CLINICAL GUIDELINES PROGRAM
NEW YORK STATE DEPARTMENT OF HEALTH AIDS INSTITUTE | HIV • HCV • STIs • SUBSTANCE USE • LGBTQ+ HEALTH

Therapeutic Use of Medical Cannabis in New York State

Updates, Authorship, and Related Resources

Date of current publication	October 30, 2025
Highlights of changes, additions, and updates in the October 30, 2025 edition	• Updated information related to New York State Office of Cannabis Management and Medical Cannabis Program, including on patient medical cannabis certification, throughout guideline • Updated information and guidance on dabs and waxes as nonrecommended administration methods throughout guideline • Therapeutic Uses of Cannabis section: – Updated Box 2: Examples of Conditions for Medical Cannabis Use in New York State – Updated information on chronic or severe pain, PTSD, and opioid use disorder as indications for medical cannabis use • Assessment section: – Updated information on conditions that require caution – New Table 3: Drug-Drug Interactions • Medical Cannabis Initiation section: Updated information on medical cannabis use during pregnancy • Monitoring section: New recommendation added and updated information on urine toxicology testing
Intended users	Clinicians throughout New York State who are registered to provide certification for medical cannabis use for patients with qualifying conditions
Lead authors	Deepika Slawek, MD, MS, MPH; Julia H. Arnsten, MD, MPH
Writing group	Susan D. Whitley, MD; Timothy J. Wiegand, MD, FACMT, FAACT, DFASAM, DFSAM; Sharon L. Stancliff, MD; Narelle Ellendon, RN; Christopher J. Hoffmann, MD, MPH, MSc, FACP; Brianna L. Norton, DO, MPH; Charles J. Gonzalez, MD
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Committee: Substance Use Guidelines Committee
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Contents

Purpose of This Guideline

This guideline on the therapeutic use of medical cannabis in New York State was developed by the New York State Department of Health AIDS Institute (NYSDOH AI) to:

- Provide clinicians with a framework for implementing the therapeutic use of medical cannabis in their outpatient settings in New York State.
- Increase access to evidence-based medical cannabis treatment for ambulatory patients in New York State by increasing the number of clinicians who can provide that care in outpatient settings (see Increasing Access to Safe Medical Cannabis).

Use of Medical Cannabis in New York State

In 2014, New York State passed the Compassionate Care Act to safely and effectively provide medical cannabis to eligible state residents, and in 2016, the New York State Medical Cannabis Program (NYSMCP) was created (see Box 1, below). In March 2021, legislation legalizing adult cannabis use in New York State was signed, creating the Office of Cannabis Management (OCM) to implement a comprehensive regulatory framework for medical cannabis use, adult cannabis use, and cannabinoid hemp (see Appendix: Office of Cannabis Management (OCM) Dear Colleague Letter).

Trained, registered clinicians evaluate patients to determine eligibility for medical cannabis treatment. If eligible, patients are certified and provided with a printed or digital certification document with their name, address, certifying practitioner's information, dosing recommendations or dosing left to discretion of the dispensary pharmacist, and unique bar code. This certification document is presented with a government-issued identification card (e.g., driver's license, passport, city identification card) at medical cannabis dispensaries when purchasing medical cannabis products. OCM Medical Cannabis

Healthcare Providers provides the names, locations, and contact information of registered clinicians who agreed to have their information publicly shared.

Medical cannabis dispensaries in New York State sell medical cannabis products approved for sale by the OCM that have been tested by independent third-party laboratories to ensure the specified delta-9-tetrahydrocannabinol (THC) and cannabidiol (CBD) content and detect potential contaminants. Laboratories must also report delta-8- and delta-10-tetrahydrocannabinol and any other marketed cannabinoid, such as cannabigerol or cannabinol, if present.

Available products include oils for vaporization, tinctures, capsules, chewables (including gummies, chocolates, and water-soluble beverage mixes), topical formulations, waxes or dabs, pre-rolls, and whole and ground flower sold in combustible forms and for use in a vaporizer device (see Table 2: Medical Cannabis Administration Methods Currently Available in New York State). The Marihuana Regulation and Taxation Act (MRTA) introduced home cultivation of medical cannabis for certified patients and caregivers. Seeds for home cultivation are intended to be made available at medical cannabis dispensaries and licensed nurseries for sale to patients, but no licensed nurseries are operational as of October 2025. Unregulated cannabis products pose a risk to public health and safety because they do not follow the same packaging, labeling, and laboratory testing standards as regulated products. There remains a large unregulated market of cannabis in New York State, through both informal sources and brick-and-mortar stores. New York City officials have estimated that between 1,400 and 3,000 unregulated brick-and-mortar cannabis dispensaries exist in the city alone [The New York Times 2024; PBS News 2023].

Under federal law, per the U.S. Food and Drug Administration and Drug Enforcement Administration, cannabis is "a Schedule I substance under the Controlled Substances Act, meaning that it has a high potential for abuse, no currently accepted medical use in treatment in the United States, and a lack of accepted safety for use under medical supervision" [DEA 2024]. The federal legal status of cannabis has severely limited the ability to conduct high-quality, rigorous research on the medical use of cannabis and limits the availability of published evidence [FDA(a) 2023]. Enforcement of federal cannabis laws is fluid and depends on Department of Justice enforcement, which changes according to the administration in the Executive Branch. The NYSMCP provides protections to clinicians who abide by program regulations. However, clinicians who do not follow NYSMCP program regulations or the MRTA could face legal consequences [New York State Assembly 2014].

Because of the lack of rigorous evidence for the therapeutic use of medical cannabis for certain conditions, some medical organizations recommend against its use, including the American Psychiatric Association, the American Academy of Neurology, and the American Medical Association. However, other professional societies, including the American Society of Addiction Medicine and the American Academy of Family Physicians, have more nuanced positions and recommend that medical cannabis be used only in circumstances in which a health department regulates medical cannabis programs and a true patient/clinician relationship is established with appropriate follow-up. Ultimately, patients are using and want to use medical cannabis [National Academies 2017]. It is important to engage patients in informed conversations that account for their preferences and balance risks with potential benefits of medical cannabis use, as a harm reduction principle or when other treatment modalities have failed.

Box 1: New York State Medical Cannabis Program

The New York State Medical Cannabis Program offers extensive information and resources to clinicians, including:

- Marihuana Regulation and Taxation Act (MRTA) Laws and Regulations: Adult Use, Medical Cannabis, and Cannabinoid Hemp Programs
- Public List of Consenting Medical Cannabis Program Practitioners
- Registered organizations that manufacture and dispense medical cannabis in New York State, and information on product quality, labeling, and safety
- Procedures for clinicians who want to become registered cannabis providers
- For New York State-registered cannabis providers, information on:
  - Certifying Patients
  - Adverse Event Reporting
  - Coverage for Medical Cannabis Office Visits
  - Medical Cannabis Home Cultivation

Medical Cannabis Clinicians

When indicated, clinicians can refer patients to New York State-registered cannabis clinicians for assessment and certification. New York State clinicians who wish to become registered medical cannabis clinicians must complete required training through the NYSMCP; once registered, they can assess patients and recommend cannabis products, delivery

methods, initial dosing, and dosing adjustments. Clinicians can either restrict patient certification to certain products or elect to have a pharmacist at the dispensary determine which products a patient can purchase. In New York State, dispensing sites must have a licensed pharmacist on the premises to supervise activity whenever medical cannabis products are dispensed or handled. These pharmacists have experience with dosing based on individual clinical symptoms and have completed an online curriculum approved by New York State. Patients usually interface directly with salespeople (known as "budtenders") who do not have pharmacy training but are supervised by pharmacists. Currently, the Office of Cannabis Management requires that all products dispensed by medical cannabis dispensaries are reported in the New York State Prescription Monitoring Program Registry, similar to other controlled substances [NYS Office of Cannabis Management 2025]. For reporting purposes, total THC is the sum of the percentage by weight or volume measurement of tetrahydrocannabinolic acid (the precursor of delta-9-tetrahydrocannabinol) multiplied by 0.877, plus the percentage by weight or volume measurement of THC [NYS Senate 2023].

