2022 Cannabis Conditions Report

A complete look at user medical conditions and cannabis treatment throughout 2022.

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Acknowledgments

Introduction

A recent Harris Poll survey showed that 91% of adults who use cannabis do so for health and wellness reasons. However, for a good part of the last century, cannabis has been construed as a harmful drug, and physicians have been reluctant to learn or talk about cannabis use with their patients.

Because of the negativity associated with cannabis and its legal status at the federal and state levels, cannabis research and education must play catch up. The internet is rife with misinformation about cannabis and its various effects and benefits. Many individuals think cannabis users are lazy and unmotivated, just want to get high, and cannabis has no medicinal benefit. Some individuals even believe that the medical cannabis doctors are recommending cannabis to patients just to make money and give it to everyone without justification.

Our goal with this annual conditions report is to understand why individuals choose to use medical cannabis, the conditions that cause them to seek a medical cannabis card in their state, and how factors such as age, gender, state, and region – and the information available to patients as a result of these factors – affect patients and their ability to get treatment. We intend for our findings to inform medical professionals, legislators, journalists, and other cannabis and healthcare companies on why individuals may seek to use medical cannabis and how they can support those patients through improved access to information and services. We believe that education about medical cannabis within these professions can help us gain more advocates for expanding access to medical cannabis around the nation, which will allow more individuals to pursue a happy and healthy life.

We also want medical cannabis patients to see that they are not alone in their journey of seeking to use medical cannabis, whether they are seeking relief for common conditions or symptoms, or if they are struggling to find reliable information from doctors and researchers about how best to use medical cannabis for their symptoms.

As the nation's leading medical marijuana technology platform, NuggMD has connected over 1,000,000 patients with state-certified medical marijuana doctors via our proprietary telemedicine platform. NuggMD operates in 19 states, including California, Connecticut, Illinois, Iowa, Maine, Maryland, Massachusetts, Michigan, Missouri, Montana, Nevada, New Jersey, New York, Ohio, Oklahoma, Pennsylvania, Texas, Virginia, and West Virginia. At NuggMD, we believe every individual should have the right to explore medical cannabis and its benefits. By providing patients with access to the information, support, and licensed medical practitioners, we can help individuals understand and explore all their options for entering their cannabis wellness journey.

Hypothesis

The Cannabis Conditions Report was developed to help answer questions such as:

- What conditions do patients commonly seek medical cannabis for in the United States?
- How do these conditions vary by geographic region, age, and gender identity?
- How do these factors (location, age, gender identity) affect the reasons an individual is seeking to use medical cannabis?

Additionally, we set out to understand whether or not patients are comfortable exploring medical cannabis as a possible approach to treating their condition and symptoms. We believe that a lack of reliable information online may reduce patient and provider confidence when discussing the addition of medical cannabis to a treatment regimen. Lastly, we sought to answer the question of whether the comfort level of the patient and variations of qualifying conditions can affect the medical professional's ability to provide the best care.

The team at NuggMD hypothesized that there would be a significant difference in the conditions for which patients sought to use medical cannabis. Not only would these variances be based on age and gender identity, but the geographic region – as a result of qualifying conditions – would also play a role. For example, individuals aged 45 and over are more likely to seek medical cannabis for cancer than individuals under 45.

By supplementing our current data with further patient surveys and additional research, we can learn more about the variances in condition, age, gender, and region. From this data, we can also prepare state regulators, medical professionals, patients, and advocates to make the most informed decisions regarding medical cannabis use and push for the expansion and legalization of medical cannabis programs, as well as improve patient access to reliable and relevant information.

Methods

Pre-evaluation data was collected via patient sign-ups on NuggMD over a twelve-month period from June 2021 to May 2022. Over 211,000 patients submitted information, which was anonymized prior to review to protect patient privacy. The data collected was then segmented into groups based on patient age, gender identity, and state of residence. The data was separated in order to assess for any correlations between gender identity, age, or geographic region and higher or lower medical cannabis use for certain conditions. Further research was conducted by our team to either support or refute the findings for patients' conditions that had a significant variance based on their age, gender identity, or geographic region.

In a follow-up survey of 1,095 patients, the NuggMD team asked questions to assess the following:

- The perceived benefits of cannabis use for medical conditions

- The confidence in the information that is available on cannabis and the condition

- The confidence in speaking with their doctor about cannabis use for their condition

- Any elements of the patient's medical history that could be a factor in influencing and informing the decision to use medical cannabis

- How other treatment and medication plans may be affected by the use of medical cannabis.

It is important to recognize the need for further research that includes a larger survey population across all age ranges, gender identities, and geographic areas. We must also acknowledge that it is important to expand our research efforts to include in-person evaluation data, as well as to control for variables regarding participant demographics, like socioeconomic status, and ethnographics, like cultural customs. By gaining this valuable data, we can add important context and better validate or refute this report's findings to provide the most accurate results and to limit the margin of error.

# Findings

Top Conditions in the US
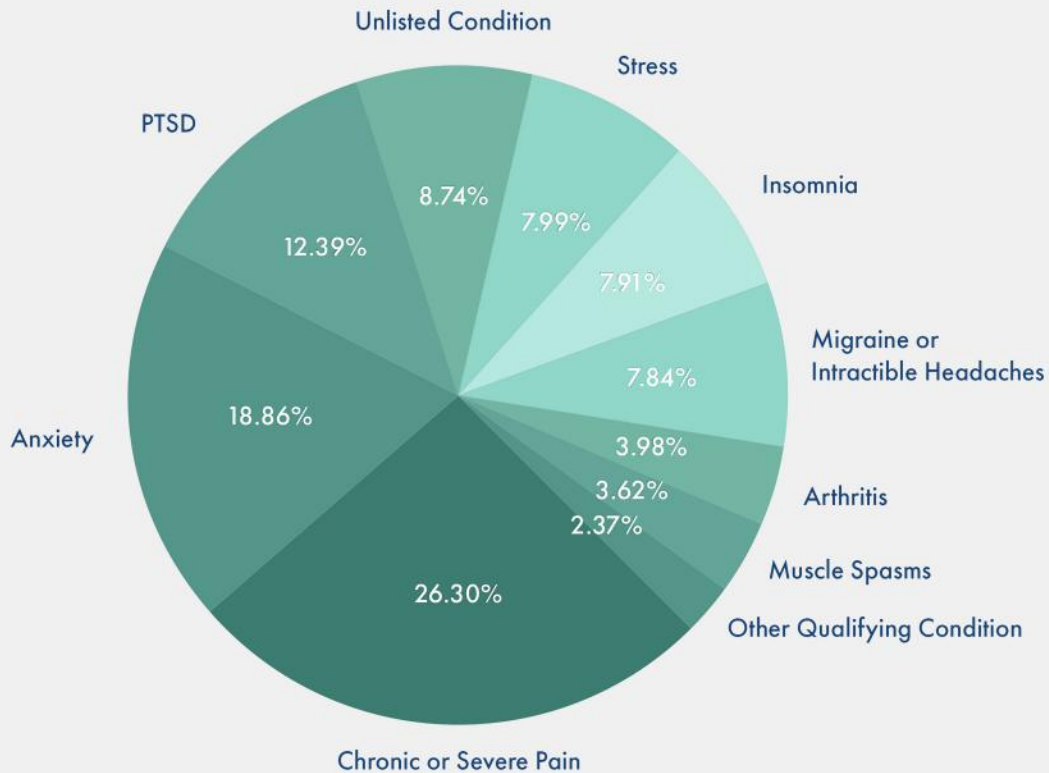
We found in our pre-evaluation data that chronic or severe pain is the most commonly reported condition by patients seeking to use medical cannabis. Of the submissions we received, 26.30% of prospective patients reported having severe or chronic pain. The next most commonly reported conditions are anxiety and PTSD, with 18.86% of respondents listing anxiety and 12.39% listing PTSD.

Interestingly, of the participants, 8.74% selected "Other Condition" rather than a listed condition. This could be due to the patient's primary condition not being considered a qualifying condition in some states and thus not included in our selection of conditions. Likewise, the symptoms they seek to treat using medical cannabis may not have a specific diagnosis. We also determined that 63.77% of all evaluated patients selected multiple conditions when requesting a medical cannabis evaluation. Many conditions have comorbidities or shared symptoms, and it is our belief that a majority of patients who listed multiple conditions – such as anxiety and stress or chronic pain and migraines – did so with the expectation that cannabis could help with each.

Top Conditions by Gender
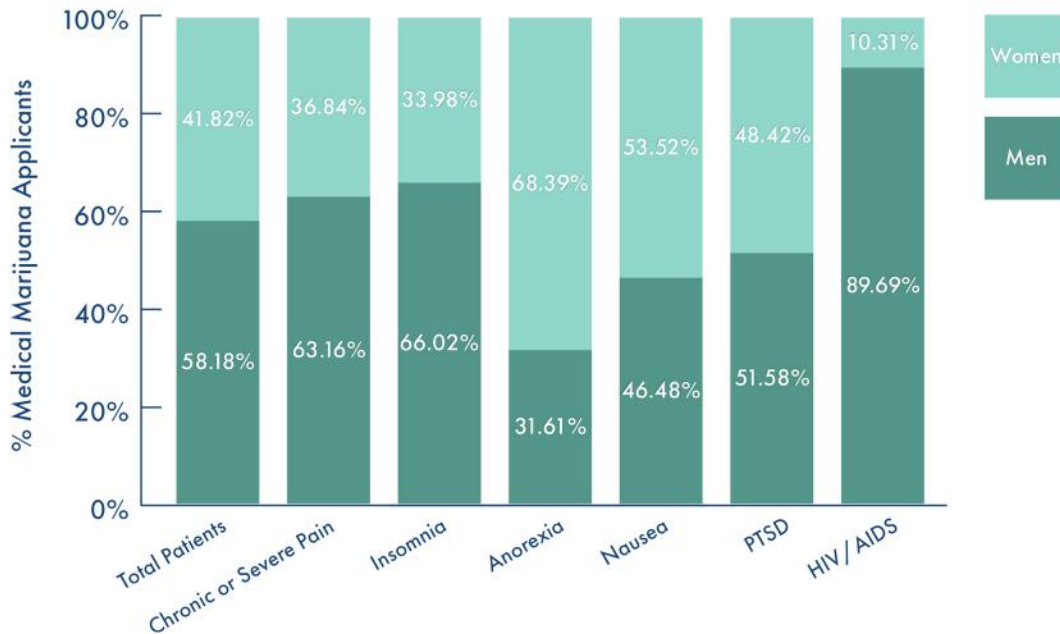
According to the data NuggMD collected, we found that individuals identifying as men accounted for an average of 58.18% of reported patients across the states we serve.

