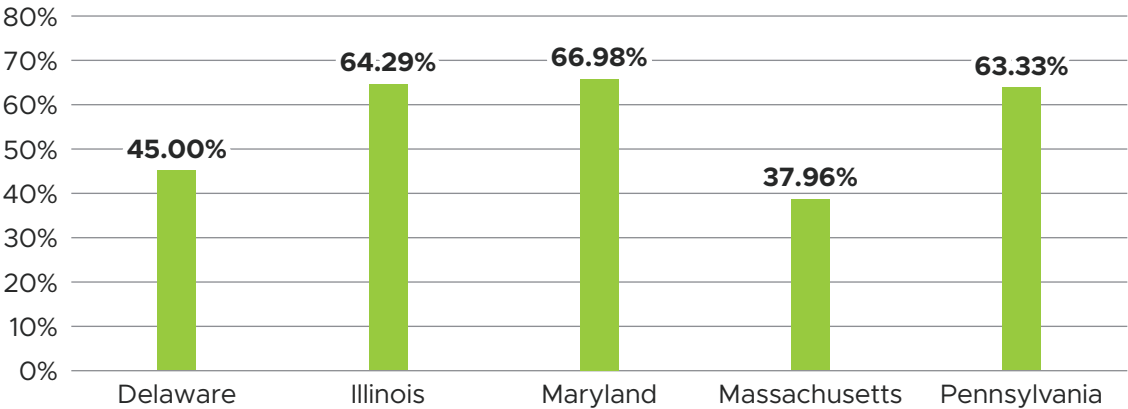
STUDY SUMMARY.

The study found that over a third of patients seeking medical cannabis as a therapy have little to no experience prior to visiting with a healthcare provider. When looking at over 1,600 patients across 7 different states, all with established medical cannabis frameworks that vary in both the level of restrictions found in the framework and the framework's maturity, the study finds that 37.59% of patients have little to no experience with cannabis. Based on the data collection of this study, we categorize "little experience" as having previously used cannabis but not within the past three years. Most commonly, we find that past usage was less than a handful of times and only within a social setting – not used for therapeutic reasons. Drilling down even further, those with no experience at all accounted for 22.35% of total patients.

The majority of patients do currently use cannabis frequently with 46.75% stating they use it daily, 12.20% stating they use it weekly and only 3.47% stating they use it on a monthly basis. These numbers do shift when you look at the data on a state-by-state basis.

Within the study, it shows that Massachusetts and Delaware each have a higher-than-average percentage of naïve patients at 37.96% and 45.0% respectively. That said, Maryland, Illinois and Pennsylvania all represent the states with the greatest percentage of naïve patients, all with more than 60% of patients who have little to no experience.
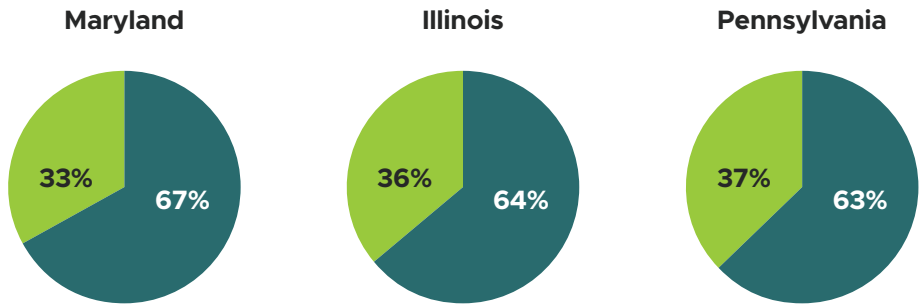
Highly Naïve States by Percentage

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We refer to these three state as *Highly Naïve* states and they represent a substantial increase to the statistical average across all patients. Whatever the reason –be it political, cultural, etc.– what this undoubtedly sheds light on is that a deeper level of education for patients seeking to integrate cannabis into their treatment regimen is critical.

The source of that education, however, remains sparse given that, for example, the Journal of Clinical Oncology found that nearly half of American Oncologists had recommended medical cannabis to patients but only 30% felt sufficiently informed to make those recommendations[1]. But the same holds true even in Canada – a remarkably mature medical cannabis market. A 2015 study by the BMC Medical Education Group found that even after more than a decade of medical cannabis legislation in Canada, 70% of physicians said they would be better able to treat patients using medical cannabis if they had more education, citing their lowest levels of knowledge were around dosing and creating effective treatment plans.

Highly Naïve States

As stated above, Maryland, Illinois and Pennsylvania show extremely high levels of naïve patients. Maryland was the highest at 66.98%; Illinois was second with 64.29%; and Pennsylvania at 63.33%. This group is clearly in greater need of educational support when integrating cannabis into their treatment plans. This can be available to patients from their primary care physician, a cannabis specialty clinic or from retail outlets – all providing varying levels of understanding. It is not a stretch to believe, however, that a good portion of these patients seek out information in peer support groups, online blogs and friends.

■ Little to No Experience   ■ Experienced

Maryland	Illinois	Pennsylvania

Let's take a closer look at Maryland. Maryland finished its first full year of its medical cannabis program in December of 2018 and the state recorded nearly 52,000 medical cannabis patients within that first year[2]. Based on this study, that would put tens of thousands coming into the program as highly naïve patients.