Definition of Terms

Table 1, below, explains terms used throughout this guideline.

Table 1: Terms Used in This Guideline

Term	Definition
Cannabis and Cannabinoid Products	
Cannabis	A broad term describing various products and chemical compounds derived from the *Cannabis sativa* or *Cannabis indica* species [National Academies 2017].
Marijuana [a]	Stigmatizing historical term, still used in regulations, laws, policies, and other legal documents, referring to leaves, stems, seeds, and flower buds derived from the *Cannabis* plant [National Academies 2017].
Hemp	*Cannabis* plant with very low levels of THC (<0.3%) on a dry weight basis [Small 2015].
Unregulated cannabis	Cannabis that is not obtained from a licensed medical cannabis dispensary, does not undergo testing for contaminants or to confirm cannabinoid content by New York State, and is **not** recommended by a clinician.
Regulated adult-use cannabis	Legal cannabis that has undergone testing for contaminants and to confirm cannabinoid content by New York State. Does **not** require evaluation by a clinician to dispense to an individual.
Medical cannabis	Legal cannabis that has undergone testing for contaminants and to confirm cannabinoid content by New York State. Dispensed under the purview of recommendations from a clinician.
Dronabinol/nabilone	Orally administered medications with synthetic THC as the active ingredient. Approved by the FDA to treat anorexia associated with weight loss in patients with HIV (dronabinol) and nausea/vomiting associated with cancer chemotherapy in patients who have not responded adequately to conventional antiemetic treatments (dronabinol or nabilone) [FDA(b) 2023; FDA 2022].
Constituents of Cannabis	
Cannabinoid	One of a group of more than 100 biologically active chemicals found in the cannabis plant.
THC	The main psychoactive constituent of cannabis [National Academies 2017].
CBD	A constituent of cannabis traditionally considered nonpsychoactive [National Academies 2017]. In a purified form, approved by the FDA for treatment of seizures associated with Lennox-Gastaut syndrome, Dravet syndrome, or tuberous sclerosis complex in patients aged 1 year or older [FDA 2024].
THC:CBD ratio	The ratio of THC to CBD in a medical cannabis product.
Terpenes	Compounds that produce the plant's smell, taste, and appearance (e.g., limonene, myrcene).

Table 1: Terms Used in This Guideline	
Term	**Definition**
Medical Cannabis Terminology	
Administration method	Refers to how cannabis is used or applied. In New York State, the currently available administration methods for medical cannabis are inhaled, oral, sublingual, topical, dabs (also known as shatter or wax), and suppository. Inhaled products include vaporized oil, vaporized whole or ground flower, and combusted whole or ground flower.
Care provider registration	An educational process by which a clinician becomes eligible to certify patients for medical cannabis use.
Medical cannabis certification	A patient assessment completed by a clinician registered in the New York State Medical Cannabis Program to certify that the patient qualifies for medical cannabis eligibility in New York State based on the clinician's professional opinion.
Dispensary	A retail site of an organization registered with New York State to dispense medical cannabis under the supervision of a pharmacist to individuals with medical cannabis certification.
Quantification of and Approach to Cannabis Use	
Less frequent or no cannabis use	Cannabis use on *less than 20 days* in a month [Compton, et al. 2016].
Near-daily or heavy cannabis use	Cannabis use on *at least 20 days* of the month [Compton, et al. 2016].
Harm reduction	In the clinical context, an approach and practical strategies targeted to reduce the negative consequences of substance use. It is founded on respect for the rights of individuals who use drugs [adapted from the National Harm Reduction Coalition].
Abbreviations: CBD, cannabidiol; FDA, U.S. Food and Drug Administration; THC, delta-9-tetrahydrocannabinol. **Note:** a. Also spelled as "marihuana" due to the spelling chosen for the Marihuana Tax Act of 1937.	

Cannabis Pharmacology and the Endocannabinoid System

"Cannabis" describes a family of plants including *Cannabis sativa, Cannabis indica,* and hemp. The cannabis plant produces more than 100 cannabinoids and a similar number of terpenes and flavonoids. The most widely studied cannabinoids are delta-9-tetrahydrocannabinol (THC) and cannabidiol (CBD). The other cannabinoids may contribute to the therapeutic effect of cannabis [Huestis 2007]; terpenes (e.g., limonene, myrcene) produce the smell, taste, and appearance of the plant; and flavonoids contribute to the color and pigmentation of the leaves and flowers of the plant [Tomko, et al. 2020]. Cannabinoids can be endogenous (endocannabinoid), plant-derived (phytocannabinoid), or synthetic and act as neurotransmitters within the human endocannabinoid system. Cannabinoid receptors in the endocannabinoid system are called CB1 and CB2 [Munro, et al. 1993; Matsuda, et al. 1990].

CB1 receptors exist primarily in areas of the brain that regulate appetite, memory, fear, and motor responses. Stimulation of CB1 receptors in the brain produces psychotropic effects. CB1 receptors are also found outside the brain in the gastrointestinal tract, adipocytes, liver, and skeletal muscle [Mackie 2005; Matsuda, et al. 1990]. CB2 is primarily expressed in macrophages and other macrophage-derived cells that are part of the immune system [Munro, et al. 1993].

Current understanding of cannabis pharmacology is incomplete and much remains under investigation. Both THC and CBD act on CB1 and CB2 receptors but in different ways. THC is a partial agonist of CB1 and CB2 receptors. Stimulation of these receptors by THC leads to analgesic, anti-inflammatory, and muscle-relaxant effects [Pertwee 2006]. The binding of THC to CB1 receptors is associated with psychoactive features, including reduced or enhanced anxiety, memory suppression, euphoria, and intoxication. Stimulation of CB2 receptors leads to anti-inflammatory effects [Russo and Guy 2006]. CBD binds weakly to CB1 and CB2 receptors [Russo and Guy 2006], producing anti-inflammatory [Ben-Shabat, et al. 2006], antispasmodic [Wade, et al. 2006], and analgesic effects [Maione, et al. 2011]. When THC and CBD are used together, several

other receptors are activated to regulate pain perception [Russo and Guy 2006]. Other compounds in the cannabis plant, including minor cannabinoids and terpenes, have been hypothesized to affect the clinical effects of THC and CBD, which is often referred to as the "entourage effect" [André, et al. 2024]. The details of how this works are not completely known and have not been studied in a rigorous way.

Therapeutic Uses of Cannabis

Evidence supporting the most common current uses of medical cannabis is summarized below. Patients may be eligible for the use of medical cannabis if deemed clinically appropriate by a certifying healthcare provider (see Box 2, below). In the clinician's professional opinion and review of past treatments, the patient is likely to receive therapeutic or palliative benefit from the primary or adjunctive treatment with medical cannabis for the condition.

Box 2: Examples of Conditions for Medical Cannabis Use in New York State (as of October 2025) [a]

Some common conditions patients use medical cannabis to find relief from include but are not limited to [b]:

- Autism
- Alzheimer's
- Cancer
- Chronic pain
- Epilepsy
- HIV/AIDS
- Inflammatory bowel disease
- Certain mental health conditions (posttraumatic stress disorder, anxiety, etc.)
- Multiple sclerosis
- Muscular dystrophy
- Neuropathy
- Parkinson's Disease
- Rheumatoid arthritis
- Substance use disorder

Notes:

a. See New York State Medical Cannabis Program for the most up-to-date information.
b. This is not a comprehensive list. Certifying practitioners are authorized to evaluate and certify patients for medical cannabis based on their independent clinical judgement. The Marihuana Regulation and Taxation Act affords clinicians the authority to use their clinical discretion to certify their patients for any condition for which the patient is likely to receive therapeutic or palliative benefit from primary or adjunctive treatment with medical cannabis.

Previously, the New York State Medical Cannabis Program (NYSMCP) listed associated conditions required for patient certification in addition to the qualifying conditions (including seizures, severe nausea, severe or persistent muscle spasms, severe or chronic pain resulting in substantial limitation of function, and cachexia or wasting syndrome). Associated conditions are no longer required under the Marihuana Regulation and Taxation Act. Certifying practitioners are authorized to evaluate and certify patients for medical cannabis based on their independent clinical judgement. There is no statutory requirement to reference a predetermined list of qualifying conditions. Instead, a practitioner may issue a certification for any condition deemed appropriate, consistent with their scope of practice and standards of care. Conditions with the most evidence for using medical cannabis are described below. Medical cannabis use requires caution for some conditions.