On average, patients identifying as male accounted for a higher percentage of patients seeking medical cannabis for anxiety, chronic/severe pain, insomnia, muscle spasms, neuropathy, inflammatory bowel disease, opioid dependence, and HIV/AIDS. However, patients identifying as female accounted for a higher percentage of patients seeking medical cannabis for arthritis, anorexia, migraines, intractable headaches, nausea, PTSD, and multiple sclerosis.

The splits between self-identifying male and female patients were comparable to national averages for a majority of conditions. Male applicants accounted for 89.69% of all NuggMD patients seeking cannabis for HIV/AIDS, while the CDC claims men accounted for 81% of all new HIV diagnoses in 2018. Likewise, female applicants were 2.16 times more likely to list anorexia as a qualifying condition when applying for medical cannabis, slightly lower than the national average that shows anorexia nervosa is three times as prevalent among females.

Interestingly, male applicants accounted for 66.02% of patients seeking cannabis for insomnia, whereas women are estimated to have a lifetime risk of insomnia up to 40% higher than men. Similarly, women accounted for just 48.42% of PTSD applicants but are believed to experience PTSD at twice the rate of men, according to the U.S. Department of Veterans Affairs.

Top Conditions by age in the US

Analysis of the pre-evaluation data NuggMD collected found that the patients' age significantly impacted what qualifying condition they sought to use medical cannabis for in their state. By age range, patient data on conditions can be broken down as follows.
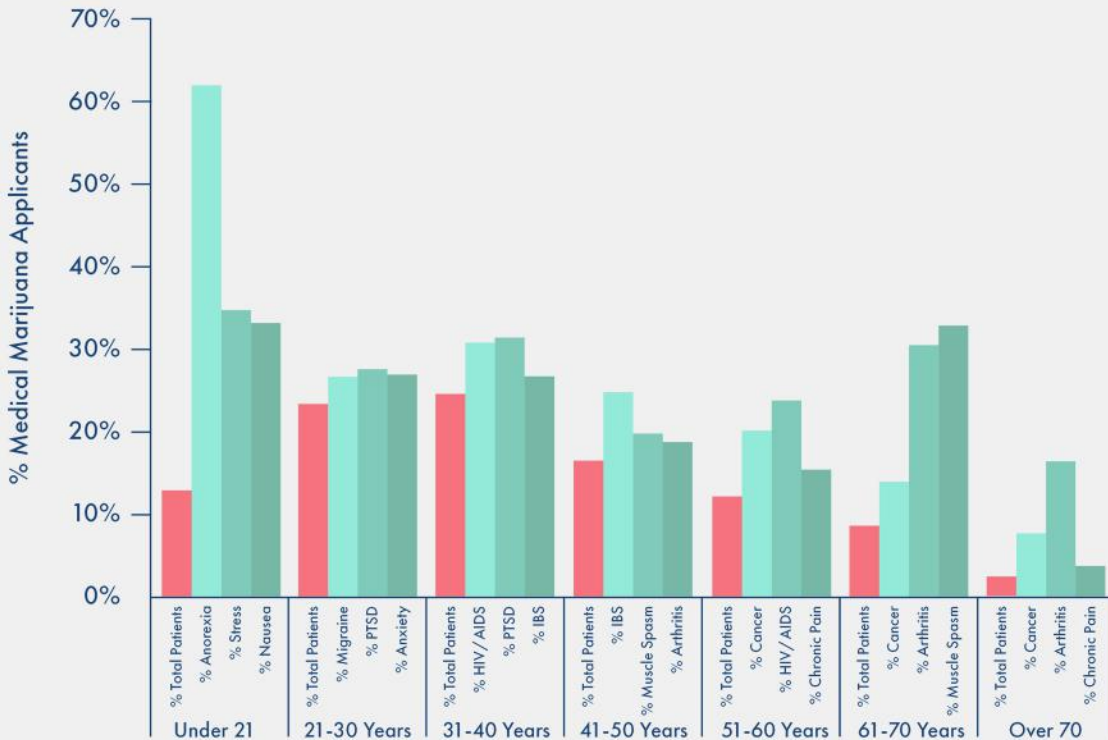
21 and under accounted for 12.79% of participating patients but represented the highest percentage of patients seeking medical cannabis for anorexia (61.57%), stress (34.50%), and nausea (32.95%).

Ages 21 to 30 accounted for 23.20% of participating patients, but represented the highest percentage of patients seeking medical cannabis for migraines/intractable headaches (27.38%), anxiety (26.48%), and insomnia (24.42%).

Ages 31 to 40 accounted for 24.40% of participating patients. Still, they accounted for the highest percentage of patients for HIV/AIDS (31.19%), PTSD (30.60%), and inflammatory bowel disease (IBD) or irritable bowel syndrome (IBS) (26.52%).

Ages 41 to 50 accounted for 16.36% of participating patients, yet accounted for the highest percentage of patients seeking medical cannabis to aid in treatment of muscle spasms (19.62%) and chronic/severe pain (18.29%). These patients also sought medical cannabis at

Ages 51 to 60 accounted for 12.06% of patients we reviewed but did not account for the highest total in any condition. They did, however, have an above-average percentage of patients seeking medical cannabis for cancer, chronic/severe pain, arthritis, HIV/AIDS, muscle spasms, and IBS/IBD.

Ages 61 to 70 accounted for only 8.52% of patients, yet accounted for the highest number of patients who sought cannabis to help treat cancer (32.64%) and arthritis (30.27%). This age group also accounted for an above-average percentage of patients attempting to treat muscle spasms, chronic/severe pain, IBS/IBD, and HIV/AIDS with cannabis.

Ages 71 and over only accounted for 2.7% of participating patients. While they were not the highest total for any condition, they did seek medical cannabis at an above-average rate for cancer, arthritis, chronic/severe pain, muscle spasms, and HIV/AIDS.

These findings largely mirror national trends. As expected, we found that the rate at which patients sought medical cannabis for cancer and arthritis increased with age, in keeping with data reported by the National Cancer Institute and CDC. We also found that over 80% of participating patients who sought cannabis for anorexia were under age 30, while the University of Rochester's Golisano Children's Hospital reports that approximately 90% of anorexia nervosa diagnoses are women age 25 or younger.

Geographical Variation

According to our data, the conditions that patients seek to treat using medical cannabis vary by state and region within the United States. Identifying the variance in medical conditions between states and regions where patients seek to use medical cannabis can help improve doctor and patient education. In addition, legislators and advocates can push for changes to states' medical cannabis programs, like expanding their list of qualifying conditions, to benefit more patients. In our pre-evaluation form, patients often listed multiple conditions. Many reported conditions share comorbidities (i.e., cancer and cachexia, or anxiety and stress).
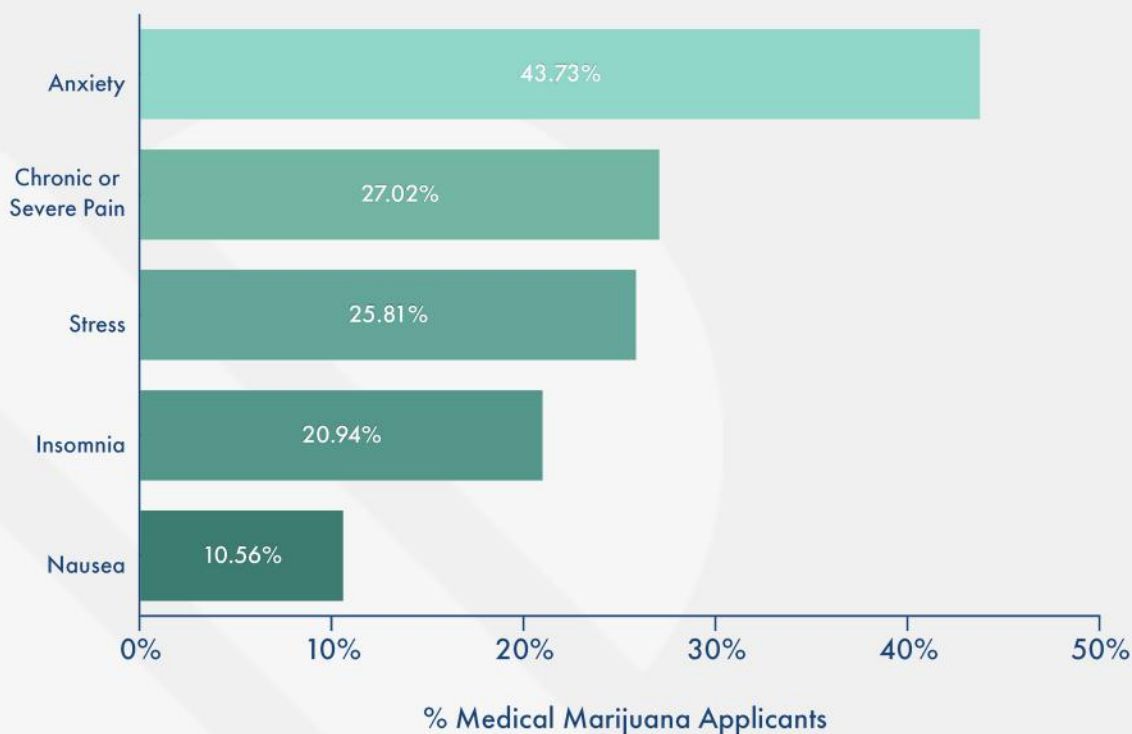
The West
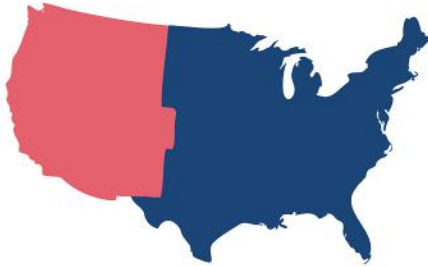
Of the pre-evaluation records, our team reviewed 134,464 from the Western U.S. states of Nevada and California, where NuggMD operates. Much of the pre-evaluation data collected in the Western region came from California. Further studies should be conducted with a greater percentage of participants coming from outside California.

