



**APTANJ**

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WhitePaper

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# Physical Therapy and Cannabis in New Jersey



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# Executive Summary

The legalization of medical and adult-use cannabis in New Jersey has significant implications for physical therapists and their patients. As cannabis becomes more accessible, physical therapists are increasingly likely to encounter patients using it for various medical purposes, including pain management, sleep issues, and anxiety relief.

This white paper aims to:

- Provide a comprehensive overview of cannabis use in New Jersey
- Explore the potential role of physical therapists in supporting patients who use cannabis
- Address the knowledge gap in cannabis education for physical therapists
- Discuss the future of physical therapy in relation to cannabis

## Key Areas Covered

Legal Framework: Current laws and regulations in New Jersey

Patient Demographics: Who is using cannabis and for what purposes

Medical Applications: Common uses of cannabis in healthcare

Evidence Review: Current research on efficacy, safety, and risks

## Physical Therapy Implications

Supporting patients who use cannabis

Fostering open communication within healthcare teams

Navigating patient discussions

Understanding cannabis' impact on rehabilitation

## Challenges & Opportunities

Education Gap: Most physical therapists lack formal training in cannabis

Evolving Landscape: Rapidly changing laws and regulations

Future Prospects:

- Advocacy for future roles with patients using cannabis
- Innovative care models
- Role in Research and evidence-based practice

# Introduction

Cannabis, a plant from the Cannabaceae family, has a long history of medicinal and industrial use. In recent years, the legal landscape surrounding cannabis has undergone significant changes, with an increasing number of states legalizing its use for medical and recreational purposes.

In New Jersey, the Compassionate Use Medical Marijuana Act, enacted in 2010, legalized cannabis for medical use by qualified patients with debilitating medical conditions.<sup>1</sup> Subsequently, in November 2020, New Jersey voters approved the legalization of recreational cannabis for adults aged 21 and older. The New Jersey Cannabis Regulatory, Enforcement Assistance, and Marketplace Modernization Act became effective in 2021.<sup>2</sup>

These legislative changes have opened up new avenues for individuals to access and use cannabis products legally. However, they also present challenges for healthcare professionals, including physical therapists, who may encounter patients using cannabis for various medical reasons during their rehabilitation journey.





# Cannabis in New Jersey

The information included in the section “Cannabis in New Jersey” is accurate at the time of this report. Readers are encouraged to refer to the Cannabis Regulatory Commission at <https://www.nj.gov/cannabis/> for updates and answers to Frequently Asked Questions.

## Medical Cannabis in New Jersey

To obtain a medical cannabis card in New Jersey, individuals must have a qualifying medical condition, be 21 or older, and receive authorization from a healthcare provider registered with the New Jersey Medicinal Cannabis Program (NJMCP).<sup>3</sup> As of this report date, healthcare providers who have a license as either a medical doctor, doctor of osteopathic medicine, advanced practice nurse, or physician assistant can be registered in the NJMCP.<sup>4</sup> Qualifying conditions include amyotrophic lateral sclerosis (ALS), cancer, chronic pain, multiple sclerosis, and seizure disorders, among others (See Table 1).

The NJMCP offers free digital ID cards for new and renewing patients and caregivers. These cards allow individuals to purchase medical marijuana from state-licensed dispensaries, also known as Alternative Treatment Centers (ATC). Physical ID cards can also be purchased for \$10.00.<sup>5</sup> As part of their enrollment period, patients can obtain up to 84 grams (3 oz) of cannabis every 30 days.<sup>5</sup> In New Jersey, the qualifying conditions are listed in Table 1.

Table 1. Qualifying Medical Conditions for Enrollment in the NJMCP\*<sup>5</sup>

Amyotrophic lateral sclerosis	Migraine
Anxiety	Multiple sclerosis
Cancer	Muscular dystrophy
Chronic pain	Human Immunodeficiency Virus (HIV) & Acquired Immune Deficiency Syndrome (AIDS)
Dysmenorrhea	Post-Traumatic Stress Disorder (PTSD)
Glaucoma	Seizure disorder, including epilepsy
Inflammatory bowel disease, incl. Crohn’s disease	Terminal illness with < 12 months to live
Intractable skeletal, muscular spasticity	Tourette Syndrome

\*\*NJMCP also allows individuals with opioid use disorder or severe withdrawal symptoms to use medical cannabis.



## Recreational (Adult-Use) Cannabis in New Jersey

Under the adult-use cannabis law voted upon in 2020, adults aged 21 and older are permitted to possess and use cannabis for recreational purposes. The legislation also introduced a framework governing the licensing and regulation of cannabis cultivation, processing, and retail sales.<sup>4</sup>

State-licensed cannabis dispensaries are authorized for the legal sale of recreational cannabis, with each transaction limited to one ounce (28.35 grams) of usable cannabis.<sup>6</sup>

Table 2. Key Differences Between Medical and Adult-Us Cannabis in New Jersey <sup>3,6,7</sup>

Aspect	Medical Cannabis	Adult-Use Cannabis
Priority	Availability is prioritized over adult-use	Secondary priority
Supply	Consistent supply ensured for patients	Supply may vary
Purchase/ Transaction Limit	Can purchase 84 grams (3oz) every 30 days; can be purchased in one transaction	Can purchase up to 18.35 grams (1 oz) per transaction
Sales Tax	No sales tax	Subject to sales tax
Cost	Less expensive due to no tax	More expensive due to tax
Eligibility	Requires qualifying medical condition	Available to adults 21 and older
Usage	Consistent with prescription medication	Consistent with over the counter drugs; recreational use

## Cannabis Regulation in New Jersey

The New Jersey Cannabis Regulatory Commission (CRC) is responsible for overseeing the regulation, licensing, and implementation of cannabis policies in the state, including both the medical marijuana program and the adult-use (recreational) cannabis market.<sup>3</sup>

Although cannabis use is legal in New Jersey, as of this report, it remains federally illegal in the United States. Currently, cannabis is a Schedule 1 controlled substance.<sup>8</sup> It is considered by the federal government to be in the same category as drugs such as heroin and LSD, with the federal government asserting that it has a high potential for abuse and lacks accepted medical use.<sup>8</sup> However, there is federal legislative activity that may result in cannabis being scheduled as a Schedule III substance, which has the potential to affect federal laws and statutes, including banking, taxation, and interstate commerce.<sup>9</sup> Readers of this report are advised to stay apprised of federal law changes as they are applied to cannabis and the cannabis industry, noting a complex legal landscape where state and federal laws often diverge.<sup>10,11</sup>



# Medical Cannabis: Who and Why

## Who

The use of medical cannabis is diverse, with individuals from various demographic backgrounds potentially benefiting from its therapeutic effects. Some key trends observed in various studies and surveys can be found in Appendix A.