Chronic or severe pain: The most common condition for which patients are certified to receive medical cannabis in New York State is chronic or severe pain [NYS Office of Cannabis Management(b) 2023]. Chronic and severe pain are also the most well-researched indications for the use of medical cannabis [AHRQ 2024; McDonagh, et al. 2022; Whiting, et al. 2015]. A systematic review of randomized controlled trials (RCTs) found that, compared with placebo, the use of cannabinoids is more likely to result in a 30% or more reduction in pain scores, specifically among individuals with acute pain [Whiting, et al. 2015]. Of the 28 RCTs reviewed, 22 evaluated plant-derived cannabinoids and most used a placebo control. Most studies used a plant-derived medical cannabis product developed for medical use outside of the United States. The remainder evaluated cannabis in flower form, which can be obtained for research studies from the National Institute on Drug Abuse [National Academies 2017]. Specific to chronic pain, defined as pain lasting longer than 3 to 6 months or beyond the usual period of tissue healing [Treede, et al. 2015], several meta-analyses have found evidence that equal parts THC and CBD improve chronic pain. These meta-analyses were limited by low-quality evidence and a limited number of studies that met the criteria for inclusion in analyses [AHRQ 2024; McDonagh, et al. 2022]. These meta-analyses also found that several formulations of cannabis remain understudied in the context of reducing chronic pain, including high-THC whole-plant extract, whole-plant cannabis, and topical formulations [AHRQ 2024].

In an analysis of New York State Prescription Management Program Registry data from 2017 to 2019 that examined medical cannabis and opioid dispensing data of more than 8,000 patients receiving long-term opioid therapy who were certified for medical cannabis, receipt of medical cannabis for more than 30 days in the observation period (vs. <30 days) was associated with a significant reduction in opioid dose over time [Nguyen, et al. 2023]. Because the studies in this analysis were retrospective and observational, it is impossible to eliminate confounding factors and determine causality.

Severe or persistent muscle spasms: Cannabinoid use for the management of spasticity has been studied primarily in people with multiple sclerosis (MS). One systematic review identified 27 studies (8 RCTs) examining spasticity in adults [Nielsen, et al. 2019]; 21 of these studies included adults with MS. Spasticity improved in participants in the 8 RCTs, although improvement was based on participant- rather than clinician-rated measures, and the few RCTs that used clinician-rated measures for spasticity used the now outdated Modified Ashworth Scale [Nielsen, et al. 2019; Ansari, et al. 2006]. In another meta-analysis, investigators conducted a pooled analysis of data from 3 studies that used numerical rating scales in investigating the efficacy of cannabinoids for spasticity in MS [Whiting, et al. 2015]. Compared with placebo, formulations of cannabis with delta-9-tetrahydrocannabinol (THC) and cannabidiol (CBD) were associated with improved spasticity on a participant-reported rating scale, and greater improvements in symptoms were reported by participants who received a formulation consisting of both THC and CBD (compared with those who received THC alone).

As with the research on chronic pain, these studies were all conducted with forms of medical cannabis that are not the same as those provided to medical cannabis patients in New York State. However, the cannabis studied contained the same primary active ingredients (THC and CBD) as the medical cannabis currently available in New York State.

Posttraumatic stress disorder (PTSD): PTSD was added as a qualifying condition for the NYSMCP in November 2017. The efficacy of cannabis for managing PTSD has not been well studied [Lowe, et al. 2019]. Several small studies examined THC for the treatment of nightmares, insomnia, and other PTSD symptoms, mostly in combat veterans [Nacasch, et al. 2022; Jetly, et al. 2015; Cameron, et al. 2014; Roitman, et al. 2014; Fraser 2009]. In all of these studies, participants experienced improved sleep, measured by a reduction in the number or intensity of nightmares or improvements in overall sleep quality. Concern remains that cannabis use in people with PTSD may result in adverse outcomes; however, this has also not been well studied [Lowe, et al. 2019].

Severe nausea: Few studies have examined medical cannabis use to treat severe nausea [National Academies 2017]. Oral synthetic THC (nabilone or dronabinol) has been used to treat chemotherapy-induced nausea for decades. It is superior to placebo and equally efficacious to comparator antiemetics [Grotenhermen and Müller-Vahl 2012]. CBD has been less well studied in humans for the management of nausea than THC. In animal studies, CBD alone was an effective antiemetic [Whiting, et al. 2015; Rock, et al. 2012].

Cachexia or wasting: There is very limited evidence that cannabis is effective in the management of cachexia or wasting. The use of cannabis for cachexia or wasting has been studied primarily in either AIDS wasting syndrome or cancer-associated cachexia. In an article summarizing 4 RCTs that investigated the effect of cannabis in individuals with AIDS wasting syndrome, the author concluded that these trials had a high risk of bias but there is some evidence that cannabis is effective for weight gain in individuals with HIV [Whiting, et al. 2015]. All 4 of these studies compared dronabinol (synthetic THC) with placebo or megestrol acetate. For cancer-associated cachexia, a phase 3 multicenter RCT compared treatment with cannabis extract (THC and CBD), THC alone, and placebo for 6 weeks. Participants (164 total) were monitored for appetite, mood, and nausea, with no significant differences between the 3 groups. Recruitment was terminated early because the data review board determined differences between groups were unlikely to emerge [Strasser, et al. 2006]. In a more recent pilot study, 17 individuals with cancer-associated cachexia were enrolled and received high THC:low CBD cannabis capsules for 6 months. Only 6 participants completed the study, 3 of whom had a weight gain of at least 10% from baseline; weight remained stable in the other participants [Bar-Sela, et al. 2019].

Seizures: In June 2018, CBD was approved by the U.S. Food and Drug Administration to treat rare forms of childhood epilepsy: Dravet syndrome, Lennox-Gastaut syndrome, and tuberous sclerosis complex [FDA 2018]. Dravet syndrome is a complex childhood epilepsy disorder associated with treatment-resistant seizures and a high mortality rate. In a double-blind RCT, daily oral CBD was associated with a statistically significant reduction in the frequency of convulsive seizures [Devinsky, et al. 2017]. In Lennox-Gastaut syndrome, another childhood epilepsy disorder with treatment-resistant seizures, CBD use resulted in a 41% reduction in seizure frequency. Reduction in seizure frequency was dose-dependent [Devinsky, et al. 2018].

The use of cannabinoids to manage seizures in adults and children with more common forms of epilepsy has not been as well studied. In an open-label study of CBD use in 70 pediatric and 62 adult participants with treatment-resistant epilepsy, 64% of participants experienced at least a 50% reduction in seizure frequency. Participants also experienced reduced severity of seizures and fewer adverse events [Szaflarski, et al. 2018]. In a small study of 21 adult participants with treatment-resistant seizures, CBD use was associated with a 71% reduction in seizure frequency, an 80% reduction in seizure severity, and

improved mood [Allendorfer, et al. 2019]. These outcomes are encouraging but were achieved with doses of CBD alone that exceed the doses approved for sale by the NYSMCP. There is little evidence to support taking other cannabinoids than CBD to manage seizures [Perucca 2017].

Opioid use disorder: Medical cannabis treatment has emerged as a strategy to address the opioid epidemic. New York State Medical Use of Marijuana regulations include substance use disorder as a condition that may be considered for medical cannabis use [NYS Office of Cannabis Management 2022].

In several ecological studies, medical cannabis use was associated with reduced opioid-related deaths, opioid prescribing, and opioid use [Bradford, et al. 2018; Powell, et al. 2018; Bradford and Bradford 2017; Boehnke, et al. 2016; Bachhuber, et al. 2014]. However, follow-up studies found that opioid overdose mortality increased in U.S. states where medical cannabis was available [Shover, et al. 2019; Caputi and Humphreys 2018]. Evidence to support taking medical cannabis to treat opioid use disorder (OUD) is scant. Randomized controlled clinical trials are needed to understand the relationship between medical cannabis use and opioid-related outcomes.