Western Top Conditions

In Nevada and California, the condition patients most frequently sought to treat with medical cannabis was anxiety, with 43.73% listing anxiety (often alongside one or more other conditions). Chronic and severe pain was reported by 27.02% of patients, and stress was reported by 25.81% of participating patients. Looking toward other regions of the United States, the Western region had the highest percentage of patients seeking to use medical cannabis for anxiety, stress, insomnia, anorexia, muscle spasms, nausea, multiple sclerosis, and HIV/AIDS.

Anxiety — 43.73%
Chronic or Severe Pain — 27.02%
Stress — 25.81%
Insomnia — 20.94%
Nausea — 10.56%

% Medical Marijuana Applicants

Western Top Conditions by Gender

Within the Western region, reported conditions by gender were in line with national findings. Individuals who identified as male accounted for 59.46% of all patients reviewed. Our pre-evaluation data found that individuals who identified as male sought medical cannabis as a treatment for conditions like HIV/AIDS, stress, insomnia, chronic or severe pain, and muscle spasms more frequently than female-identifying patients. Male-identifying patients also reported higher rates of cancer, glaucoma, neuropathy, IBS, and opioid dependence or replacement for reasons they sought to use medical cannabis. Female identifying patients only accounted for 40.54% of participants within the Western region; however, they accounted for 65.15% of individuals seeking medical cannabis for anorexia and 51.08% of individuals who reported nausea.
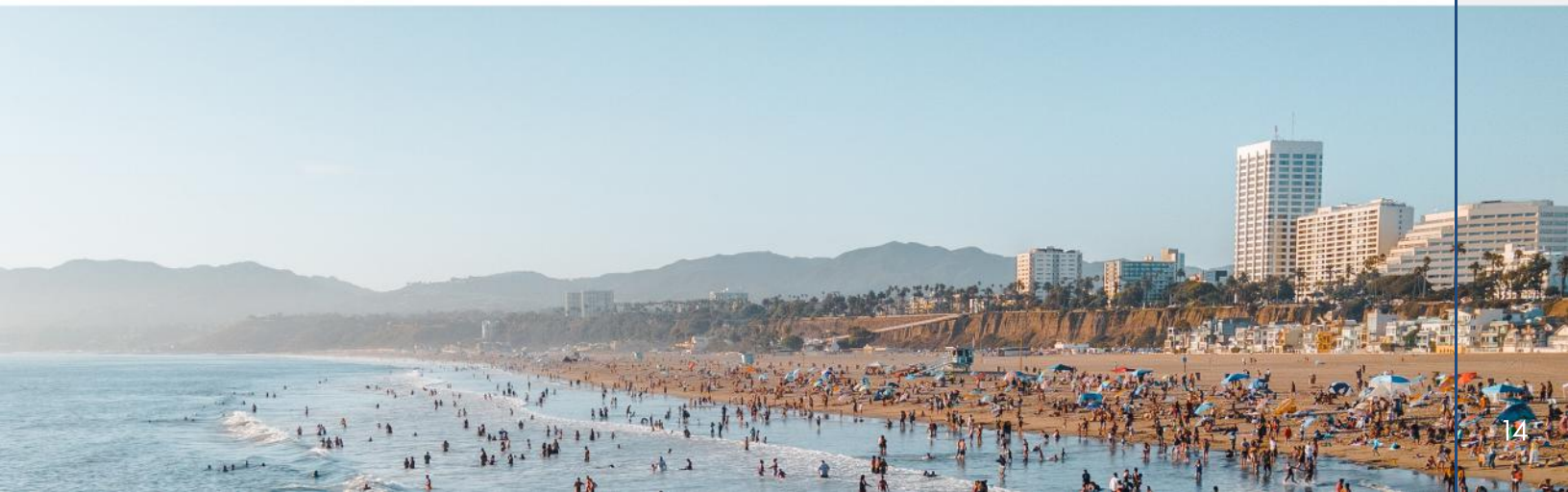
Western Top Conditions by Age

As the patient's age increased in the Western U.S., so did the reporting of conditions like arthritis and cancer. Patients under age 21 sought medical cannabis for anxiety, insomnia, anorexia, migraines, and nausea at a higher rate than other age groups. These conditions also showed a reduction in reporting as patient ages increased. Below we have a breakdown of some of our collected demographics.
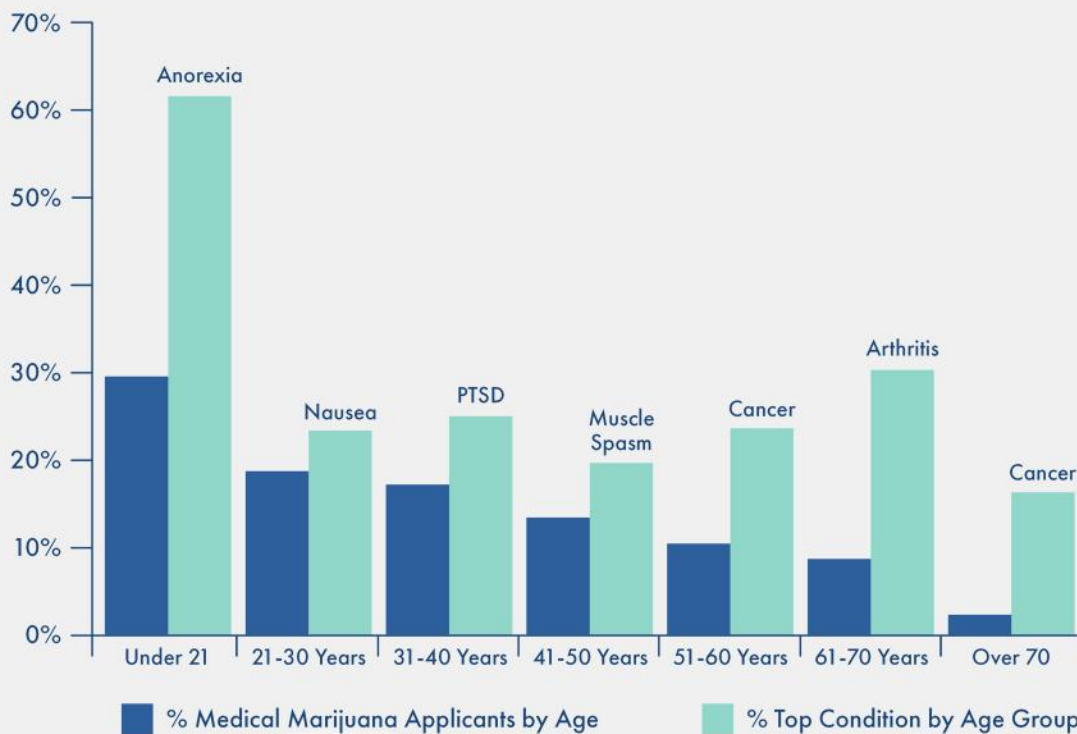
21 and under accounted for 29.51% of patients surveyed in the Western United States region. These individuals also accounted for a larger than expected percentage of patients for conditions including anorexia, anxiety, insomnia, stress, migraines/intractable headaches, and nausea.

Ages 21 to 30 accounted for 23.32% of patients seeking to use medical cannabis for nausea in the Western United States. However, this age group only accounted for 18.69% of patients surveyed in the Western region.

Ages 31 to 40 accounted for just 17.15% of reporting patients in the West but made up 23.32% of patients who reported PTSD as the reason they were seeking to use medical cannabis.

Ages 41 to 50 accounted for 13.37% of patients within the Western region yet accounted for 19.62% of patients seeking to use medical cannabis to treat muscle spasms.

Ages 51 to 60 accounted for 10.40% of patients within the Western region, but they accounted for 23.60% of patients who reported cancer as the reason they were seeking to use medical cannabis.

Ages 61 to 70 within the Western U.S. accounted for only 8.65% of patients surveyed in the region. Still, they accounted for 32.64% of patients identifying cancer and 30.27% of patients identifying arthritis as the reason they were seeking to use medical cannabis.

Ages 71 and over only accounted for 2.26% of reporting patients in the Western region. Still, they accounted for 16.28% of patients reporting cancer as the reason they sought to use medical cannabis.


Our pre-evaluation data showed several notable outliers between the two states in the Western region, California and Nevada. Insomnia was also reported at significantly higher rates in California (40.42%) than in Nevada (1.46%). Likewise, stress was cited by patients at a significantly higher rate in California (48.84%) than in Nevada (1.78%). This is especially interesting given a report from March 2022 found Nevada to be the second most stressful state, and California to be the 14th most stressful state. Nevada doesn't currently list either insomnia or stress as qualifying conditions, which explains the disparity despite the prevalence of those conditions in the state.