## Why

Some of the most common reasons for using medical cannabis are listed in Table 3

Table 3. Medical Conditions and Cannabis

Medical Condition	Details
Chronic Pain	Medical cannabis is frequently used to alleviate chronic pain associated with conditions such as arthritis, fibromyalgia, and neuropathy. <sup>12-14</sup>
Cancer-Related Symptoms	Patients undergoing cancer treatment may use medical cannabis to manage symptoms like nausea, vomiting and loss of appetite caused by chemotherapy. <sup>15-17</sup>
Epilepsy	The FDA-approved medication Epidiolex, a cannabidiol (CBD) product, has been found effective in reducing seizures associated with certain forms of epilepsy in both children and adults. <sup>18-19</sup>
Glaucoma	Medical cannabis has been suggested to reduce intraocular pressure in some individuals with glaucoma, potentially slowing down the progression of the disease. <sup>20-23</sup>
HIV/AIDS	Medical cannabis has been used to improve appetite and alleviate nausea in individuals living with HIV/ AIDS, especially those undergoing antiretroviral therapy. <sup>24-28</sup>



Medical Condition	Details
Inflammatory Bowel Diseases (IBD)	Patients with conditions like Crohn's disease and ulcerative colitis may use medical cannabis to manage symptoms such as abdominal pain and inflammation. <sup>29</sup>
Mental Health Conditions	Some individuals use medical cannabis to manage symptoms of mental health conditions such as anxiety, depression, and PTSD. <sup>30-32</sup>
Multiple Sclerosis	Some individuals with multiple sclerosis use medical cannabis to help alleviate muscle spasms, stiffness, and pain. <sup>33-37</sup>
Sleep Disorders	Medical cannabis has been used by individuals with insomnia or other sleep disorders to improve sleep quality. <sup>38</sup>



# Cannabis Efficacy, Safety, and Risks

Published research on the efficacy and safety of cannabis continues to evolve rapidly and is nuanced. This section explores the current evidence base, including clinical practice guidelines and relevant systematic reviews. However, research in this area is ongoing, and the potential risks and benefits should be based on the best available evidence and a thorough understanding of an individual’s current physical and mental health, past medical history, and medication use.

## Efficacy

There is evidence to suggest that cannabis and cannabinoid-based medicines can be efficacious in managing specific conditions and associated symptoms. It is important to note that the conditions listed in Table 4 are not inclusive of all conditions for which cannabis has been investigated. However, these conditions have received considerable attention.

Table 4. Reported Efficacy of Cannabis for Medical Conditions

Medical Condition	Efficacy
Cancer-Related Symptoms	<p>Meta-analyses have found cannabis to positively affect cancer-related pain<sup>39, 40</sup></p> <p>Cannabis may have therapeutic benefits for chemotherapy-induced nausea and vomiting<sup>41,42</sup></p>
Chronic Pain	<p>Clinical practice guidelines include research that suggests moderate benefit of cannabis based medicines for chronic pain management for persons not achieving adequate response from other modalities<sup>12</sup></p> <p>A meta-analysis found, in comparison to placebo, that non-inhaled cannabis products have either a small or very small effect on chronic pain with more temporary adverse effects<sup>43</sup></p>



Epilepsy	Several systematic reviews have found that cannabis, specifically CBD, can be helpful in the treatment-resistant forms of childhood epilepsy <sup>44-46</sup>
Human Immunodeficiency Virus (HIV)	Cannabis has been found helpful in managing neuropathic and muscular pain associated with HIV <sup>12, 47</sup>  Cannabis may promote desired weight gain or maintenance in individuals with HIV <sup>12, 48</sup>
Multiple Sclerosis (MS)	Cannabis has been found to be moderately effective in reducing neuropathic pain in persons with MS <sup>12, 34</sup>  Nabiximols (oral mucosal spray of THC and CBD) has a positive effect on spasticity in some individuals with MS <sup>49</sup>
Parkinson's Disease (PD)	A systematic review found that self-mediation with cannabis may improve some symptoms of PD; however, well-designed studies are needed before general recommendations can be made <sup>50</sup>  A meta-analysis found subjective PD symptom alleviation with cannabis; however, there is insufficient evidence to recommend cannabis for motor symptom treatment <sup>51</sup>



## Safety and Risks

CBD (cannabidiol) and delta-9-THC (tetrahydrocannabinol) are the two most well-known and studied compounds in cannabis, and they have distinct effects and risk profiles. It is also important to note that the safety and risk profiles of cannabis products can vary depending on the specific cannabinoid composition, dosage, and route of administration.

### CBD Safety Profile

- Generally considered safer and better tolerated than delta-9-THC
- Favorable safety profile with few reported side effects
- Does not produce intoxication

### CBD Potential Risks<sup>52, 53</sup>

- Liver injury (with high doses)
- Drug interactions
- Drowsiness
- Potential fertility issues
- Diarrhea
- Changes in appetite

### Delta-9-THC Safety Profile

- Intoxication
- Potential for abuse and dependence

### Delta-9-THC Associated Risks<sup>54-56</sup>

- Cognitive impairment
- Psychiatric adverse effects
- Increased risk of cardiovascular events
- Impaired driving ability
- Adverse effects on fetal development
- Drug interactions



## Specific Health and Safety Concerns: Delta-9-THC

### Cardiovascular Conditions<sup>54,55</sup>

- High blood pressure
- Arrhythmia
- Myocardial infarction
- Cerebrovascular events
- Cardiovascular events
- Cardiac death in patients with pre-existing cardiovascular conditions

### Mental Health<sup>57</sup>

- Risks identified in pediatric populations
  - Significant link between cannabis use and depression, mental illness
  - Increase suicidality
- Limited confirmed effects on mental health disorders in adults

### Cannabis Use Disorder<sup>58</sup>

Risk increases with frequency of cannabis use, characterized by:

- Impaired function
- Loss of control due to cannabis use
- Signs of dependency

### Cannabis Hyperemesis Syndrome (CHS)<sup>59</sup>

- Cyclic episodes of nausea, vomiting, and abdominal pain; symptomatic relief with hot bathing or showering
- Exact cause unknown, potentially due to long-term effects on the endocannabinoid system
- Symptoms relieved by abstaining from cannabis, may recur with resumed use

# Cannabis Products and Modes of Administration

Cannabis, like many medications, can be administered through various methods such as edibles, smoking, vaporizing, tinctures, and topicals. The choice of administration method can significantly influence the onset time, duration, and intensity of effects, as well as potential risks and adverse effects. This variability in effects based on delivery method is not unique to cannabis but is a consideration for many medications. For detailed information on specific cannabis administration methods, including onset times, duration of effects, and associated risks for each method, please refer to Appendix B.





# Harm Reduction and Cannabis

Harm reduction is an approach that aims to minimize the negative impacts associated with substance use, through a spectrum of interventions ranging from abstinence to managed safer use. In the context of cannabis, harm reduction strategies may involve recommending cannabis as an alternative to opioid painkillers or other substances with higher risks of addiction and overdose.

## Key Points

Ongoing research explores cannabis use in addressing the opioid epidemic.

Some studies suggest access to cannabis may be associated with lower rates of opioid use and opioid-related harms.

Recommending cannabis as a substitute for opioid medications can be viewed as a harm reduction approach.

Risks of addiction and overdose are remarkably less with cannabis compared to opioids.

**Important Note:** While cannabis may offer a potentially less harmful alternative to certain substances, its use is not without risks. The potential side effects of cannabis should be carefully considered.

# Communication

Despite the legalization of medical and recreational cannabis in New Jersey, the stigma surrounding its use persists. This stigma is rooted in complex cultural, political, legal, and moral factors, including the historical classification of cannabis as a highly dangerous drug with no medical benefits.

## Contribution Factors to Stigma

- Negative perceptions and outdated stereotypes
  - Association of cannabis use with criminal behavior
- Portrayal of users as lazy or unmotivated

These factors can contribute to a reluctance among individuals to discuss their cannabis use openly with healthcare providers.



## Role of Physical Therapy Professionals

Physical therapy professionals must create a nonjudgmental and supportive environment that fosters open communication with patients about their use of cannabis. This openness can help ensure that physical therapists:

- Have a comprehensive understanding of their patient's health contexts

Provide appropriate guidance and support



# Physical Therapy

The impact of cannabis use on individuals' participation in physical rehabilitation programs is a multifaceted issue that requires careful consideration. While cannabis has been reported to provide pain relief and alleviate symptoms associated with certain medical conditions, its effects on motivation, cognition, and overall engagement in rehabilitation activities can vary widely among individuals. When patients choose to use cannabis, physical therapists must determine if its use supports or interferes with a rehabilitation program that's designed to optimize progress and function.