There are well-established OUD treatments based on a strong evidence base. Buprenorphine and methadone are the standard of care for OUD and effectively retain patients in treatment and reduce illicit opioid use [Mancher and Leshner 2019; Hser, et al. 2016; Timko, et al. 2016; Mattick, et al. 2014; Fiellin, et al. 2011; Kakko, et al. 2003]. If there is a role for medical cannabis in OUD management, it will be to augment rather than replace evidence-based pharmacologic treatment. Currently, there is insufficient evidence to advocate for the use of medical cannabis to manage OUD.

Medical Cannabis Formulations and Administration Methods Available in New York State

All medical cannabis products sold in dispensing sites in New York State must meet specific manufacturing requirements regulated by the New York State Office of Cannabis Management. These requirements address methods for extracting cannabinoids from cannabis plants, the cannabinoid profile, the presence of additives, and labeling. All cannabis manufacturers must provide medical cannabis products that are equal parts delta-9-tetrahydrocannabinol (THC) and cannabidiol (CBD) and low THC:high CBD (e.g., a 1:20 ratio of THC to CBD). All medical cannabis dispensaries also sell high THC:low CBD products, currently the most frequently used products by individuals in New York State. All products are tested by a laboratory located in New York State and permitted by the Cannabis Control Board to confirm cannabinoid content and identify contaminants [NYS Office of Cannabis Management 2025; NYS Office of Cannabis Management(a) 2023].

Table 2, below, describes the medical cannabis administration methods available to individuals in New York State, along with the advantages and disadvantages of each. The potential harms vary by administration method. Smoking ground flower through combustion confers the highest risk of harm because of the high temperature of inhaled smoke and potential for chronic damage to bronchioles and airways [Ribeiro and Ind 2018]. Risk is lower when cannabis is vaporized rather than smoked via combustion.

Hemp-based CBD versus medical cannabis: The 2018 U.S. Farm Bill Act made it legal to develop, distribute, sell, and market CBD products derived from hemp plants, which contain less than 0.3% THC on a dry weight basis. The Farm Bill Act removed hemp-based CBD regulation from the purview of the U.S. Food and Drug Administration and Schedule I status (Schedule I drugs, substances, or chemicals are defined as drugs with no medical purpose and a high potential for abuse). Hemp-based CBD has subsequently become available for purchase in retail settings, such as grocery and convenience stores, and with many different product types, including foods and beverages. Unregulated hemp-based CBD is often inaccurately labeled [Vandrey, et al. 2008]. One study found that almost half of products contained less CBD than the label described, and an additional quarter contained more CBD. In one-fifth of products sampled, THC was detected [Bonn-Miller, et al. 2017]. Additionally, while hemp plants are low THC at harvest, hemp-derived products can be processed to have intoxicating levels of THC and other cannabinoids and sold outside the regulated market. Consumers are often unaware of whether the products they are consuming are regulated versus illicit products.

Table 2: Medical Cannabis Administration Methods Currently Available in New York State (as of October 2025)			
Product, Method of Use, and Bioavailability	**Bioavailability and Peak or Onset and Duration of Effect**	**Advantages**	**Disadvantages** (also see guideline section Medical Cannabis Initiation)
Vaped oil: Inhaled using a battery-operated, portable pen-like device that administers a metered dose	• **Bioavailability:** Varies between 2% to 56% due to difference in inhalation dynamics (number of puffs, spacing of puffs, hold time, inhalation time, etc.) [a] • **Peak:** 9 minutes [a] • **Duration:** ≤2 hours [a]	• Quick onset of action • Ease of dose titration	Potential for short- and long-term adverse effects: • Intoxication [b] • Chronic bronchitis [c]
Vaped ground or whole flower: Inhaled using a tabletop or handheld device that creates vapor from the plant material and provides metered doses	• **Bioavailability:** Varies between 2% to 56% due to difference in inhalation dynamics (number of puffs, spacing of puffs, hold time, inhalation time, etc.) [a] • **Peak:** 9 minutes [a] • **Duration:** ≤2 hours [a]	• Quick onset of action • Ease of dose titration • No oil or additives in the flower	Potential for short- and long-term adverse effects: • Intoxication [b] • Chronic bronchitis [c]
Capsule/tablets/chewable tablets/orally disintegrating tablets/effervescent tablets/dissolvable powder/chewable gels: Oral ingestion	• **Bioavailability:** 4% to 25% depending on the study [d]. Variable due to drug degradation in the stomach, variable absorption in the stomach, and first-pass metabolism • **Peak:** 1-5 hours [e] • **Duration:** ≤25 hours [e]	• Slow onset of action, low bioavailability • Avoids adverse effects of inhalation • Long duration of effect could be advantageous in certain clinical situations	• Risk of dose stacking (repeating doses before an effect is felt). Usually attributable to a long period before onset of effect. Results in unanticipated intoxication and adverse effects [b,d] • Absorption and onset and duration of effect can vary based on individual patient factors (e.g., fat content of meals, patient weight) • Difficult to titrate
Tincture and spray: Sublingual/oral	• **Bioavailability:** 87.5% to 90% [f] • **Onset:** As early as 10 min [f,g] • **Duration:** ≤10 hours [f]	• Fast onset of action • Avoids adverse effects of inhalation • Advantageous for patients with swallowing difficulties	• Taste • Potential for user error because patients can swallow the product rather than wait for absorption through oral membranes
Suppository: Rectal	• **Bioavailability:** 14% to 67% [h,i] • **Onset:** 1-2 hours [j] • **Duration:** ≤8 hours [j]	• Avoids first-pass metabolism [j] • Avoids adverse effects of inhalation	• Inconvenient dosing method • Very little supporting data for the use of suppositories

Table 2: Medical Cannabis Administration Methods Currently Available in New York State (as of October 2025)			
Product, Method of Use, and Bioavailability	**Bioavailability and Peak or Onset and Duration of Effect**	**Advantages**	**Disadvantages** (also see guideline section Medical Cannabis Initiation)
Lotions, gels: Transdermal	• **Bioavailability:** Depends on formulation. Data is extrapolated from animal models. There may be wide variability in effect onset based on formulation, heat application, and amount of fat in tissue where applied [k] • **Onset:** 2 hours [l] • **Duration:** ≤48 hours [l]	• Avoids adverse effects of inhalation • Helpful for patients unable to adhere to other formulations (terminal illness, etc.)	Variability of bioavailability depending on formulation [l]
Dabs, waxes, shatter: Cannabinoid concentrates with very high levels of THC (often >60%) applied to a hot platform and inhaled [m]	• **Bioavailability:** ~75% based on laboratory studies [n] • **Onset:** Almost immediate [n] • **Duration:** 2-3 hours, though may vary by dose [n]	Quick onset of action	• Intoxication: Higher THC concentration may cause more intoxication than other administration methods [o] • Potential for lung injury [p] • Exposure to solvents and pesticides, especially when using unregulated dabs [m] • Psychosis or hallucinations

References:

a. [Huestis, et al. 1992]
b. [Monte, et al. 2019]
c. [Mancher and Leshner 2019]
d. [Monte, et al. 2015]
e. [Goodwin, et al. 2006; Gustafson, et al. 2003; Wall, et al. 1983; Ohlsson, et al. 1980; Perez-Reyes, et al. 1973]
f. [Hilliard, et al. 2012; Karschner, et al. 2011]
g. [Guy and Robson 2004]
h. [ElSohly(a), et al. 1991]
i. [ElSohly(b), et al. 1991]
j. [Mattes, et al. 1993]
k. [Huestis 2007]
l. [Valiveti, et al. 2004]
m. [Raber, et al. 2015]
n. [Hädener, et al. 2019]
o. [Rossi and Beck 2020]
p. [Stephens, et al. 2020]

Assessment

☑ RECOMMENDATIONS

Assessment

- Before certifying a patient for medical cannabis use or guiding patients on reducing harm when using cannabis, clinicians should determine the following:
  - Current and previous use of medical, regulated adult-use, or unregulated cannabis, including amount and administration method (A3)
  - Method used for smoking cannabis (e.g., pipe or rolling papers), if applicable (A3)
  - Known history of arrhythmia, CAD, SUD, or psychosis or family history of schizophrenia (A2)
  - Current diagnosis of cannabis use disorder based on *DSM-5-TR* diagnostic criteria (A3)
  - Potential drug-drug interactions with medical cannabis (A*)

☑ RECOMMENDATIONS

- Clinicians should assess and document the qualifying condition for medical cannabis based on medical records and patient evaluation with standardized tools (A*), such as:
  - PEG Scale
  - DSM-5 PTSD Checklist

Abbreviations: CAD, coronary artery disease; *DSM-5-TR*, *Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition, Text Revision*; PEG, Pain, Enjoyment of Life, and General Activity; PTSD, posttraumatic stress disorder; SUD, substance use disorder.