Insomnia, anxiety, anorexia, and muscle spasms were each reported by patients in the Western U.S. at more than two times the national average among participating patients. Nausea and stress were even higher in the Western region, being three times the national average.
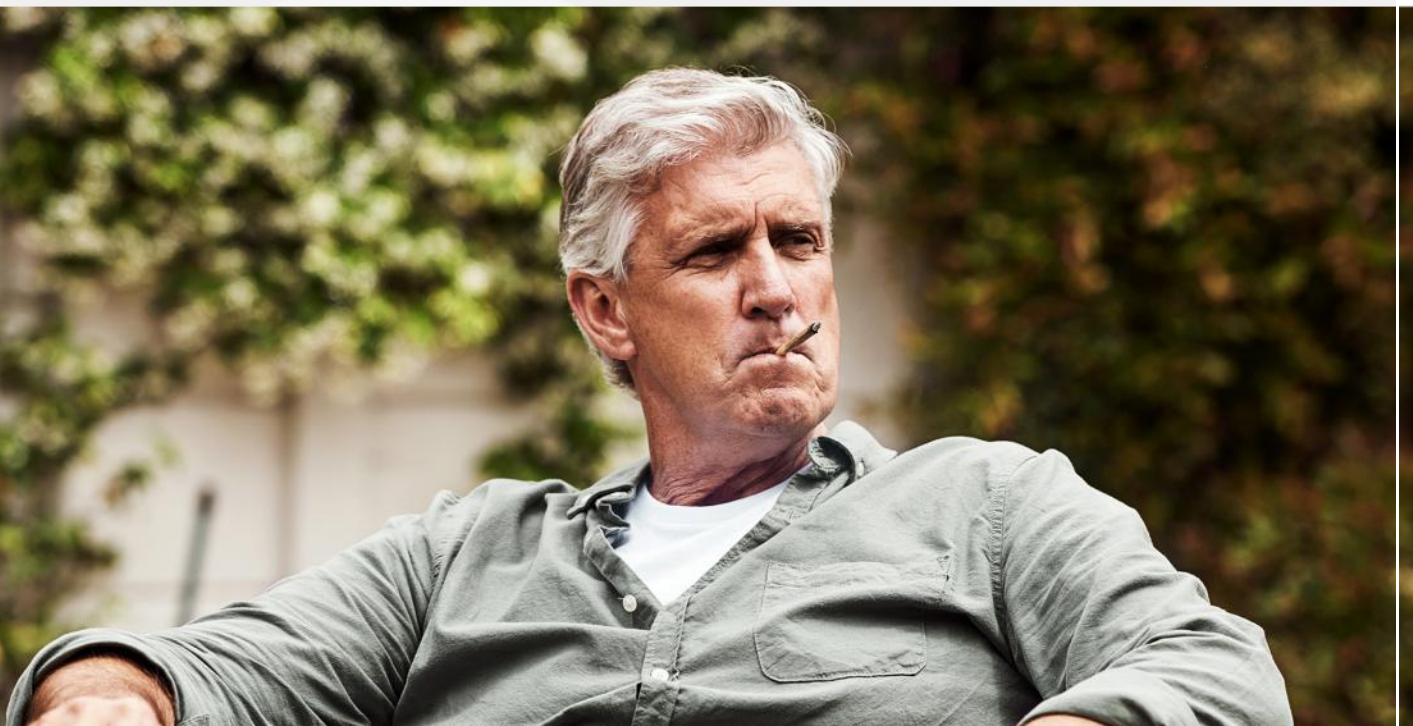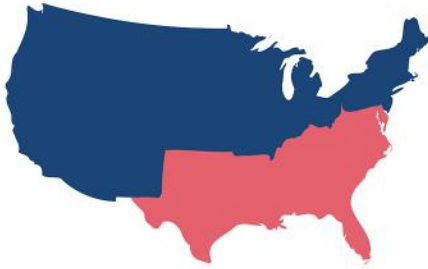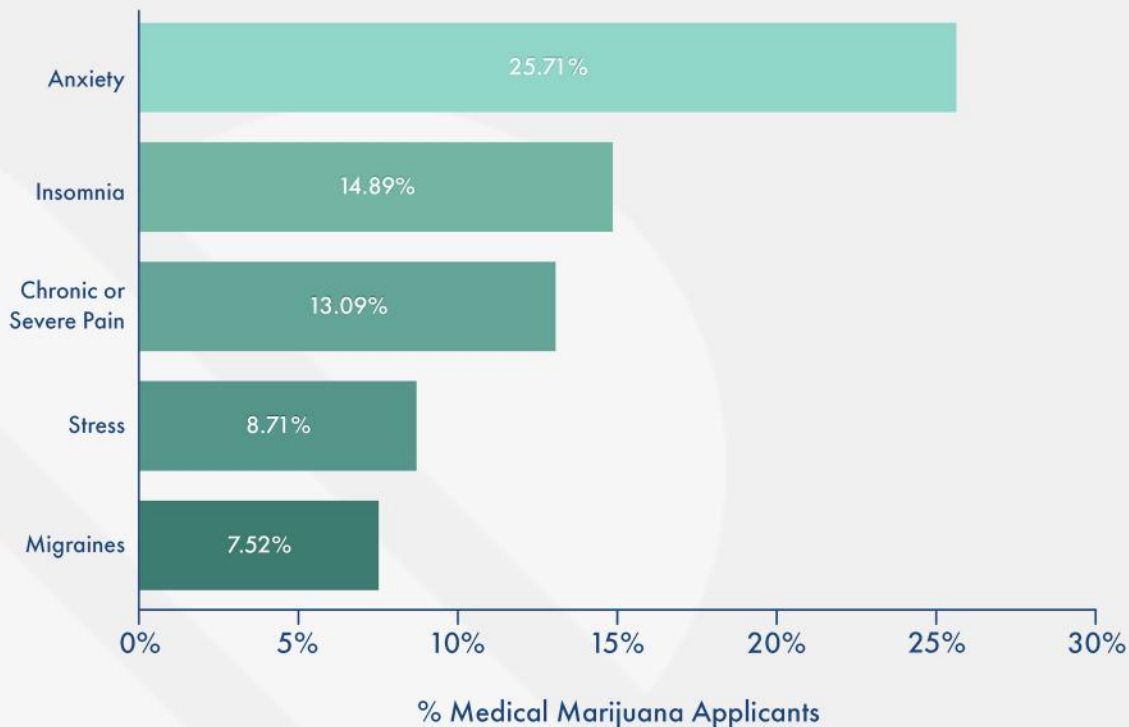
The South

Of our pre-evaluation records, there were 10,080 participating patients from the Southern United States in which NuggMD operates: Oklahoma, Texas, and Virginia. The team at NuggMD collected a majority of the Southern region's data from patients in Oklahoma. Further study should expand the number of patients and states in the Southern U.S. to better account for state and regional differences.

Southern Top Conditions

Patients in the Southern U.S. sought medical cannabis at a higher than average rate for anxiety, stress, and insomnia. The South also accounted for the lowest percentage of patients seeking medical cannabis for chronic or severe pain compared to other United States regions (although chronic or severe pain was still one of the top five reasons patients requested a medical cannabis evaluation in the region).

Condition	% Medical Marijuana Applicants
Anxiety	25.71%
Insomnia	14.89%
Chronic or Severe Pain	13.09%
Stress	8.71%
Migraines	7.52%

% Medical Marijuana Applicants

Southern Top Conditions by Gender

Throughout the southern region of the United States, our data showed that individuals identifying as male accounted for 52.39% of participating patients, and individuals identifying as female accounted for 47.61% of participating patients. Self-identifying females accounted for 71.87% of patients reporting multiple sclerosis as a qualifying condition in the South. For patients identifying as females, the most reported conditions for wanting to use medical cannabis other than multiple sclerosis include anorexia, inflammatory bowel syndrome, and nausea. In comparison, self-identifying males accounted for 88% of patients who reported HIV/AIDS as the reason for seeking to use medical cannabis. Self-identifying males also reported seeking medical cannabis for stress, insomnia, and chronic/severe pain more frequently than self-identifying females.
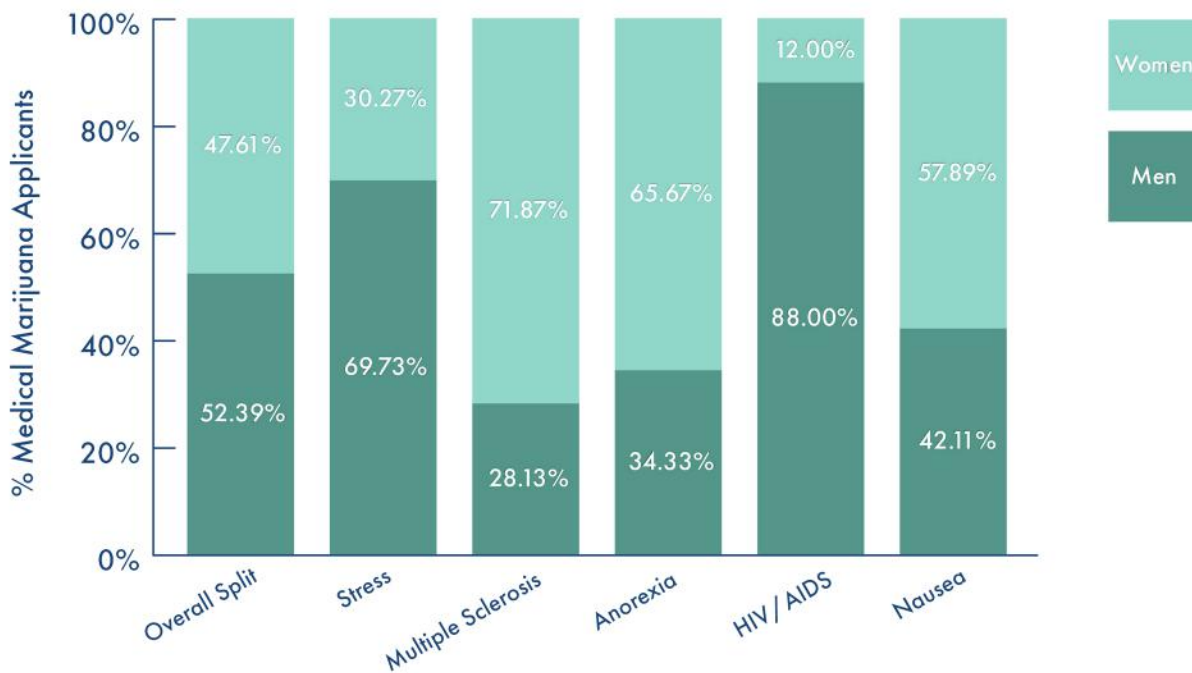
Southern Top Conditions by Age