## Potential Positive Effects

- Pain relief
- Reduced anxiety
- Alleviation of symptoms associated with a wide range of medical conditions

## Potential Negative Effects

- Impaired cognitive function
- Decreased motivation
- Lack of focus
- Impact on coordination, balance, and reaction times
- Impaired mental health



# The Role of Physical Therapy When Patients/Clients are Considering or Using Cannabis

Physical therapists perform health and physical assessments, educate, collaborate with patients and other healthcare professionals, develop treatment plans, and continually monitor and evaluate their patients' status. As part of their comprehensive approach to patient care, physical therapists already consider and discuss patients' use of both prescribed and over-the-counter medications, making them well-positioned to address questions about cannabis use as well. For tips when working with patients who are interested in or already access cannabis, please see Appendix C. Refer to Appendix D for a glossary of cannabis-related terms.

Physical therapists in the state of New Jersey are not authorized to prescribe or recommend specific medications, including cannabis.<sup>60</sup> However, addressing cannabis use is a natural extension of physical therapists' existing role in considering patients' overall medication use and health status.

Physical therapists' comprehensive scope of practice includes considerations related to the medical use of cannabis when appropriate.<sup>60</sup>

## Health Assessment

Physical therapists assess patients' overall health, including medical conditions, medications, and lifestyle factors.<sup>60</sup> By understanding a patient's health context, they can contribute to informed discussions about the potential use of cannabis.

## Educational Role

Physical therapists can offer general information about the potential benefits and risks of cannabis for certain medical conditions. They can help patients understand the available evidence, legal considerations, and potential interactions with other medications.<sup>60</sup>

## Communication and Support

Physical therapists often build strong therapeutic relationships with their patients. They can provide a supportive and non-judgmental space for patients to discuss their health concerns, including the use of cannabis. Open communication allows for better-informed decision-making.

## Collaboration with the Healthcare Team

Physical therapists are part of a healthcare team. They can collaborate with physicians, nurses, and other healthcare professionals to ensure a comprehensive understanding of a patient's health and coordinate care effectively<sup>55</sup>, including discussions about cannabis use.

## Functional Goals and Treatment Plans

Physical therapists focus on functional goals and treatment plans. In the context of cannabis use, they can discuss how it might impact a patient's ability to participate in rehabilitation activities, manage pain, or achieve therapeutic goals.<sup>55</sup>

## Monitoring and Evaluation

Physical therapists can monitor and evaluate the impact of various interventions, including the use of cannabis, on a patient's progress. Regular assessments allow for adjustments to treatment plans based on the patient's response and evolving health status.<sup>55</sup>

By understanding the fundamental science behind the cannabis plant, its compounds, and the available product formulations, physical therapists can better navigate discussions with patients and make more informed decisions regarding the potential role of cannabis in rehabilitation programs.





As part of a holistic approach to patient care, physical therapists can provide harm reduction strategies related to cannabis use. This may include:

- **Education:** Providing information on safe cannabis use practices, potential risks, and information about obtaining a medical marijuana card when appropriate.
- **Injury Prevention and Rehabilitation:**
  - Advising on safe physical activities and exercises that minimize the risk of injury, especially considering any impairments or vulnerabilities that may result from cannabis use.<sup>55</sup>
  - Adjusting treatment timing with patients' cannabis use and modifying exercise prescriptions based on cannabis's effects on pain perception and motor control
- **Collaboration:** Working within interdisciplinary teams to address the broader health and well-being of individuals using cannabis, integrating physical therapy into comprehensive care plans.<sup>55</sup>

By integrating these aspects into their practice, physical therapists contribute to promoting safer practices and optimizing outcomes for individuals who use cannabis.

## Research and Evidence-Based Practice

The physical therapy profession will need to actively contribute to the growing body of research on cannabis and its effects on rehabilitation outcomes. This will involve:

- Conducting research on the interaction between cannabis use and physical therapy interventions.
- Developing best practice guidelines for treating patients who use cannabis.
- Investigating the long-term effects of cannabis use on physical function and rehabilitation progress.

By taking these steps, the physical therapy profession can position itself as a leader in the integration of cannabis into mainstream healthcare. This proactive approach will expand the scope of physical therapy practice and ensure that patients receive comprehensive, evidence-based care that addresses all aspects of their health and well-being.



To assess the impact of cannabis legalization on physical therapy practice in New Jersey, the APTANJ conducted a survey between April and June 2024. The survey aimed to gather insights into current trends, continuing education needs, and the effects of recent cannabis legislation on physical therapy practice. Responses were collected from 260 anonymous participants out of approximately 7,500 licensed PT professionals in the state. The respondent pool was diverse, with a majority being experienced practitioners working in outpatient settings. Demographically, the survey captured a range of ages, ethnicities, and professional roles within the physical therapy field, providing a broad perspective on the issues at hand. In general, the results of this survey are consistent with the results of surveys conducted with physicians. For a detailed breakdown of the survey results, including specific demographic information and response distributions, please refer to Appendix E.

## Summary

Cannabis use, both medical and recreational, is a growing reality in New Jersey's healthcare landscape. This white paper has provided an overview of the current state of cannabis use, its legal status, and its implications for physical therapy practice. Key findings from our 2024 survey of New Jersey physical therapy professionals indicate a need for increased education and guidance in this area. This paper highlights the necessity for physical therapists to be knowledgeable about cannabis, its effects, and its potential impacts on rehabilitation outcomes, emphasizing the importance of:

- Open communication with patients
- Comprehensive patient education
- Interdisciplinary collaboration

These factors are crucial in addressing cannabis use in physical therapy settings. As the field evolves, physical therapists have the opportunity to enhance comprehensive patient care by:

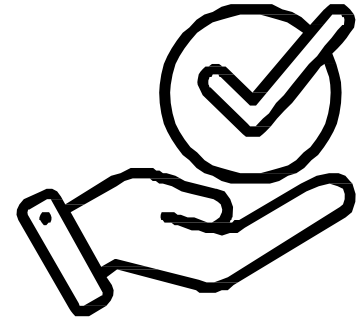
- Playing a crucial role in patient care and education
- Contributing to research on cannabis and rehabilitation
- Developing best practices related to cannabis use in physical therapy

By embracing these opportunities, the physical therapy profession in New Jersey can position itself at the forefront of integrating cannabis considerations into mainstream healthcare, ensuring patients receive holistic, evidence-based care that addresses all aspects of their health and well-being.



## Recommendations

1. Enhance educational curricula in physical therapy programs to include comprehensive information on cannabis, its effects, and its implications for rehabilitation.
2. Develop continuing education programs for practicing physical therapists to stay updated on cannabis research and best practices.
3. Establish clear guidelines for discussing cannabis use with patients in physical therapy settings.
4. Encourage interdisciplinary collaboration to ensure comprehensive care for patients using cannabis.
5. Support and conduct research on the effects of cannabis on physical therapy outcomes and rehabilitation processes.



## Charges

### 1. To the APTA of New Jersey:

- a. Form a task force to develop specific guidelines for physical therapists on addressing cannabis use in practice.
- b. Engage with state legislators and regulators to ensure physical therapy perspectives are considered in cannabis-related healthcare policies.
- c. Create resources to educate the public about the role of physical therapists in managing care for patients who use cannabis.

2. To physical therapy educational institutions: Integrate cannabis education into existing pharmacology and patient care courses.

3. To clinical practice owners and managers: Develop protocols for assessing and addressing cannabis use in patient populations.

4. To practicing physical therapists: Actively seek out continuing education opportunities related to cannabis and its impact on physical therapy practice.