When assessing patients for medical cannabis use, clinicians should obtain information from patient interviews, medical records, and, when possible, the patient's other clinicians (e.g., primary care, psychiatry, neurology, pain management, oncology, infectious disease).

Current amount and method of cannabis use: If patients are currently using medical, regulated adult-use, or unregulated cannabis, clinicians should ask patients to describe their use in detail, including the amount and frequency of cannabis used, estimated delta-9-tetrahydrocannabinol (THC) level, other cannabinoids (e.g., delta-8-tetrahydrocannabinol) in consumed cannabis (if known), and the type and method of use. Details about a patient's current pattern of cannabis use inform the recommended dose and type of medical cannabis and the recommended method for use.

If patients smoke cannabis, clinicians should ask about the method used, such as rolling papers, water pipe (bong), pipe, or vaporizer. Other methods include using cigar papers to roll a large "blunt" and smoking a combination of cannabis and tobacco, which may result in nicotine dependence and require nicotine replacement therapy if switching to a form of cannabis that does not include nicotine.

Regulated cannabis versus unregulated cannabis: Medical and regulated adult-use cannabis may be less harmful than unregulated cannabis because they have known THC and cannabidiol (CBD) content, are tested for potential contaminants, and are required to be in child-resistant packaging that does not appeal to minors [NYS Office of Cannabis Management(a) 2023]. Regulated THC and CBD levels and ratios and doses in milligrams allow patients to titrate the dose of cannabis more precisely than is possible with unregulated cannabis. If a patient uses unregulated cannabis for a qualifying condition, a primary harm reduction goal may be to switch to medical cannabis. Clinicians can work with patients on limiting THC content and potentially harmful psychoactive effects while addressing symptoms of the qualifying condition.

By acquiring medical cannabis at medical cannabis dispensaries, individuals can limit interactions with the street market and the criminal justice system. The criminalization of cannabis has a disproportionately negative effect on Black and Hispanic people; in New York State, in 2018, the arrest rate for cannabis possession was 2.6 times higher among Black people than White people, with rates ranging widely among counties [ACLU 2020]. To help patients determine whether a dispensary is regulated or unregulated, the New York State Office of Cannabis Management created signage that all regulated dispensaries must display in their windows. A list of medical cannabis dispensaries is also available.

Conditions that require caution: Safety concerns are based on limited evidence that acute THC exposure is associated with tachycardia and developing or worsening psychosis [Di Forti, et al. 2014; Bryson and Frost 2011; Khiabani, et al. 2008; Sewell, et al. 2008]. Before initiation, clinicians should determine whether the patient seeking medical cannabis has a history of arrhythmia or CAD. Risk factors for cardiac disease may affect the safety of medical cannabis treatment and should be carefully evaluated [Skipina, et al. 2021; Yahud, et al. 2020; Goyal, et al. 2017]. Clinicians should also obtain a psychiatric history, including diagnoses, history of psychosis, previous treatment(s), hospitalization(s), signs and symptoms (e.g., auditory or visual hallucinations), history of suicide attempts or suicidal ideation, and family history of schizophrenia or other psychosis [Skipina, et al. 2021; Yahud, et al. 2020; Goyal, et al. 2017]. Personal history of hallucinations and family history of schizophrenia are also risk factors that may affect the safety of medical cannabis treatment and warrant careful evaluation [Athanassiou, et al. 2021; Shrivastava, et al. 2014]. Cannabis use may precipitate symptoms of schizophrenia, especially in patients younger than 26 years [Helle, et al. 2016].

Personal history of SUD is considered a relative contraindication to medical cannabis. Individuals who use medical cannabis may be at increased risk of cannabis use disorder, which has been found to be comorbid with other SUDs [Hasin, et al. 2016; Stinson, et al. 2006]. Clinicians should obtain and document a detailed history of current and prior substance use, SUD, including family history of SUD, and SUD treatment. *DSM-5-TR* diagnostic criteria should be used to diagnose SUD and determine its severity. For more information on monitoring cannabis use or diagnosing cannabis use disorder, see guideline section Monitoring and NYSDOH guideline Substance Use Screening, Risk Assessment, and Use Disorder Diagnosis in Adults > Diagnosis of Substance Use Disorder.

If any of the above conditions are identified during evaluation for medical cannabis use and the patient is not being treated, refer for treatment as appropriate prior to medical cannabis initiation. If the patient is already being treated for the condition, consult with the treating clinician. For patients with these conditions who are using unregulated cannabis, switching to medical cannabis could reduce THC intake and support harm reduction.

Cannabis use during pregnancy also warrants careful evaluation. See the guideline section Medical Cannabis Initiation > Cannabis use during pregnancy.

Potential drug-drug interactions: Along with obtaining a patient's medical history, clinicians should conduct a full medication reconciliation. This should include checking the New York State Prescription Monitoring Program Registry to identify any controlled substances or medical cannabis taken by the patient. There is a paucity of evidence on potential drug-drug interactions with medical cannabis. THC and CBD are metabolized in the cytochrome P450 (CYP450) system and may inhibit the metabolism of other strong CYP450 inhibitors, such as warfarin [Damkier, et al. 2019; Alsherbiny and Li 2018]. Cannabis can also have additive sedative effects when used with other sedating agents [Echeverria-Villalobos, et al. 2019; Russo 2016]. Cannabis and alcohol used in combination are associated with increased impairment of complex task performance, such as driving, compared with cannabis or alcohol use alone [Miller, et al. 2020]. For information on potential drug-drug interactions with medical cannabis, see Table 3, below.

Table 3: Drug-Drug Interactions [a]

Metabolism and Clearance	Enzyme or Efflux Transporter Inhibition or Induction	Half-Life	Pharmacokinetic Interactions
Cannabidiol (pharmaceutical and standardized extract) [b]			
• Hepatic and gut metabolism via CYP2C19 (minor), CYP3A4 (major) • Glucuronidation (UGT1A7, UGT1A9, UGT2B7) to active and inactive metabolites • Metabolites cleared in feces (primarily) and urine (minor)	Inhibits: • CYP2C19 (moderate) • CYP1A2 (weak) • CYP2C9 (weak) • CYP3A4 (weak) • P-gp • BSEP	56 to 61 hours	• **Potential for CBD to affect other medications:** CBD can *increase* serum concentrations, clinical effects, and toxicity of substrates of CYP2C19, CYP2C9, CYP1A2, CYP3A4, and P-gp. • **Potential for CBD to be affected by other medications:** – Serum concentrations, clinical effects, and toxic effects of CBD can *increase* if coadministered with CYP3A4 inhibitors. – Serum concentrations and clinical effects of CBD can *decrease* if coadministered with CYP3A4 and/or CYP2C19 inducers.
Cannabis (pharmaceutical THC and CBD) [c]			
• Hepatic metabolism via CYP2C9 (major), CYP2C19 (minor), CYP2D6 (minor), CYP3A4 (major) • Glucuronidation (UGT1A7, UGT1A9, UGT2B7) to active metabolites and oxidation to inactive metabolite • Metabolites cleared in feces (primarily) and urine (minor)	• Preliminary in vitro data provided in manufacturer labeling suggest the possibility of metabolic inhibitory or induction effects, but clinical relevance is largely unconfirmed [d]. • In a pharmacokinetic study, THC alone did not alter CYP metabolism [Bansal, et al. 2023].	24 to 36 hours (or longer)	• **Potential for cannabis to affect other medications:** – Warfarin: Cannabis may *increase* INR values (by CBD inhibition of CYP2C9) – Hormonal contraceptives: Cannabis may *decrease* efficacy [GW Pharma 2012]; however, actual risk of contraceptive failure has not been adequately studied.