The data our team collected and reviewed for patients in the Southern region of the United States demonstrated that younger patients, ages 21 to 40, reported seeking medical cannabis for anxiety, migraines, insomnia, and PTSD at higher rates when compared to older patients. Conditions such as chronic or severe pain were the most commonly reported for individuals over 41. Overall, the data presented some interesting results about the reasons individuals in the Southern U.S. are seeking to use medical cannabis when compared to similar age groups in other regions.
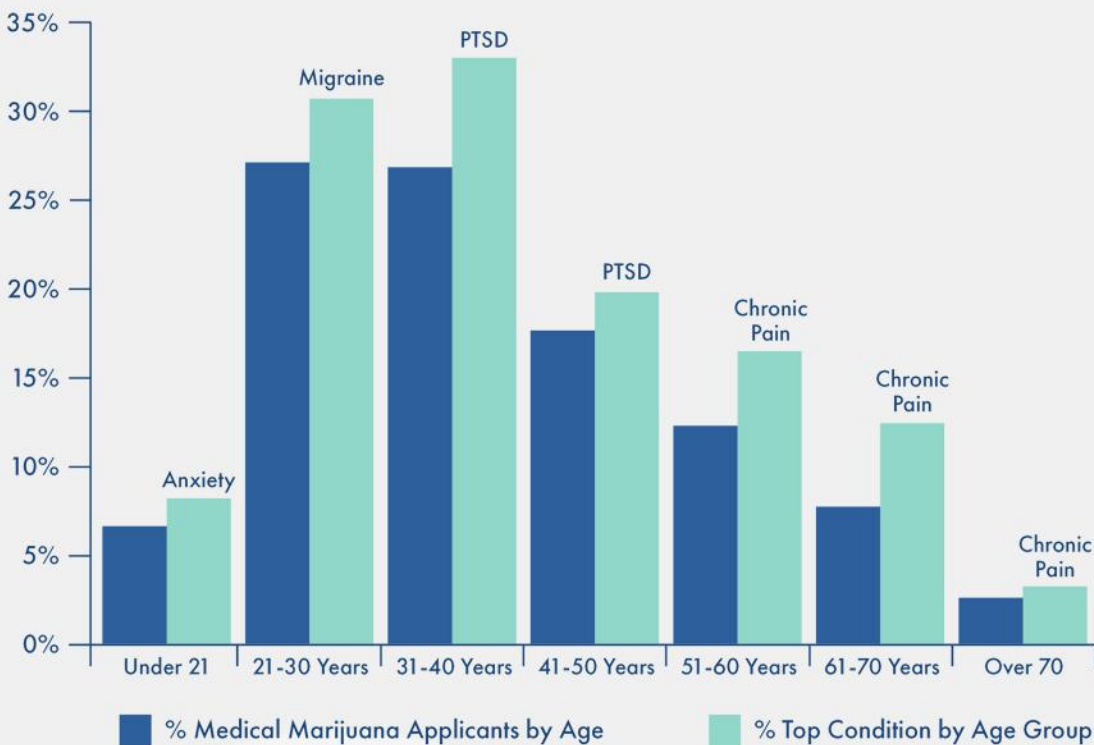
21 and under accounted for a higher than expected percentage of patients who reported anxiety, migraines, and insomnia as qualifying conditions. Individuals under 21 accounted for 6.57% of patients, but 8.12% of the individuals who reported anxiety as the reason for seeking to use medical cannabis.

Ages 21 to 30 accounted for 26.90% of patients seeking to use medical cannabis. Still, they had a higher than average number of patients pursuing cannabis to aid in the treatment of migraines (30.46%), anxiety (30.05%), insomnia (28.61%), and PTSD (28.76%).

Ages 31 to 40 accounted for 32.75% of individuals in the South seeking medical cannabis for PTSD. And while this age group only accounted for 26.63% of patients in our pre-evaluation reports, they accounted for 28.61% of patients with migraines and 28.10% of patients reporting anxiety in the region.

Ages 41 to 50 accounted for 19.46% of patients reporting chronic or severe pain in the region, slightly higher than the 17.51% of the total patients the age range represents in the Southern region. They also accounted for above-average rates of PTSD (19.65%) and migraines (18.17%).

Ages 51 to 60 within the Southern U.S. reported chronic or severe pain at a higher than average rate (16.35%) while accounting for just 12.18% of the patients in the region.

Ages 61 to 70 accounted for 12.33% of patients seeking to use medical cannabis for chronic or severe pain but were only 7.66% of the total patients within the Southern region.

Ages 71 and over accounted for just 2.57% of patients in the South. However, they represent 3.20% of patients seeking to use medical cannabis for chronic or severe pain and 2.77% of patients seeking to use medical cannabis for insomnia.


The most notable difference within the Southern region states of Virginia and Oklahoma was the percentage of patients who reported stress as a qualifying condition. In Virginia, 17.21% of patients reported stress as a condition, compared to 0.21% of patients in Oklahoma. In addition, compared to Oklahoma, Virginia had zero reports of patients seeking to use medical cannabis for multiple sclerosis, neuropathy, inflammatory bowel disease, or opioid dependence. Interestingly, chronic or severe pain was about even for both states, with 13.69% of patients reporting it in Oklahoma and 12.48% reporting it in Virginia. Virginia also reported arthritis as a qualifying condition at a significantly higher rate (26% of patients listed arthritis) than the average across all regions we reviewed (6% of patients).

When comparing the Southern U.S. to other regions, our pre-evaluation data saw that patients reported arthritis at one and a half times the national average. The Southern region also saw higher rates of patients reporting insomnia (14.89%) than the Midwest (0.39%) and the Northeast (4.99%).
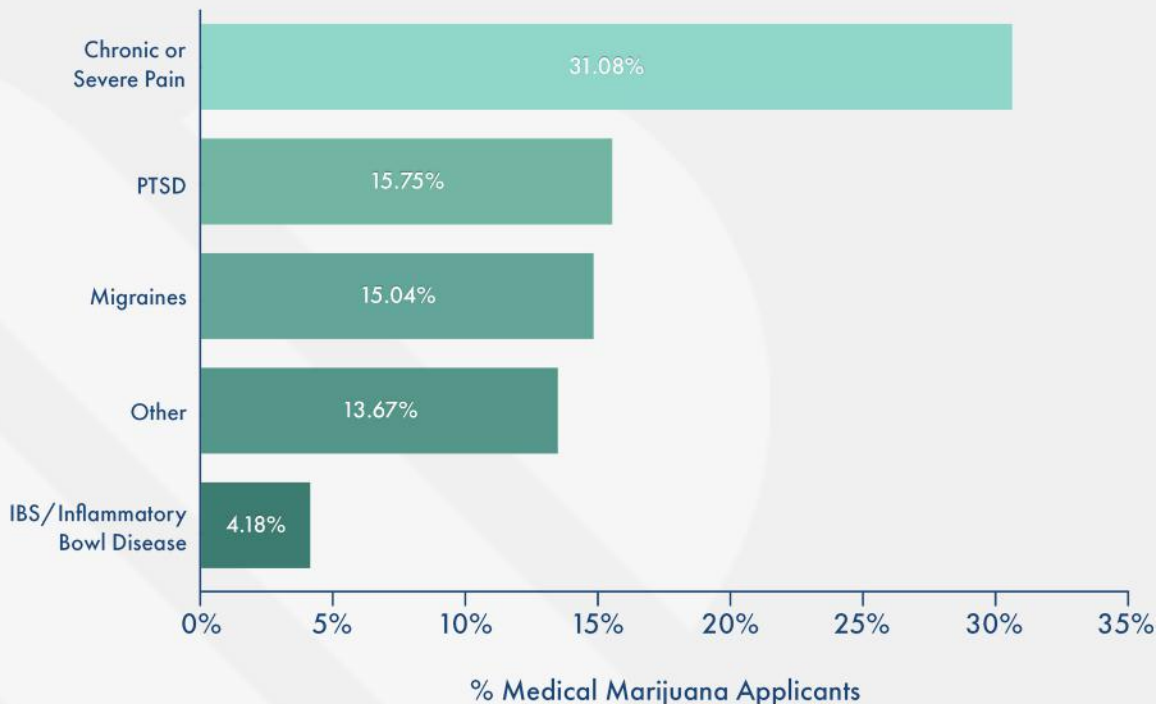
The Midwest
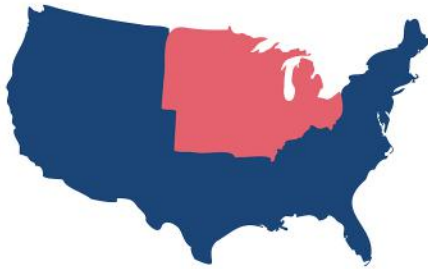
NuggMD operates in Illinois, Iowa, Missouri, and Ohio within the Midwest region of the United States. Of our pre-evaluation records, 34,675 patients were reviewed in the Midwest region, and a majority of the data collected for the Midwest region came from Missouri. Further study should expand the number of patients and states in the Midwest to better account for state and regional differences.

Midwestern Top Conditions

Our pre-evaluation data showed that the Midwestern United States had the highest percentage of patients seeking to use medical cannabis for chronic or severe pain, cancer, migraines or intractable headaches, PTSD, neuropathy, IBS/IBD, and either opioid dependence or replacement when compared to other regions. However, certain conditions that were common in other regions – such as anxiety, stress, insomnia, and nausea – each accounted for less than 10% of the national average in the Midwest. While states like Missouri allow medical cannabis for "Any other chronic, debilitating or other medical condition," they don't directly list anxiety, stress, insomnia, or nausea. It is believed that adding these specific ailments as qualifying conditions in more states in the Midwest would bring them closer to the rates of use we saw for medical cannabis patients in other regions.