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# Appendix A

## Trends: Who Uses Cannabis for Medical Purposes <sup>61,63</sup>

Category	Details
<b>Age</b>	
Children and adolescents	May be used for epilepsy and the effects of cancer. Pure CBD products are more likely to be used to avoid intoxicating effects. <sup>64</sup>
Adults	Many report using cannabis for managing anxiety, chronic pain, migraines, sleep, and symptoms related to arthritis, multiple sclerosis, and cancer. <sup>65-67</sup>
<b>Sex</b>	
Female	<p>Many report using cannabis for muscle spasticity, menstrual cramps, insomnia, and autoimmune disorders such as lupus and rheumatoid arthritis.</p> <p>More likely than men to use cannabis for mental health conditions including anxiety, depression, and post-traumatic stress disorder (PTSD).</p>
Male	<p>Many report using cannabis for pain management particularly chronic pain conditions such as back pain, arthritis, and neuropathic pain.</p> <p>More likely than women to use cannabis to manage symptoms related to human immunodeficiency virus (HIV) and hepatitis C.</p>



**Under-Represented Populations<sup>68-72</sup>**

Transgender

Many report using cannabis to cope with stress related to gender identity and societal stigma, pain, and hormone therapy side effects. Limited access to affirming healthcare may lead to self-medication with cannabis.

Non-binary

Limited research exists on cannabis and non-binary individuals. One study included individuals who are non-binary as a part of a larger grouping. They were found to use illicit drugs including cannabis at lower rates than previously reported for the general population.

**Geographic Location<sup>73</sup>**

Studies suggest a significant portion of adult-use consumers report using cannabis to treat medical conditions and symptoms, even if they are not part of their state’s medical cannabis program.

Usage patterns differ based on the legal status of cannabis in a particular region, with higher usage reported in states where cannabis is legal for medical and adult use purposes.

**Socioeconomic Factors<sup>73</sup>**

Individuals with higher socioeconomic status may have better access to legal cannabis for medical purposes due to factors such as access to regular healthcare, availability of dispensaries, and cost.

Stigma and workplace drug testing can deter some employed individuals from using cannabis even if they have a state-approved medical cannabis card.<sup>74</sup>

Rules around cannabis use can limit access for those living in public, subsidized or rental housing, even for medical reasons.<sup>75</sup>

Adult students who have a medical cannabis card are typically prohibited from possessing, or using, cannabis on university property.<sup>76</sup>



## Cannabis Products and Modes of Administration

In a legal cannabis dispensary, a comprehensive range of cannabis products is available to cater to the diverse needs of patients seeking therapeutic relief. These offerings allow a person to choose the method of administration. There are various ways to inhale cannabis, ingest cannabis, and use cannabis sublingually, transdermally, or topically.

### Inhalable Products

Inhalation products include traditional options such as dried flower and pre-rolled joints that are smoked or inhaled as vapor. Concentrates, also known as wax, shatter, dabs, or live resins, all used in a vaporized form, can provide a high potency impact.

This mode of administration has a fast onset, typically 5-10 minutes and can have a duration of effect between 2-4 hours. Smoking dried leaves in the form of a marijuana joint or blunt is the most common and least expensive method of inhalation. It is also challenging to precisely dose as medicine and can produce adverse effects associated with inhaling combusted plant materials. Vape pens tend to allow for more precise dosing, and some vape pens deliver a measured dose with each inhalation.

It is important to note the FDA does not recommend vaping cannabis products due to its association with lung injury. Though products with vitamin E acetate as well as unauthorized vaping accessories or incorrect use of authorized vaping accessories pose the greatest risk. Vaporization also requires lower heat than combustion, which can be easier on the throat and lungs and produce less carcinogens. Other forms of inhalation or vaping (pipes, bongs, hookah, bubblers, etc) are challenging to dose, much like smoking a joint.

### Ingestible Products

Ingestible cannabis products are often known as edibles. Edibles can come in a wide variety of forms ranging from mints and sucking candies to gummies, taffy, chocolate, cookies, brownies, etc. Swallowable tablets are also considered “edibles” because they pass through the digestive tract.

All edibles move through the digestive tract with an onset of effect of 1-3 hours although the specific time to onset of effect may vary between users and specific products. The duration of effect for edibles can be 6-8 hours. Edibles purchased through a dispensary have ingredients and dose information on the package.

When purchasing cannabis products from a dispensary, the active ingredients (cannabinoids like THC or CBD) are measured in milligrams (mg). Products typically contain between 1 to 10 mg of active ingredient per dose, though some may be higher. For example, a chocolate bar might contain a total of 100 mg THC, divided into 10 squares, with each square containing 10 mg THC. Similarly, a container of gummies might have 30 individual pieces, with each gummy containing a specific dose noted on the container, such as 5 mg THC per gummy. Much like any pharmaceutical that goes through the digestive tract, the amount of active ingredient that enters the system depends on a person’s individual digestion.

## Tinctures

Cannabis tinctures are liquid preparations that can be administered sublingually. This mode of administration bypasses the digestive tract and often has an onset of effect faster than edibles but slower than inhaled cannabis.

The time to onset of effect is between 15 and 45 minutes. The duration of effect can be as much as 6-8 hours but typically is 4-6 hours. Tinctures come in many different dosages and can be titrated by individual drops to a full pipet. If purchased in a cannabis dispensary with appropriate labeling, each drop has a known amount of active ingredient.

## Transdermal Products

Transdermal patches, creams, balms, and lotions are applied to the skin. There is no reliable information on how long it takes for the onset of action, how much cannabis reaches the target tissue, or how much cannabis actually gets picked up by the bloodstream.

Dosing of active ingredients with creams, balms, oils and lotions cannot be reliably reported although each full tube or container will be labeled with the total amount of active ingredient. Transdermal patches are individual and discrete, with dosing information on the label indicating how many milligrams are infused into each patch.

## Emerging Products

The cannabis industry is continuously evolving, looking for innovative products to engage the consumer. Products like infused butter, infused cooking oils, marinades, teas, and salad dressings are impossible to dose or titrate; nevertheless, these products provide patients with a diverse range of therapeutic options to align with their rehabilitation goals.

Cannabis products found in a legal dispensary are most often labeled with cannabinoid and terpene profiles. Some products list only the cannabinoid profile but provide a QR code for more complete information about each product.

## Cannabis Products and Modes of Administration<sup>77-80</sup>

Mode of Administration	Onset of Effect	Duration of Effect	Comments
Inhalation	5-10 minutes	Peak effect in 10-30 minutes.  Typically lasts 2-4 hours.	Precise dosing can be challenging. Vape pens may offer more accurate dosing.  Smoking combusted materials may have negative side effects.
Ingestion (Edible/Tablet)	30-180 minutes	Peak effect in 2-3 hours after ingestion.  Typically lasts 6-8 hours for an average dose.	Easier to measure doses, but effects can vary based on individual digestion and absorption.  First-pass metabolism impacts effectiveness.
Sublingual (Tincture)	15-45 minutes	Peak effect by 45 minutes.  Typically lasts 4-6 hours.	Bypasses digestion via absorption through sublingual blood vessels.  Allows precise dosing by droplet.  If swallowed, effects are more like ingestion.
Transdermal/ Topical (Patches, Lotions)	Additional research needed  Patch - advertised 15-60 minutes  Lotion/gel - advertised 5-20 minutes	Additional research needed  Patch - advertised 8-72 hours depending on product  Lotion/gel - advertised 1-6 hours	Bypasses digestion; may avoid psychoactive effects.  Patches may provide sustained steady plasma levels and allow early termination if needed.  Topical application localizes effects.  CBD shows higher skin permeability than THC.