Table 3: Drug-Drug Interactions [a]			
Metabolism and Clearance	**Enzyme or Efflux Transporter Inhibition or Induction**	**Half-Life**	**Pharmacokinetic Interactions**
			• **Potential for cannabis to be affected by other medications:** – Serum concentrations, clinical effects and toxic effects of cannabis can *increase* if coadministered with CYP3A4 and/or CYP2C9 inhibitors. – Serum concentrations and clinical effects of cannabis can *decrease* if coadministered with strong CYP3A4 inducers.

Abbreviations: BSEP, bile salt export pump; CBD, cannabidiol; CYP, cytochrome P450; INR, international normalized ratio; P-gp, P-glycoprotein; THC, delta-9-tetrahydrocannabinol; UGT, uridine diphosphate glucuronosyltransferase.

Notes:

a. Adapted from [UpToDate 2023].
b. CBD data are derived mainly from labeling for an orally administered pharmaceutical antiseizure drug [FDA 2024] and results of a pharmacokinetic study of an orally administered CBD extract containing a trace amount of THC [Bansal, et al. 2023]. Other nonpharmaceutical CBD products (e.g., herbal oils, gummies) can vary widely in potency and are administered by other routes, which can variably alter metabolic effects and potential for interactions.
c. Cannabis data are derived mainly from labeling for standardized THC-CBD (Sativex) [GW Pharma 2012]administered as an oromucosal spray and from a pharmacokinetic study of cannabis extracts [Bansal, et al. 2023]. Other cannabis preparations and herbal products have different constituent potencies and are administered by other routes (inhaled, ingested, etc.), which can variably alter metabolic effects and potential for interactions.
d. According to the THC-CBD (Sativex) product monograph [GW Pharma 2012], in vitro data suggest cannabis components may inhibit CYP3A4 and UGT glucuronidation and/or induce CYP1A2, CYP2B6, and CYP3A4. The labeling advises a regimen review if administered with sensitive (e.g., narrow therapeutic margin) substrates. These potential interactions have not yet been confirmed by adequate pharmacokinetic or clinical data.

Assess for qualifying conditions with standardized tools: Clinicians should obtain a thorough history of the condition for which the patient seeks medical cannabis, including onset, duration, and characteristics as well as previous treatment attempts and their success. Standardized instruments, such as the PEG Scale [Krebs, et al. 2009] and *DSM-5* PTSD Checklist [Lang, et al. 2005], should be used at baseline and follow-up visits to assess the qualifying condition and other conditions that may be affected by cannabis treatment. Changes in scores can indicate response to medical cannabis treatment and whether it is advisable to change dosage or formulation.

Cost of medical cannabis: The typical cost of a 30-day supply of a starting dose of medical cannabis from a dispensary ranges from $70 to $150. Medical cannabis is not covered by insurance and must be paid for with cash or a debit card, which may pose significant barriers to access. Clinicians should ensure that patients seeking medical cannabis certification are informed about cost and payment requirements.

Medical cannabis certification: For medical cannabis certification in New York State, patients must have a government-issued photo identification, email address, and current physical address that matches their state identification. If they do not have a government-issued photo identification, they must submit a different proof of New York State residence. The health care provider will print and sign the certification or, if using a certifying provider via telehealth, transmit a signed certification electronically for the patient to download or print.

The certification document contains the patient's name, date of birth, address, and a unique barcode with their registration identification number, as well as specific clinician recommendations. Once patients receive certification (either a paper copy of the signed patient certification or an electronic copy displayed on a smart device), they are immediately able to visit a medical dispensary and purchase medical cannabis products. The certification document and identification that matches the information on the certification are required.

Medical Cannabis Initiation

☑ RECOMMENDATIONS

Administration Method and Dose

- Clinicians should counsel patients on the risks and benefits of available medical cannabis administration methods, advise patients against using vaped, smoked, or dab/wax cannabis products, and engage in shared decision-making on the most appropriate method. (A3) See Table 2: Medical Cannabis Administration Methods Currently Available in New York State.
- Clinicians should recommend a medical cannabis method and dose based on a patient's symptoms and the frequency, amount, and type of cannabis they currently use, if applicable. (A3)
- To initiate cannabis, clinicians should recommend (A3):
  - For cannabis-naive patients, a dose of 2.5 mg THC daily or lower
  - For cannabis-experienced patients and patients who are currently using nonmedical cannabis, an initial dose of medical cannabis equivalent to 50% of the patient's current amount of THC, with titration to an effective daily dose
- Clinicians should inform patients of the risks associated with unregulated cannabis use and recommend discontinuation after medical cannabis is initiated. (A3)

Potential Adverse Effects

- Clinicians should use caution when initiating medical cannabis in patients with a known history of arrhythmia, CAD, SUD, or psychosis or a family history of schizophrenia (see guideline section Assessment > Conditions that require caution). (A2)
- Clinicians should inform patients about and provide education on the management of potential acute adverse effects of medical cannabis use (A2):
  - Inform patients of the potential for intoxication (i.e., feeling "high"), dizziness, or impaired concentration; recommend that patients lie down and wait for these effects to resolve and then reduce their dose of THC.
  - Ensure that patients know to seek emergency medical evaluation if they experience any serious adverse effects, including hallucinations, psychosis, severe anxiety, paranoia, pulmonary or cardiac symptoms, or hyperemesis.
  - Inform patients, particularly elderly individuals, that cannabis use may increase the risk of falls.
- Clinicians should advise patients to take the first dose of medical cannabis before bedtime and at home in a safe environment to limit potential immediate adverse effects. (A3)
- Clinicians should caution patients about the potential for impaired driving while taking cannabis and advise them to avoid driving or operating heavy machinery while using medical cannabis. (A2)

Medical Cannabis During Pregnancy

- For patients who may become or are currently pregnant, clinicians should (A3):
  - Inform them about the risks, to themselves and the neonate, of using cannabis while pregnant.
  - Recommend using contraception while using cannabis.
  - If a cannabis-naive patient is pregnant, advise against initiating any cannabis use.
  - If a pregnant patient is currently using unregulated cannabis, advise against continued use; if the pregnant patient plans to continue using cannabis, encourage a switch to regulated adult-use or medical cannabis and discuss harm reduction strategies.

Medical Cannabis in Patients Younger Than 25 Years

- Clinicians should inform patients younger than 25 years of the potential for long-term changes in brain development, mental health, and cognition associated with cannabis use in people whose brains are still developing (A2):
  - If a cannabis-naive patient is younger than 25 years, advise against initiating cannabis.
  - If a patient younger than 25 years is currently using unregulated cannabis and intends to continue use, advise a switch to regulated adult-use or medical cannabis and discuss harm reduction strategies.

Abbreviations: CAD, coronary artery disease; SUD, substance use disorder; THC, delta-9-tetrahydrocannabinol.

Clinicians do not *prescribe* medical cannabis; they *recommend* it. Clinicians can choose to manage all aspects of medical cannabis treatment or limit their practice to assessment and certification and refer patients to dispensary pharmacists for all other related services (formulation, initial dosing, and dosing adjustments based on individual symptoms). Because clinicians have knowledge of or access to a patient's medical history, comorbidities, and history of cannabis use, it is preferable for clinicians to direct formulation, initial dosing, and dosing adjustments for patients' medical cannabis use and collaborate with the medical cannabis dispensary pharmacist as needed. If clinicians make specific recommendations in their certifications, dispensary pharmacists are bound by law to follow those instructions (see New York State Office of Cannabis Management Practitioner Guide to Patient Certification).