Condition	% Medical Marijuana Applicants
Chronic or Severe Pain	31.08%
PTSD	15.75%
Migraines	15.04%
Other	13.67%
IBS/Inflammatory Bowl Disease	4.18%

% Medical Marijuana Applicants

Midwestern Top Conditions by Gender

Through our analysis of pre-evaluation records, we found that within the Midwest, 57.38% of patients identified as male, and 42.62% identified as female. Overall, patients identifying as male were seeking to use medical cannabis at a higher than the average rate for insomnia (79.67%), stress (76.84%), anxiety (70.62%), muscle spasms (65.84%), and chronic or severe pain (64.56%). While only accounting for 42.62% of patients, patients who identified as female accounted for 65.54% of anorexia patients, 65.45% of multiple sclerosis patients, and 59.71% of individuals with nausea.
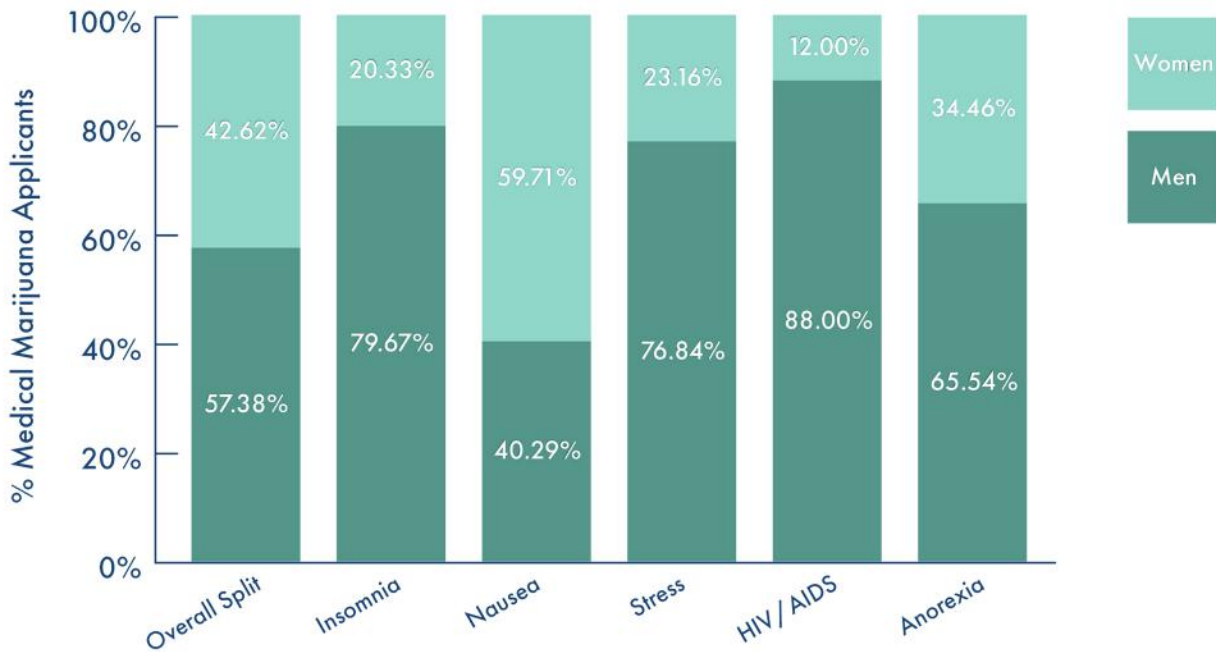
Midwestern Top Conditions by Age

In the Midwest, we saw that individuals aged 21 to 40 reported PTSD, migraines, or intractable headaches more commonly than other age groups. On the other hand, individuals over 40 reported chronic or severe pain more commonly. In keeping with national statistics from the CDC, individuals 31 and over reported IBS or IBD at a higher rate than other age groups. Other interesting data collected in our pre-evaluation records included the following.
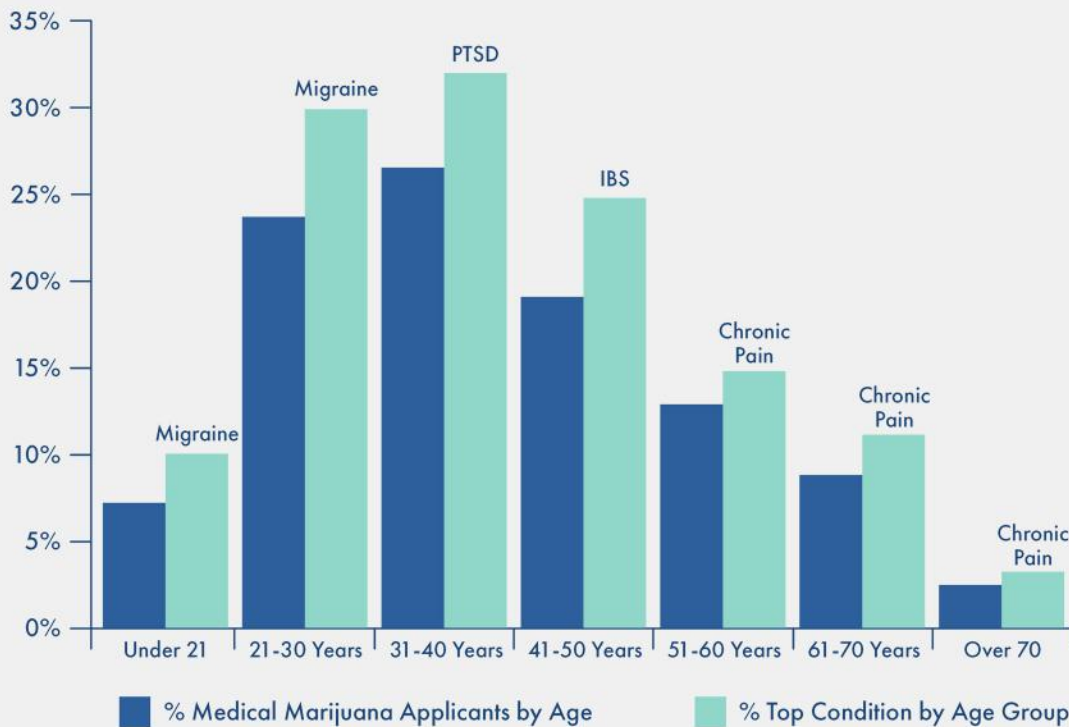
21 and under accounted for 7.16% of reported patients, but 9.97% of patients who reported migraines as a reason for seeking medical cannabis.

Ages 21 to 30 accounted for 29.69% of those reporting migraines and 27.82% reporting PTSD, while accounting for just 23.52% of the participating patients in the Midwest.

Ages 31 to 40 accounted for 26.34% of patients within the Midwest. They reported PTSD at a higher rate (31.75%) than other age groups. Interestingly, this age group accounted for 29.63% of patients reporting "other conditions," the highest rate we saw across any age group in any region.

Ages 41 to 50 accounted for 24.60% of those reporting IBS or inflammatory bowel disease but were only 18.95% of total patients in the Midwest.

Ages 51 to 60 accounted for 12.8% of patients but reported IBS or inflammatory bowel disease at an above-average rate, accounting for 14.83% of patients in the Midwest seeking medical cannabis for the condition. This age group also accounted for 14.7% of patients reporting chronic or severe pain.

Ages 61 to 70 accounted for 16.94% of patients in the Midwest who reported "other conditions," but only 8.75% of total patients.

Ages 71 and over were just 2.46% of patients, but they accounted for 3.21% of patients who reported chronic or severe pain as the reason they were seeking to use medical cannabis.

Our pre-evaluation data found that in the Midwest, Ohio had the highest percentage of patients in the region who reported chronic or severe pain and arthritis, but fewer patients reporting migraines or intractable headaches. The data also showed that rates of patients reporting PTSD were nearly twice as high in Illinois and Ohio compared to Missouri. On the other hand, Missouri demonstrated the highest percentage of patients seeking to use cannabis for opioid dependence or to replace opioids of any state we reviewed.

Compared to other US regions, the Midwest showed above-average rates of individuals reporting migraines as the reason they were seeking to use medical cannabis but below-average rates for those reporting stress, insomnia, and nausea. Interestingly, out of all the states and regions, patients in Missouri reported "other conditions" at the highest rate, likely due to the state not listing common conditions, like anxiety, insomnia, stress, or nausea, while accepting "Any other chronic, debilitating or other medical condition" as a qualifying reason to receive a medical cannabis prescription.

Compared to the national average, patients in the Midwest and South reported similar rates of PTSD. A 2020 self-survey report found Missouri to be the 5th most stressed state in the United States, suggesting many patients who listed "other conditions" may have selected stress if it was clearly listed as a qualifying condition in the state.
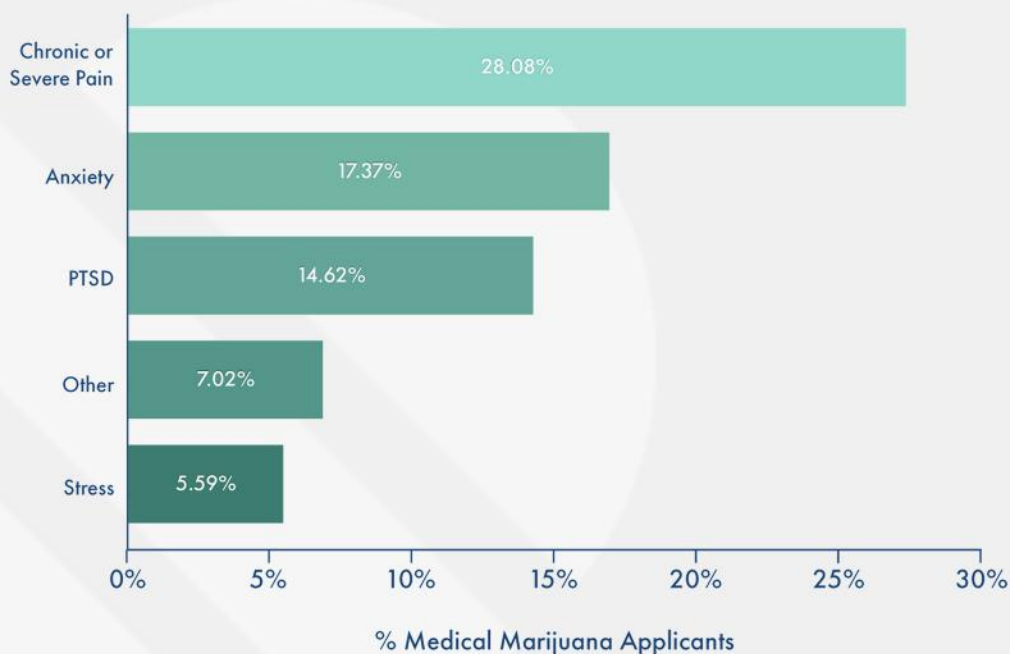
The Northeast