Now, the Maryland Medical Cannabis Commission[3], the arm of the state government that develops policies, procedures and regulations around the state's cannabis program proves that Maryland is acutely aware of the need for high levels of resourcing and education for cannabis treatment. Aside from policy issues, the MMCC holds patient registration events and houses a resource library online of all licensed retailers and growers in the state. But they have also gone a step further and launched a grant program, The Medical Cannabis Educational and Business Development Training Programs, to help generate a greater focus on cannabis education throughout the state. These types of programs are imperative to allow for real education and understanding to meet the surging demand in cannabis treatment.

Study Protocols

Seventeen medical cannabis clinics across 7 states in which legal medical cannabis frameworks exist provided data over a 6-week period. For patients who were eligible to receive medical cannabis, data was collected by a licensed healthcare practitioner utilizing standardized electronic case report forms.

Patients who had visited the evaluation center at least once prior to the reporting period and had previously received a medical cannabis authorization were excluded from the study. The reason for this was to eliminate profiles who immediately came with a known usage within the past 12 months and therefore only look at new patients entering the medical cannabis program in their state.

Along with cannabis experience levels, patient conditions, symptoms, current medications, other treatments or therapies and additional patient characteristics were captured. Descriptive statistics were tabulated by a data analyst.

The Basics

The Basics - Study Specific

Starting Date of Data	29-Nov-18
Closing Date of Data	14-Jan-19
Total Length	6 weeks plus 4 days
Number of States in Study	7 (CT, DE, IL, MD, MA, PA, RI)
Number of Clinics in Study	17
Categories of Experience	5
Naïve Patient Categories	No Experience, Little Experience
Experienced Patient Categories	Daily, Weekly, Monthly

Experience Level Overview

Experience Overview	Total	Percentage
Total Patients	1615	100.00%
Patients with No Experience	361	22.35%
Patients with Little Past Experience	246	15.23%
Patients with Little to No Experience (total)	**607**	**37.59%**
Patients with Experience (Daily)	755	46.75%
Patients with Experience (Weekly)	197	12.20%
Patients with Experience (Monthly)	56	3.47%
Patients with Regular Experience (total)	**1008**	**62.41%**

Note: "Little Past Experience" is defined as someone who has not used cannabis in more than 3 years or has used it less than 5 times and only in social settings – not for therapeutic purposes.

Experience Level Overview – By State

By State	No Experience (%)	Little Experience (%)	Total Naïve	Monthly Use (%)	Weekly Use (%)	Daily Use (%)	Total Experienced
Connecticut	11.57%	12.40%	**23.97%**	2.48%	10.74%	62.81%	**76.03%**
Delaware	25.00%	20.00%	**45.00%**	2.50%	15.00%	37.50%	**55.00%**
Illinois	57.14%	7.14%	**64.29%**	0.00%	21.43%	14.29%	**35.71%**
Maryland	50.00%	16.98%	**66.98%**	3.77%	7.55%	21.70%	**33.02%**
Massachusetts	22.16%	15.79%	**37.96%**	2.18%	12.13%	47.73%	**62.04%**
Pennsylvania	33.33%	30.00%	**63.33%**	0.00%	13.33%	23.33%	**36.67%**
Rhode Island	9.48%	11.21%	**20.69%**	2.59%	8.62%	68.10%	**79.31%**

State by State Overview

States with Legal Medical Programs (34 + DC)

Note: Includes South Carolina

Alaska	Maine	North Dakota
Arizona	Maryland	Ohio
Arkansas	Massachusetts	Oklahoma
California	Michigan	Oregon
Colorado	Minnesota	Pennsylvania
Connecticut	Missouri	Rhode Island
Delaware	Montana	South Carolina
DC	Nevada	Utah
Florida	New Hampshire	Vermont
Hawaii	New Jersey	Washington
Illinois	New Mexico	West Virginia
Louisiana	New York	

States with Legal Recreational Cannabis Programs (10)

Alaska	Massachusetts	Vermont
California	Michigan	Washington
Colorado	Nevada	
Maine	Oregon	

States with Possible Recreational Program Launches in 2019 (7)

Connecticut	New Jersey	New York
Illinois	New Mexico	Rhode Island
Minnesota		

States with Possible Medical Program Launches in 2019 (2)

Kansas	Wisconsin

States with No Program or No Known Timeframe (13)

Alabama	Kentucky	South Dakota
Georgia	Mississippi	Tennessee
Idaho	Nebraska	Virginia
Indiana	North Carolina	Wyoming
Iowa		

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The views and opinions expressed in this document are meant to generate thought and discussion and are in no way meant to provide substantive medical opinion to patients, healthcare practitioners or other readers. Medical cannabis has many applications, product strains and consumption methods and it is the opinion of CB2 Insights that despite millions of Americans who look to medical cannabis as a treatment option, a deeper understanding towards the efficacy of cannabinoid therapy is still required before providing full guidance in this area. Please consult with your physician before integrating cannabis into any treatment regimen.

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