Administration method and dose: Clinicians should counsel patients on the risks and benefits of available medical cannabis administration methods (see Table 2: Medical Cannabis Administration Methods Currently Available in New York State) and engage in shared decision-making with the patient on the appropriate method. Because of potential short- and long-term adverse effects, clinicians should advise patients against using vaped, smoked, or dab/wax cannabis products [Rossi and Beck 2020; Stephens, et al. 2020; Raber, et al. 2015].

Because of a lack of high-quality evidence, specific dosing regimens for the therapeutic use of medical cannabis are lacking. The authors have been managing medical cannabis use in patients since 2016 when the Montefiore Medical Center Medical Cannabis Program was implemented. Boxes 3 and 4, below, outline basic strategies for implementing medical cannabis treatment based on the authors' clinical experiences.

For cannabis-naive patients, a dose of 2.5 mg THC daily or lower is recommended. For cannabis-experienced patients, including patients who are currently using nonmedical cannabis, clinicians should recommend an initial dose equivalent to 50% of the patient's current amount of THC and titrate to an effective daily dose (see Box 3, below). The overall goal is to reduce THC use, limit intoxication, and minimize withdrawal symptoms such as irritability, sleeplessness, and decreased appetite [Vandrey, et al. 2008].

After initiating the lowest possible dose, advise patients to slowly titrate up. Patients should take their initial dose at night and maintain that dose for 2 to 3 days. After that period, the dose can be increased by 2.5 to 5 mg THC daily. Patients can continue to increase the dose every 2 to 3 days until a therapeutic level is reached. If symptoms are experienced during the day, a midday or morning dose can be added. Advise patients to maintain direct contact with pharmacists at the dispensary or with their certifying medical cannabis clinician during the induction period to report any adverse events and address any dosing concerns.

Box 3: Medical Cannabis Dosing [a]

- Recommend a cannabis formulation (THC:CBD) based on a patient's level of use at assessment:
  - Less frequent to no use (<20 days/month): 1 THC:1 CBD
  - Near-daily to heavy use (≥20 days/month): High THC:low CBD
  - Some patients with severe pain may require high THC:low CBD regardless of current use.
- Recommend induction at the lowest dose possible for the first 2 to 3 days of use. The daily dose may be increased by 2.5 to 5 mg every 2 to 3 days, as needed, until a therapeutic level is reached.
  - Advise patients that incremental dosing can help prevent cannabis-related adverse events.
  - Encourage patients to maintain close contact with dispensary pharmacists or their clinicians during the induction period.
  - Advise patients that total dose and dosing frequency can be increased if needed.
  - Recommend a dose of medical cannabis equivalent to at least 50% of the patient's current amount of THC to reduce the risk of THC withdrawal symptoms.

Abbreviations: CBD, cannabidiol; THC, delta-9-tetrahydrocannabinol.

Note:

a. Based on experience at Montefiore Medical Center Medical Cannabis Program.

Box 4: Sample Approach to Quantifying Current Cannabis Use and Determining Medical Cannabis Dose [a]

- Total cannabinoids comprise delta-9-tetrahydrocannabinol (THC) and cannabidiol (CBD):
  - 1 vape inhalation of cannabis = approximately 10 mg total cannabinoids
  - 1/8 ounce of cannabis = approximately 3,500 mg total cannabinoids
  - 1 ounce of cannabis = approximately 28,000 mg total cannabinoids
- The assumption that most unregulated cannabis is 10% THC [b] may underestimate current street cannabis composition; however, this assumption is used to approximate a patient's THC dose so an appropriate medical regimen can be recommended.
- *Example 1:* A patient who reports using 1/8 ounce of cannabis monthly uses approximately 3,500 mg total cannabinoids (or 350 mg THC) monthly.
  - This amount is equivalent to approximately 117 mg total cannabinoids daily or approximately 12 mg of THC daily.
  - An appropriate recommendation for this patient would be a volume of tincture containing 10 mg of THC daily, taken either in 1 dose at night or in divided doses 2 to 3 times daily.
- *Example 2:* A patient who reports using 1 ounce of cannabis monthly uses approximately 28,000 mg total cannabinoids (or 2,800 mg THC) monthly [b].
  - This amount is equivalent to approximately 930 mg of total cannabinoids daily or 93 mg of THC daily.
  - An appropriate recommendation for this patient would be 40 mg to 50 mg of THC daily, taken in 10 mg doses every 4 to 6 hours.
  - Counsel patient to reduce nonmedical cannabis use.

Notes:

a. The calculations and doses presented are based on experience at Montefiore Medical Center Medical Cannabis Program.
b. To calculate an initial dose, it is estimated that street cannabis in New York State averages approximately 18% THC [ElSohly, et al. 2024; DEA 2021]. The percentage may change over time and by geographic region.

Potential adverse effects: Clinicians should use caution when initiating medical cannabis for patients with a known history of arrhythmia, CAD, SUD, or psychosis or a family history of schizophrenia (see guideline section Assessment > Conditions that require caution). As with all patients initiating medical cannabis, clinicians should advise patients with these conditions to start at a low dose and increase their dose cautiously every 2 to 3 days, maintain contact with their clinicians, and seek emergency medical evaluation if they experience any serious adverse effects, including hallucinations, psychosis, severe anxiety, paranoia, pulmonary or cardiac symptoms, or hyperemesis.

Clinicians should advise patients initiating medical cannabis to take the first dose at night to limit potential adverse effects, such as feeling high, dizzy, or unable to concentrate. Severe adverse effects usually present as anxiety, paranoia, or panic attacks. Other neurologic symptoms include euphoria, lightheadedness, dizziness, or vertigo. In most cases, these symptoms require no intervention and are managed through observation. Rarely, cannabis can cause immediate nausea, vomiting, or abdominal pain, which can be managed with symptomatic treatment such as antiemetics [Noble, et al. 2019]. To date, there are no known cases of fatal overdose from cannabis use [Hasin 2018], but heavy cannabis use has been linked to increased healthcare utilization in states with legalized cannabis use, particularly among individuals using cannabis through oral rather than inhaled routes [Monte, et al. 2019].

New York regulations require registered organizations and certifying practitioners to report adverse events using the Office of Cannabis Management Incident Reporting Form.

There is concern that cannabis intoxication will contribute to motor vehicle accidents [Brady and Li 2014]. Cannabis use impairs driving in a dose-response manner [Hartman and Huestis 2013]. However, population-level studies have shown a mixed relationship between medical cannabis laws and increased motor vehicle accidents or traffic fatalities [Rogeberg 2019; Santaella-Tenorio, et al. 2017; Dubois, et al. 2015; Pollini, et al. 2015; Masten and Guenzburger 2014; Blows, et al. 2005]. Clinicians should caution patients about the potential for impaired driving while using cannabis and advise them to avoid driving or operating heavy machinery if physical or mental control is diminished by cannabis use. Emphasize that combining cannabis with alcohol can impair complex task performance, such as driving [Miller, et al. 2020]. Advise patients to store cannabis locked up, out of sight, and out of reach from children and pets.

Cannabis use during pregnancy: In patients who are or may become pregnant, clinicians should discuss the risks, to the patient and the fetus associated with prenatal cannabis use and encourage them to discontinue or minimize use during pregnancy. In a population-based retrospective cohort study from January 2011 to December 2019, prenatal cannabis use

was associated with an increased risk of gestational hypertension, preeclampsia, gestational weight gain outside of recommendations, and placental abruption [Young-Wolff, et al. 2024]. Additionally, there is evidence indicating that prenatal cannabis use is associated with moderate increases in the risk of other adverse fetal and neonatal health outcomes, including low birthweight, preterm birth, and neonatal intensive care unit admission [Avalos, et al. 2024; Baía and Domingues 2024; Lo, et al. 2024; Young-Wolff, et al. 2024].

No evidence supports the use of medical cannabis to manage pregnancy-associated nausea and vomiting. In patients who are pregnant and who are not already using cannabis, clinicians should advise against initiating medical cannabis. In patients who are pregnant and using unregulated cannabis, clinicians and patients may find a harm reduction perspective useful. Patients may be using unregulated cannabis to treat specific symptoms such as posttraumatic stress disorder, and medical cannabis may be the safer choice if a patient plans to continue using cannabis. For individuals who could become pregnant, clinicians should recommend using contraception while using medical cannabis.