NuggMD operates in Illinois, Iowa, Missouri, and Ohio within the Midwest region of the United States. Of our pre-evaluation records, 34,675 patients were reviewed in the Midwest region, and a majority of the data collected for the Midwest region came from Missouri. Further study should expand the number of patients and states in the Midwest to better account for state and regional differences.
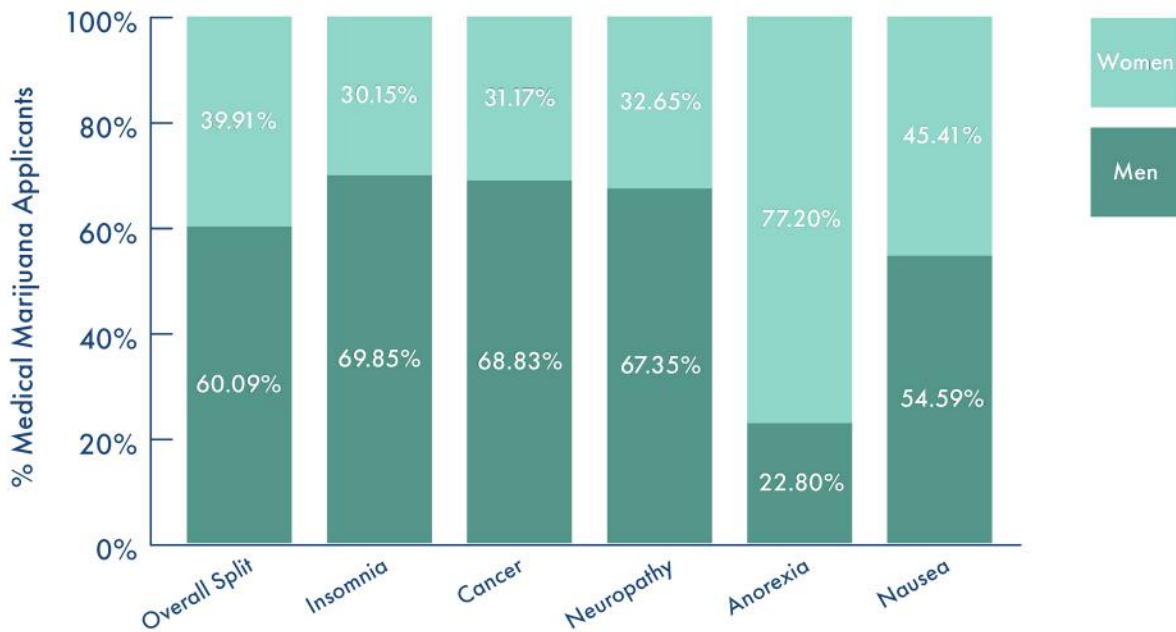
Northeastern Top Conditions

In the pre-evaluation records our team analyzed, we found that the Northeast U.S. had the highest percentage of patients seeking to use medical cannabis for glaucoma. The region saw an above-average percentage of patients seeking to use medical cannabis to treat chronic or severe pain, cancer, PTSD, and neuropathy when compared to other regions. Our data also revealed that patients in the Northeast seek treatment for migraines and multiple sclerosis at well below the rates seen in other regions. Interestingly, we saw that "other condition" was the fourth most commonly listed reason patients were seeking medical cannabis in the Northeastern United States. We suggest that is because New York allows doctors to determine if a patient's condition qualifies them to use medical cannabis, rather than having to adhere to a specific list of conditions. As such, patients may feel more comfortable initiating a medical cannabis evaluation for an unlisted condition.

Condition	% Medical Marijuana Applicants
Chronic or Severe Pain	28.08%
Anxiety	17.37%
PTSD	14.62%
Other	7.02%
Stress	5.59%

Northeastern Top Conditions by Gender

The Northeast region of the United States consisted of 60.09% self-identifying male patients and 39.91% self-identifying female patients seeking medical cannabis. According to our pre-evaluation records, patients who identified as males sought to use medical cannabis at a higher rate than average for conditions such as inflammatory bowel disease (70.74%), insomnia (69.85%), cancer (68.83%), and neuropathy (67.35%). Other conditions over-represented by self-identifying males in the Northeast include arthritis, stress, chronic or severe pain, muscle spasms, HIV/AIDS, and opioid dependence or replacement.

While patients who identified as female only accounted for 39.91% of the patients in the Northeast region, they accounted for 77.20% of individuals reporting anorexia as a reason to use medical cannabis. In addition, self-identifying females accounted for 47.85% of glaucoma patients, 46.88% of multiple sclerosis patients, and 45.41% of patients with nausea in the region.

Northeastern Top Conditions by Age

Of participating patients in the Northeast region, individuals aged 41 and older accounted for the majority of patients seeking to use medical cannabis for chronic or severe pain. Younger patients under the age of 41 reported higher rates of PTSD and anxiety. In analyzing our pre-evaluation data, we also found the following.
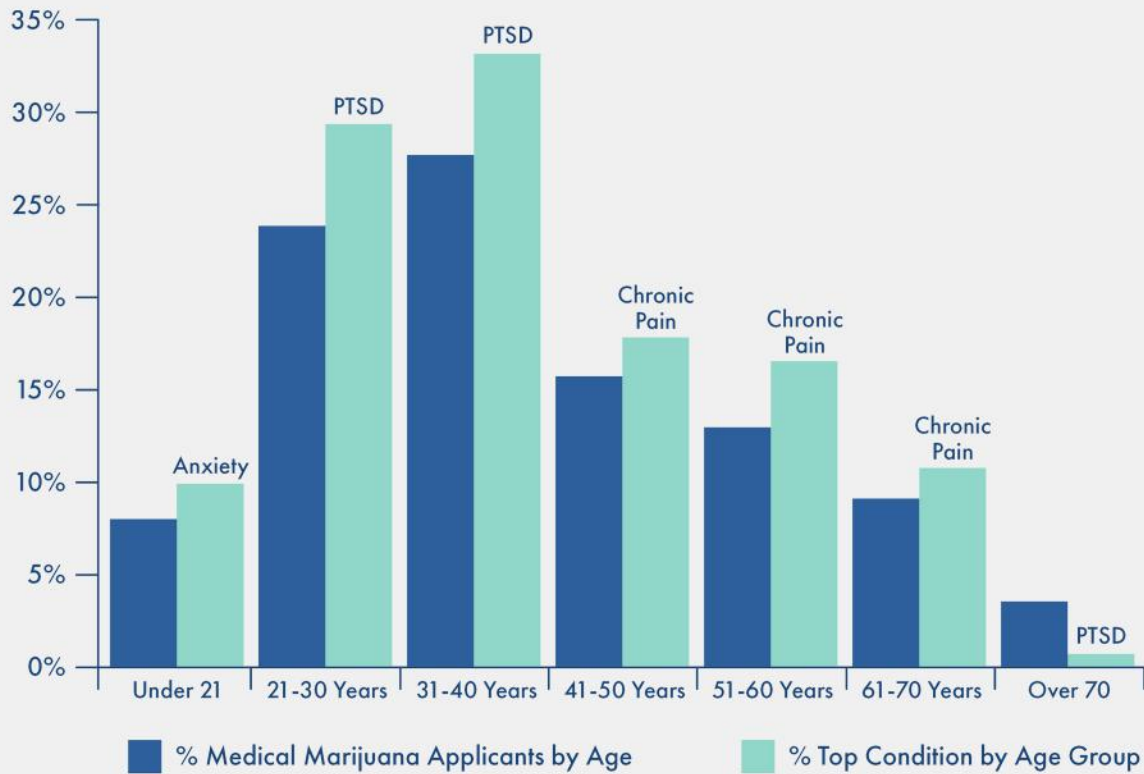
21 and under accounted for 9.81% of patients seeking medical cannabis for anxiety but accounted for only 7.92% of patients in the Northeast.

Ages 21 to 30 accounted for 23.67% of participating patients in the region but 29.13% of patients seeking medical cannabis for PTSD and 28.44% of patients looking to treat anxiety.

Ages 31 to 40 reported the highest rate of PTSD in the region, accounting for 32.91% of patients selecting that condition. However, they accounted for just 27.47% of total patients in the Northeast.

Ages 41 to 50 accounted for 17.87% of patients we reviewed who reported chronic or severe pain, but only 15.59% of registered patients in the Northeast.

Ages 51 to 60 reported chronic or severe pain at an above-average rate, accounting for just 12.84% of patients in the region, but 16.40% of those seeking medical cannabis for the condition.

Ages 61 to 70 reported seeking medical cannabis for chronic or severe pain at a percentage of 10.67% and accounted for 9.02% of total patients.

Ages 71 and over had similarly prevalent chronic pain. This age group accounted for 3.49% of patients in the region, but 4.65% of those patients reporting chronic or severe pain as a qualifying condition.

Our pre-evaluation data noted some interesting differences between states in the Northeast. In Pennsylvania, 49.48% of patients listed anxiety as a qualifying condition, compared to just 0.55% in New York. Maryland reported a higher number of patients (48.71%) seeking medical cannabis to aid in the treatment of chronic or severe pain. Meanwhile, Maine and New Jersey had patients reporting arthritis, migraines, and insomnia at significantly higher rates than the other states in the region.