# Cannabis

## NJ.gov/Cannabis

For the most up-to-date information on accessing medicinal cannabis in New Jersey, please visit <https://www.nj.gov/cannabis/medicinalcannabis/medicinal/>.

Patients who wish to access medicinal cannabis must register with the New Jersey Medicinal Cannabis Program (NJMCP). To register they must have a relationship with a healthcare provider who is registered with the system who will manage their qualifying healthcare condition and provide the patient with cannabis orders to be filled at a dispensary. A list of registered healthcare providers and whether they accept new patients is available on the NJMCP website. Dispensaries that offer medical-use cannabis may also be able to provide information about healthcare providers who can certify patients.

## Patient Education

Patients may decide to use adult-use cannabis to manage their symptoms, purchasing from a recreational dispensary without registering with the NJMCP. They should be encouraged to communicate their usage to all their healthcare providers, as cannabis use can affect the anesthetic response of patients undergoing surgery and may have interactions/affect the concentration levels of other medications the patient is taking.

If a patient asks you about using cannabis to manage their symptoms, it is best to advise them to speak with their primary care provider. However, it is appropriate to provide education about cannabis and its effects without making specific recommendations that might be perceived as practicing outside of your scope.

## Best Available Evidence for Pain and Co-Occurring Conditions

The 2024 Clinical Practice Guidelines for Cannabis and Cannabinoid-Based Medicines in the Management of Chronic Pain and Co-Occurring Conditions<sup>12</sup> recommend a slow titration of dosage to achieve optimal symptom improvement with minimal or no side effects. Patients should be educated that they do not need to feel “high” to have symptom improvement. The titration regimens referenced in the CPG recommend that most patients start with a CBD-predominant product and slowly increase the amount, then add a low dose of THC to address remaining symptoms/achieve treatment goals.

# Appendix D

## Glossary

**Cannabinoid:** A compound found primarily in cannabis plants that act on cannabinoid receptors. These include THC, CBD, CBG, CBN, etc. There are currently over 100 chemical compounds found in the cannabis plant.

**Marijuana:** A term most often referring to dried flower, leaves or buds of the cannabis plant. The active cannabinoid in marijuana is most usually delta-9 THC, and it is expressed as a percentage. At a legal dispensary, the percentage of THC will vary, with the lower end being in the 15 to 18% range up to a maximum of 35%. The potency of a marijuana product increases with an increasing percentage of THC. Marijuana can be smoked, vaped, or inhaled by several different methods. It is used both medicinally for symptom relief as well as recreationally.

**Hashish/Hash:** A concentrated form of cannabis made by separating the resin from the plant material. It is a solid or paste-like product and can be smoked, vaporized, or added to a baked product to become an edible. Hash tends to have higher percentages of THC and is thus much more potent. In NJ, no legal dispensaries can sell hashish.

**Endocannabinoid System (ECS):** A complex biological system that regulates various physiological processes, including pain perception, mood, appetite, memory, and immune function. It plays a role in maintaining homeostasis and modulating various systems in the body, including the nervous, endocrine, and immune systems.

The ECS comprises three main components:

1. **Endocannabinoids** are naturally occurring compounds produced by the body that bind to and activate cannabinoid receptors. The primary endocannabinoids are anandamide (AEA) and 2-arachidonoylglycerol (2-AG).
2. **Cannabinoid receptors** are specific receptors located throughout the body, primarily CB1 receptors (found mainly in the central nervous system) and CB2 receptors (found primarily in the peripheral nervous system and immune cells).
3. **Enzymes:** Enzymes like fatty acid amide hydrolase (FAAH) and monoacylglycerol lipase (MAGL) are responsible for breaking down and inactivating endocannabinoids after they have carried out their functions.

Cannabinoids from the cannabis plant, such as tetrahydrocannabinol (THC) and cannabidiol (CBD), can interact with the ECS by binding to cannabinoid receptors or modulating the activity of enzymes, thereby producing various effects on the body and mind.



## Glossary

**Edibles:** Food products infused with cannabis extracts, such as brownies, cookies, gummies, or beverages. Essentially, anything processed through the digestive tract could fall into this category. Capsules, while swallowed whole, would also fall into this category.

**Tinctures:** A liquid extract of cannabis, often mixed with alcohol or another solvent. They are typically taken sublingually (under the tongue) for quicker absorption.

**Topicals:** A cannabis-infused cream, balm, or lotion applied to the skin. They are often used for localized relief of pain or inflammation without producing a psychoactive effect.

**Vaping:** Vaporizers heat cannabis extracts or flower to create an inhalable vapor. Some consider this method to be a less harmful alternative to smoking.

# Appendix E

## Survey Information and Results

### Background and Objectives

This survey was conducted to assess current trends in physical therapy practice regarding patient use of cannabis. The goal was to inform the American Physical Therapy Association of New Jersey (APTANJ) about membership needs related to cannabis legalization in New Jersey, particularly regarding current practices and continuing education requirements.

### Methodology

- Survey period: April to June 2024
- Distribution: Email to all APTANJ active members and licensed Physical Therapy professionals in NJ
- Respondents: 260 anonymous responses from approximately 7,500 licensed PT professionals in NJ

### Key Findings

#### Respondent Demographics

- Gender: 64% women, 34% men, 2% preferred not to say
- Age range: 21 to 70+ years old
- Ethnicity: 85% White, 8% Asian, 3% Hispanic/Latino, 2% Black, 2% Other
- Professional status: 93% Physical Therapists, 6% PT/PTA students, 1% Physical Therapist Assistants
- APTA membership: 62% members, 38% non-members
- Experience: 54% in practice for over 20 years
- Practice setting: 62% in outpatient care

#### Patient Cannabis Use

- 78% of respondents have worked with patients who use cannabis
- 69% reported patients used cannabis for both medical and recreational purposes
- 72% listed pain as the most common condition for cannabis use in therapy patients
- Consumption methods: 29% edibles, 24% smoking, 15% topical application, 14% vaping, 9% tinctures

#### Professional Knowledge and Attitudes

- 42.3% feel they have good knowledge about medicinal cannabis products
- 35.7% feel comfortable discussing medicinal cannabis with patients
- 73% do not know how to facilitate a referral for medical cannabis
- 63.8% agree there is scientific evidence supporting medical cannabis efficacy
- 50% believe PT professionals should educate about cannabis risks and benefits
- 80.8% support cannabis-specific training for PT professionals

#### Learning Needs: Top areas of interest include:

- Pain modulation benefits
- Risks and benefits of cannabis use
- Effects on common diagnoses
- Impacts on balance, mental health, exercise, and focus
- Use in specific conditions (e.g., MS, Parkinson's, osteoarthritis)