New York also saw 24.29% of patients list "other condition" as a reason to seek medical cannabis, compared to just 0.9% of patients in Pennsylvania and 8.43% in Maine. We postulate that New York saw a high rate of patients who reported "other conditions" because New York allows doctors to recommend medical cannabis to patients for any condition they believe may benefit from medical cannabis.

Compared to other regions, the Northeast had the highest percentage of patients who identified as male and a higher than average rate of patients who were 51 and older. Within the Northeast, many reported conditions fell close to the national average, but patients reported glaucoma, PTSD, and neuropathy at a higher rate than the national average. The Northeast region also saw higher rates of IBS or inflammatory bowel disease than other regions.

Anxiety is reported to affect 19.1% of the U.S. population, but nearly half of all patients in Pennsylvania and roughly one-quarter of patients in Maine and New Jersey. The Northeast region also saw a significant variance in the rate of patients seeking to use medical cannabis for PTSD compared to the national average, with 29.70% of patients in Connecticut listing PTSD as a qualifying condition.

Conclusions
and Context

Context

To provide greater context to our report findings and the role medical cannabis plays in the lives of patients, we surveyed 530 current medical cannabis card holders. Patients surveyed range from new consumers to individuals who have consumed cannabis for 10 years or more. A total of 58.4% of survey respondents tried lifestyle changes (diet, exercise, etc) prior to beginning medical cannabis.

We asked patients what level of relief they get from medical cannabis. Of the patients polled, 94.1% say cannabis provides moderate or total relief. This is further supported by 68.0% of respondents claiming they have ceased or reduced their use of one or more pharmaceutical treatments since starting to use medical cannabis. And 95.3% of survey respondents believe their medical cannabis card was worth the cost.

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We next sought to understand how confident medical cannabis card holders were in seeking information online or from their doctor. Of our survey respondents, 18.9% said it was fairly difficult or very difficult to find reliable information about treating their condition with medical cannabis. When asked how comfortable patients were talking to their doctor about medical cannabis as a possible treatment, 19.3% of respondents said they were fairly uncomfortable or very uncomfortable.

Discussion

From analyzing the pre-evaluation data reported by our patients, we saw that conditions varied most significantly by state. Overall a significant portion of patients we reviewed were seeking medical cannabis for anxiety or chronic or severe pain, which we found consistent across all regions other than the Midwest, where patients reported anxiety as a qualifying condition at only 4% of the rate seen across all other regions in our analysis. While the learnings from this report have been robust, we identify two takeaways as most worthy of further consideration.

Conditions Vary Significantly By State And Region

A significant barrier to medical cannabis access is how states limit the qualifying conditions for which a patient may be recommended medical cannabis. In some states, legislators have expanded their regulations to include more qualifying conditions (Connecticut has a list of 45 qualifying conditions as of this report) or, as in New York, allow physicians to recommend medical cannabis in broad terms such as "debilitating medical condition."

Variations in the rates at which patients seek medical cannabis for different conditions can be explained, at least in part, by whether those ailments were listed as qualifying conditions in their state. For example, anxiety disorders such as generalized anxiety disorder or social anxiety disorder affect a combined 21.8 million adults or about 10.2% of the population. Yet, in the Midwest, only 2.09% of patients reported anxiety as the reason for which they were seeking to use medical cannabis. In contrast, other US regions had roughly half or more patients reporting anxiety as the reason they were seeking to use medical cannabis. Likewise, states that allow physicians to determine the qualifying condition saw a higher rate of patients reporting "other condition" as a reason they were seeking medical cannabis.

This suggests that states with fewer qualifying conditions may be 1) deterring patients from seeking the medication they need, or 2) reducing the accuracy of available data by forcing patients in need of medical cannabis to select a comorbidity rather than the primary ailment for which they were seeking an evaluation. A majority of patients in our study listed multiple conditions, which can be expected as many conditions exist co-morbidly. Further research is required to better understand the causes of these variations. Such research should seek a greater balance in the number of records reviewed from state to state and include in-person evaluations as well as telehealth data.

Patient Age Varies Widely from State to State, Greatly Impacts Reason for Use

Our pre-evaluation data shows individuals of all ages are interested in using cannabis, and these age ranges vary significantly by state and region.

Our data suggests that the average age of medical cannabis patients may play a role in commonly reported conditions. For example, individuals under the age of 21 account for 61.57% of patients seeking medical cannabis for anorexia, while individuals over the age of 51 account for over half of patients seeking to use cannabis for cancer. Arthritis affects roughly 23% of the U.S. population, yet was listed as a qualifying condition by less than 4% of patients in our study. This isn't unexpected, as arthritis is more common in older populations, and nearly 82% of participating patients we reviewed were under 51 years old.

Learning about and understanding the differences in which age groups are seeking to use cannabis for certain conditions can help advocates and legislators push for more inclusive regulations across the states with legal medicinal cannabis. In states with a limited list of conditions that qualify patients to use medical cannabis, doctors may have difficulty serving certain populations or age groups in need of an alternative treatment plan.

With this data, we can also help businesses and journalists create and share information geared toward the conditions that patients most frequently seek to treat with medical cannabis. For example, younger patients may seek to use medical cannabis for PTSD or anxiety. In comparison, older patients may seek to use medical cannabis for chronic or severe pain or cancer. By understanding these differences, information can be tailored to those individuals in most need.

Benefits of Talking to Your Doctor

Speaking to a qualified doctor about your diagnosis can play a vital role in understanding how cannabis may benefit you. Unfortunately, many medical schools still aren't teaching about the endocannabinoid system. And whether due to incomplete education or stringent federal regulations, many doctors lack expansive knowledge of the benefits of medical cannabis and shy away from discussing it with patients. As a result of this stigma, many potential patients may not feel comfortable speaking to their primary care doctor or diagnosing physician about using cannabis for their condition.

This is where doctors who specialize in medical cannabis come into play. Medical cannabis doctors have often spent years assisting patients in formulating a treatment plan using cannabis. In order to prescribe cannabis in many states, physicians are required to complete additional certification. These physicians are knowledgeable about the endocannabinoid system, potential drug interactions, and how cannabis may affect your symptoms and condition.

Cannabis is a versatile plant with hundreds of compounds found in different ratios, depending on the product. Likewise, each human's endocannabinoid system is unique; thus, cannabis affects each individual differently, even if they've consumed the same product in the same quantity. For these reasons, and because the science is still developing, it is crucial to speak with a doctor who can assist you with beginning the safest treatment plan for the situation.

Dosing Considerations

Individuals who choose to use medical cannabis may be overwhelmed by the hundreds of products available within legal cannabis markets across the United States. Dosage recommendations found on cannabis packaging are not the same as dosage on traditional medications like Aspirin or Ibuprofen.

Each individual has a unique endocannabinoid system, which means that not everyone will feel the same effect from the same product. In addition, different ratios of cannabinoids and terpenes can produce different effects, and a product that helps a patient alleviate chronic pain may not help that same patient manage anxiety or reduce nausea from cancer treatment.

This complexity around finding the right product and dose is an important but undervalued reason medical cannabis remains so essential in states with adult-use programs. To get the right effects, individuals have to consider their physiology and existing conditions, especially conditions of the heart, lungs, or liver. It is also essential to consider any drug interactions cannabis may have with other medications the patient may be taking. For older patients and those with pre-existing conditions or other prescription medications, meeting with a qualified medical cannabis doctor can mean the difference between finding relief and exacerbating their condition through unwanted side effects or drug interactions.

Current research recommends that older patients and those with pre-existing heart conditions or mental health issues begin with a CBD-dominant product and start with 5mg CBD, slowly titrating up 5mg of CBD per day as needed. If needed for symptom relief, further recommendations include introducing no more than 2.5mg of THC at a time along with the CBD. For consumers who are new to using medical cannabis, these recommendations are a starting point to avoid adverse effects. Still, these dosing recommendations are not standard for every consumer and are meant to be adjusted as needed, ideally with the help of a qualified medical practitioner.

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Conclusions

Our data showed interesting variances between age, region, and medical conditions. Many of the variances between U.S. regions could result from stigma toward cannabis use in those states, specifically in the way that stigma influences the list of qualifying conditions. This is especially prevalent when comparing patient conditions in the West and Midwest. Stigma against cannabis use could also play a role in the age range of patients within the different U.S. regions.

For example, we found that a more significant number of individuals aged 40 and under were seeking to use medical cannabis for various conditions than individuals over the age of 40. This trend is consistent with a recent survey conducted by Pew Research Center that reveals 70% of individuals aged 18-29 believe cannabis should be legal for medical and recreational use, compared to just 46% of individuals aged 65 or older.

Patients seek to use cannabis for a multitude of reasons, and sometimes the conditions the patients report may not accurately identify their specific condition. We would like to reiterate that 8.74% of patients (and more than 1 in 5 patients in some states) selected "other conditions" when seeking a medical cannabis evaluation. Our data analysis also found that patients often list multiple conditions, which can be expected as many conditions exist co-morbidly.

This can also complicate the findings in helping to determine specific conditions by age and region. This could also leave specific conditions underrepresented, which could affect the information provided during doctor certification programs, making it harder for physicians to respond to some patient queries.

Patients, practitioners, and policymakers can all benefit from gaining access to more – and more complete – information regarding medical cannabis and the conditions it is being used to treat. Access to information about medical cannabis and specific conditions can help these individuals make better, more informed decisions about their health. Unfortunately, the data we currently have is limited, and research, particularly in the United States, is restricted due to the plant's status as a Schedule I drug. In addition, decades of negative propaganda toward cannabis and those who use cannabis are still being dismantled by advocates and patients.

As we collected the data from a limited number of states that NuggMD services via telemedicine, this conditions report should be considered a starting point for future research. We encourage further study to verify or refute the findings in this report, and we look to expand on these findings with an annual conditions report.

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