## Responses Overview Closed

Responses

260



Average Time

06:52

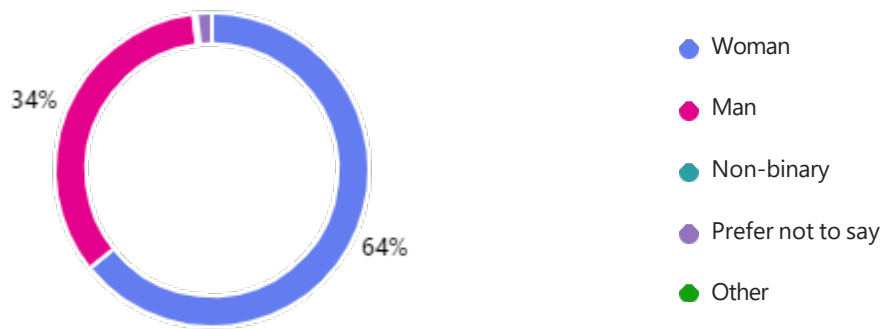


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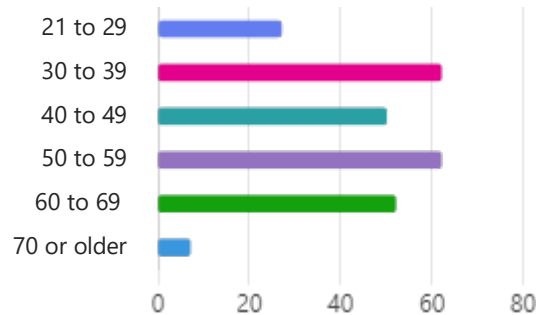
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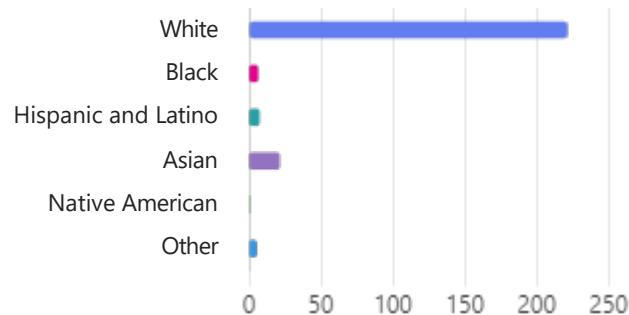
### 1. Gender



### 2. Age



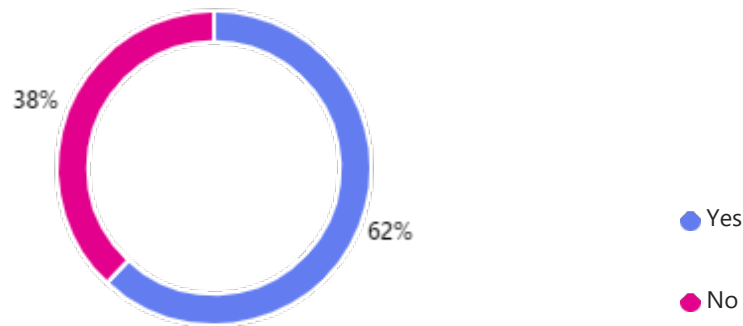
### 3. Race/Ethnicity



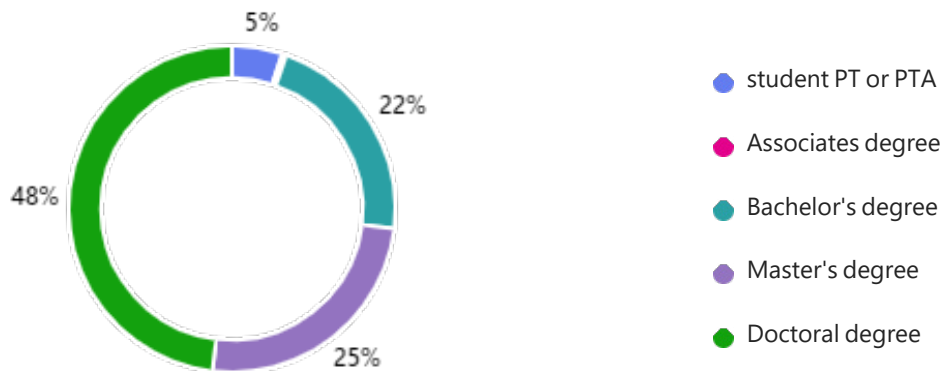
4. What is your title?



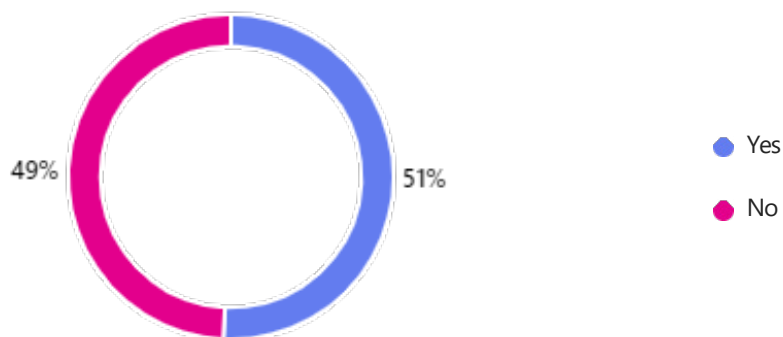
5. Are you a member of APTA



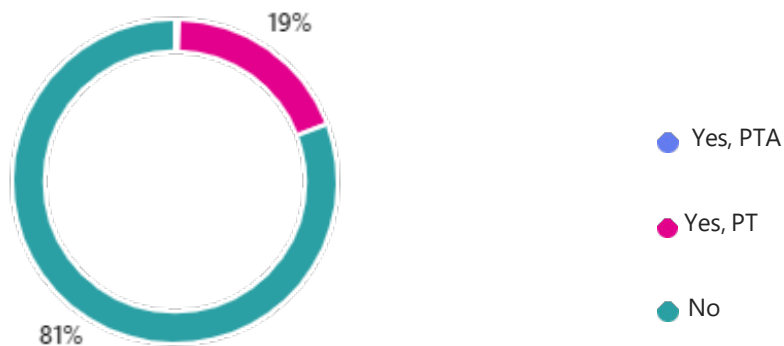
6. What is your entry level of education in the profession?



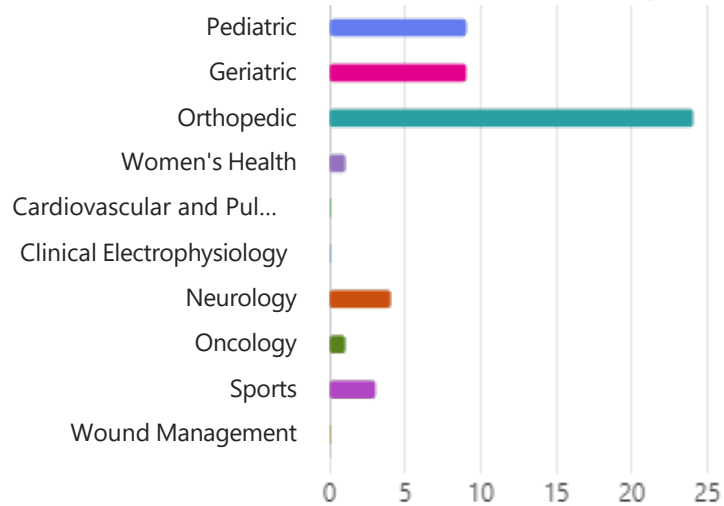
7. Have you completed a post graduate program?



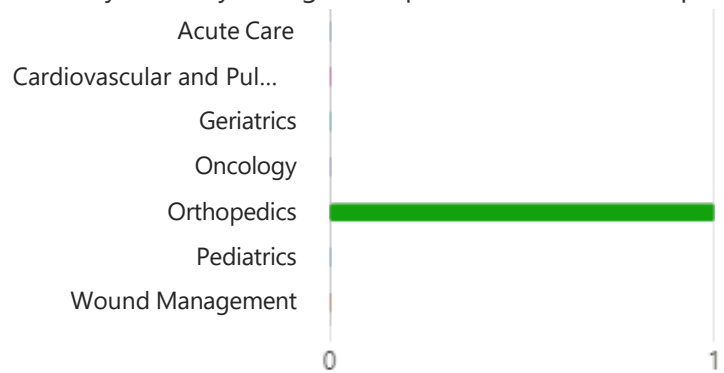
8. Are APTA component Board Certified or PTA Advanced Proficiency Recognition?



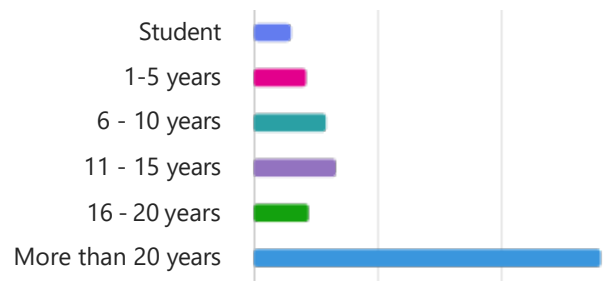
9. If you are Board Certified please indicate below which certification(s) you have.



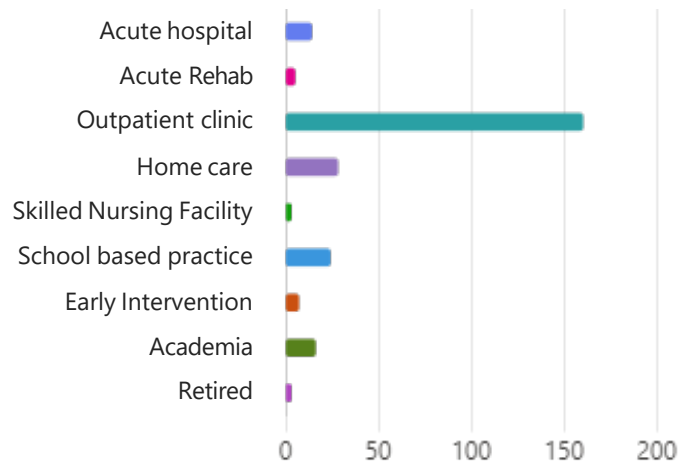
10. PTA Advanced Proficiency Pathway Recognition, please indicate which pathway(s) below:



11. How long have you been in Practice?

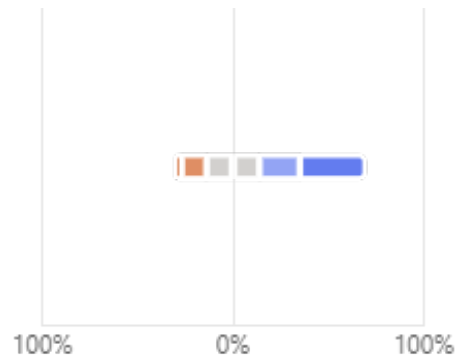


12. Practice Setting

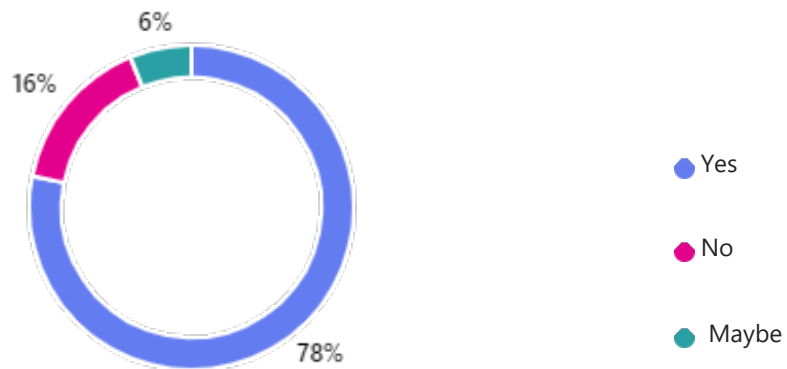


13. In the past three months, my patients have asked me about medicinal cannabis products?

● Always ● Frequently ● Sometimes ● Rarely ● Never

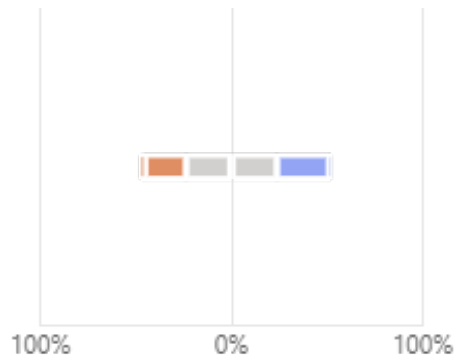


14. Have you ever worked with patients who use cannabis?

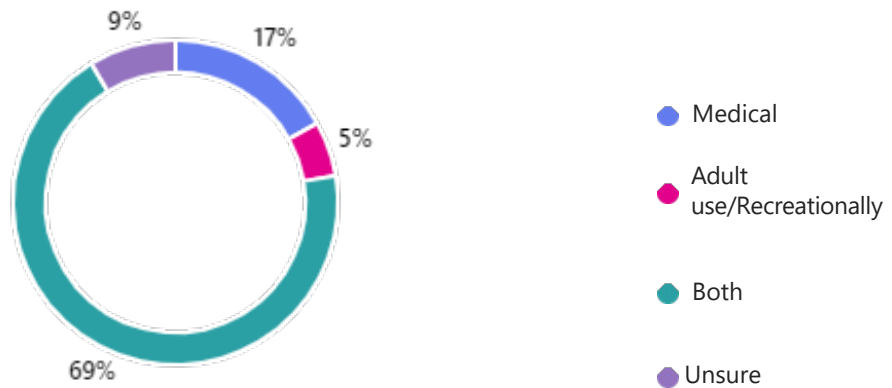


15. How often have you worked with patients who use cannabis?

● Always ● Frequently ● Sometimes ● Rarely ● Never



16. How would you describe your patients use of cannabis?



17. What is the most common condition you treat with those who use cannabis?

219 responses submitted

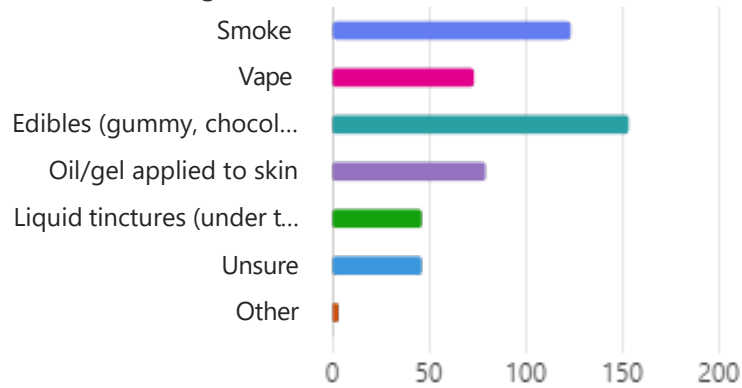
"DJD and post op"

"n/a"

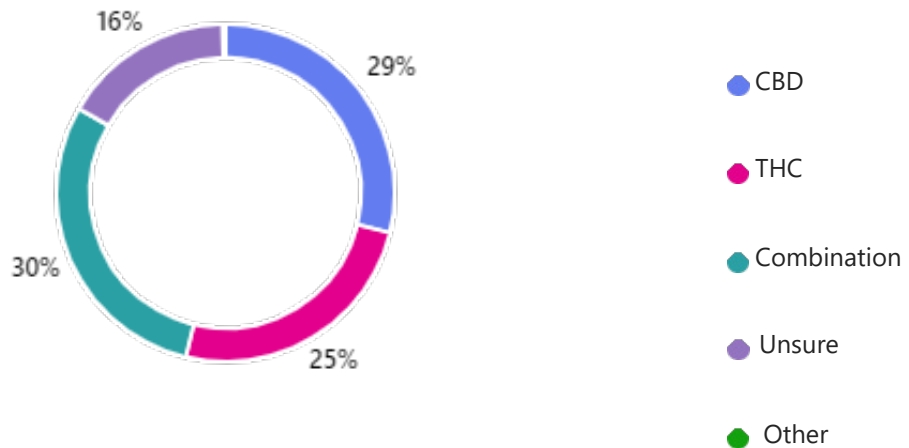
"Chronic pain"

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18. How are your patients consuming cannabis?

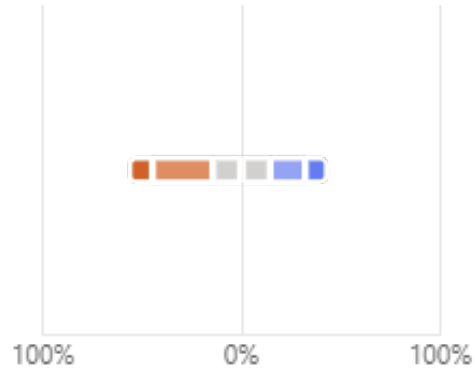


19. What type of cannabis products are your patents using, select all that apply.



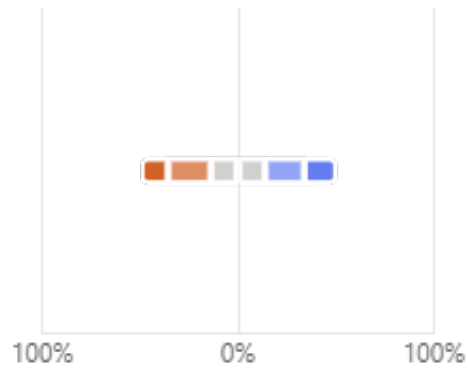
20. I have good knowledge around the effects of medicinal cannabis products.

● Strongly agree ● Agree ● Neither agree nor disagree ● Disagree ● Strongly disagree

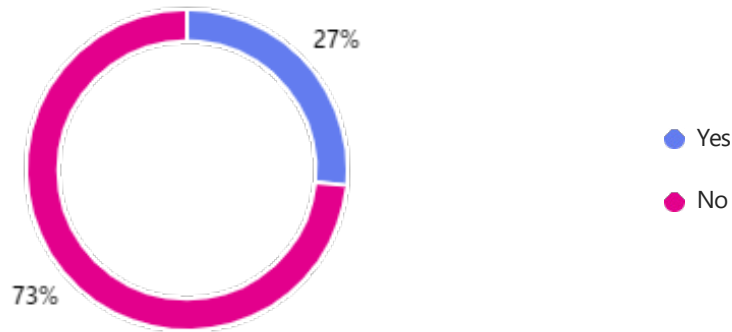


21. I feel comfortable discussing medicinal cannabis with my patients

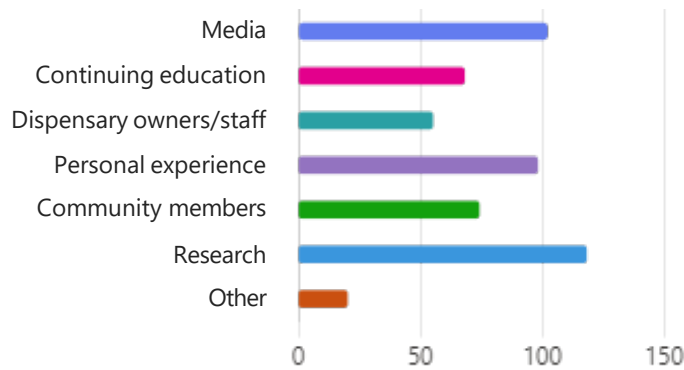
▶ Strongly agree ● Agree ● Neither agree nor disagree ● Disagree ● Strongly disagree



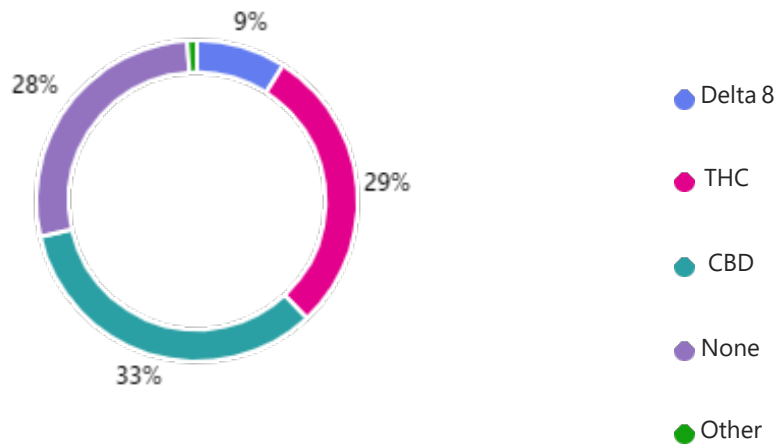
22. I know how to facilitate a referral for legal access to medical cannabis.



23. From which sources have you obtained most of your information about cannabis? Check all that apply.

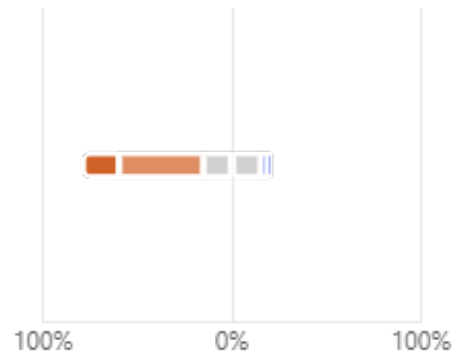


24. I am comfortable with my knowledge of these cannabinoids: Check all that apply.



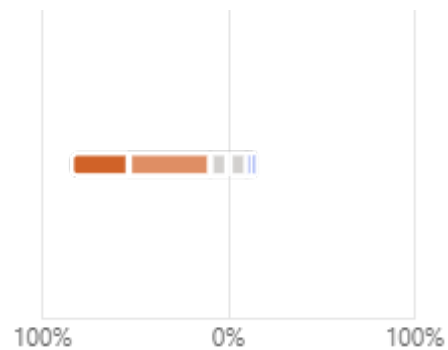
25. There is scientific evidence regarding the efficacy of medical cannabis.

● Strongly agree ● agree ● Neutral ● Disagree ● Strongly disagree



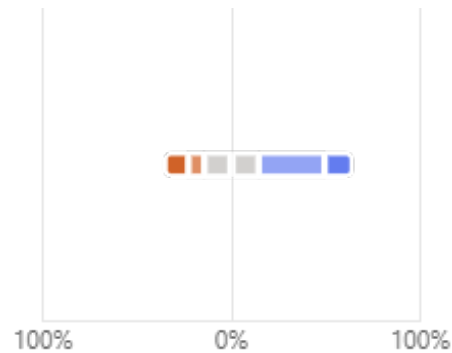
26. Medical cannabis is a legitimate medical therapy.

▶ Strongly agree ● Agree ● Neutral ● Disagree ● Strongly disagree



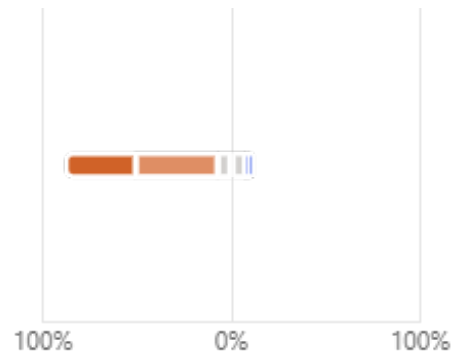
27. Physical Therapy professionals should play a role in education regarding risks and benefits of cannabis.

● Strongly disagree ● Disagree ● Neutral ● Agree ● Strongly agree



28. Training (CME) about cannabis should be available and specific for Physical Therapy professionals.

● Strongly agree ● Agree ● Neutral ● Disagree ● Strongly disagree





29. What do you think would be most worthwhile for the Physical Therapy professional to learn about Cannabis?

175 responses submitted

"What it does, indications and contraindications for use..."

"Any information that is relevant to Physical therapy pr..."

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