Patients younger than 25 years: Among adolescents and young adults, whose brains are still developing, cannabis use is associated with changes in cognitive processes that could affect mental health, propensity toward future SUDs, and cognition [Hurd, et al. 2019]. As with adults, cognitive performance improves in adolescents after at least 25 days of abstinence from cannabis use [Hurd, et al. 2019]. There remains much to be understood about cannabis use and the developing brain. For additional information about the effects of cannabis use in adolescents and young adults, see World Health Organization The Health and Social Effects of Nonmedical Cannabis Use and American Academy of Pediatrics Counseling Parents and Teens About Marijuana Use in the Era of Legalization of Marijuana.

Follow-up after medical cannabis initiation: Following up within 2 weeks of treatment initiation allows for adjustment of a patient's treatment plan based on initial experience. As treatment continues, the frequency of follow-up can be tailored to a patient's specific needs and in accordance with the clinic's existing policies regarding treatment and follow-up for patients taking other controlled substances. In the absence of an existing policy, this committee suggests clinical follow-up every 3 to 6 months.

Monitoring

☑ RECOMMENDATIONS

Monitoring

- For all patients taking medical cannabis, clinicians should perform an annual assessment of benefits, undesired effects, and risks, including consideration for CUD using the *DSM-5-TR* diagnostic criteria. (B*)
  - If CUD is diagnosed, clinicians should work with the patient to develop an individualized treatment plan that maximizes benefits and minimizes harm. The plan may include referral to treatment, cannabis cessation, or harm reduction approaches. (A3)
- If a patient experiences new or worsening signs or symptoms of a psychiatric disorder while taking medical cannabis, the clinician should discontinue medical cannabis certification and consult with a psychiatrist or refer the patient for psychiatric assessment and treatment. (A2)
- Clinicians should ask patients about any symptoms of cannabis hyperemesis syndrome (nausea, vomiting, abdominal pain) and discontinue medical cannabis treatment if the syndrome is identified. (A3)
- If a patient chooses to vape medical cannabis, the clinician should ask about any breathing changes, including reduced exercise tolerance, shortness of breath, or wheezing. (A3)
- If breathing changes occur in patients who vape medical cannabis, the clinician should:
  - Advise the patient to avoid vape products purchased outside of registered facilities. (A*)
  - Encourage the patient to switch to an administration method other than vaping and advise against future use of inhaled cannabis. (A3)
- If a patient wants to stop using medical cannabis, the clinician should:
  - Inform the patient that cessation of chronic use may result in cannabis withdrawal symptoms, such as irritability, negative mood, nausea, and stomach pain. (A3)
  - Help the patient develop a plan to taper the dose and ultimately discontinue cannabinoid use. (A3)

☑ RECOMMENDATIONS

- Clinicians should not perform urine toxicology testing unless the patient and clinician have engaged in shared decision-making and the patient agrees to testing. (A3)

Abbreviations: CUD, cannabis use disorder; *DSM-5-TR*, *Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition, Text Revision*.

Clinicians should perform an annual assessment for CUD in all patients taking medical, regulated adult-use, and unregulated cannabis. If CUD is identified, clinicians should engage patients in shared decision-making to revise treatment goals as needed and update the treatment plan to meet the new goals. There are no U.S. Food and Drug Administration–approved pharmacotherapies for CUD, and referral to treatment will likely focus on behavioral therapy. The treatment plan should prioritize harm reduction and may include increased visits, using methods other than smoking, THC dose reduction, a modified dosing schedule, or linking patients to therapists or other mental health professionals [Fischer, et al. 2017].

At follow-up appointments, clinicians should ask patients about symptoms of potential adverse effects. Clinicians should collaborate with patients' existing treatment teams, including primary care clinicians, mental health care clinicians, cardiologists, and other specialists, to monitor these signs and symptoms. The most common adverse effects are described below.

Psychiatric symptoms: Chronic cannabis use is associated with psychiatric symptoms, including anxiety, depression, and psychosis, and has been linked to worsening schizophrenia in individuals with a preexisting genetic vulnerability [Di Forti, et al. 2014; Caspi, et al. 2005; Patton, et al. 2002]. However, a direct causal relationship is difficult to establish because multiple confounding factors blur the relationship between cannabis use and psychiatric illness. For example, individuals with anxiety or stress may be more likely to use cannabis [Volkow, et al. 2014]. Clinicians should monitor patients for new or worsening psychiatric symptoms and discontinue medical cannabis if symptoms are identified. To decertify patients for medical cannabis use, see New York State Medical Cannabis Program: Patient Certification Instructions.

Cognition: Cannabis intoxication has an acute effect on memory and attention, but the effect of cannabis use on long-term cognition has not been well studied [Broyd, et al. 2016; Volkow, et al. 2016]. Some case-control studies found that neuropsychological function was worse in participants who used unregulated cannabis than in controls with no use; however, in similar studies of individuals with at least 1 month of abstinence from unregulated cannabis, neuropsychological measures were similar in both groups [Schreiner and Dunn 2012; Grant, et al. 2003]. These findings suggest that any cognitive impairment due to cannabis use may be inversely related to the length of abstinence. In addition, longitudinal data from a small cohort of adult patients who use medical cannabis indicate improved executive function after 3 months. Medical cannabis could affect cognition differently than unregulated cannabis [Gruber, et al. 2017]

Cannabis hyperemesis syndrome: One study reported that gastrointestinal symptoms were the most common cause for emergency room visits related to cannabis use [Monte, et al. 2019]. The most severe gastrointestinal effect of cannabis use, cannabis hyperemesis syndrome [Allen, et al. 2004], manifests as cyclical nausea and vomiting and abdominal pain in individuals with chronic cannabis use. Symptoms may improve with hot showers or baths and resolve after cessation of cannabis use [Schreck, et al. 2018]. Cannabis hyperemesis syndrome has been described primarily in case series as early as 2004 [Venkatesan, et al. 2019; Allen, et al. 2004]; however, the criteria for diagnosing cannabis hyperemesis syndrome have been inconsistent, making it difficult to define the epidemiology. The most recent diagnostic criteria include episodic vomiting at least 3 times in the past year, cannabis use for at least 1 year, cannabis use at least 4 times per week on average, and resolution of symptoms following a period of abstinence from cannabis use for at least 6 months or a period that spans at least 3 typical cyclical vomiting episodes for the individual [Venkatesan, et al. 2019]. Clinicians should monitor patients using medical cannabis for hyperemesis disorder symptoms; if symptoms are present, a trial of abstinence from cannabis may be appropriate.

Pulmonary effects: For patients who choose to vape or combust their cannabis, clinicians should recommend avoiding products purchased outside of registered facilities and, during follow-up visits, ask patients about any changes in breathing. Chronic inhaled cannabis use can lead to chronic bronchitis symptoms, including cough, sputum production, and wheezing [Ribeiro and Ind 2018; Tashkin 2018]. Cannabis use may result in pulmonary function test changes, but, unlike tobacco, cannabis has not been associated with chronic obstructive lung disease in observational studies [Ribeiro and Ind 2018; Tashkin 2018]. The mode of consumption could be related to specific types of respiratory syndromes.

A new lung disease associated with heavy vaping emerged in late 2019 [Layden, et al. 2020; Schier, et al. 2019]. To date, it remains unclear whether the risk is limited to specific types of vaping products or oils or associated with specific use patterns. Between 75% and 80% of cases of e-cigarette or vaping product use-associated lung injury (EVALI) occurred among

individuals using delta-9-tetrahydrocannabinol (THC)-containing vaporized products, leaving a proportion of patients with EVALI who had no exposure to THC, suggesting other factors could contribute to its pathogenesis [Adkins, et al. 2020; FDA 2020]. Vitamin E acetate was often used as a thickening agent in THC-containing liquid for vaping devices and was found in 48 of 51 bronchoalveolar lavage samples of patients with EVALI and is suspected to be linked to its pathogenesis [Blount, et al. 2020]; after its ban from vaporized products by the U.S. Food and Drug Administration in 2020, continued cases of EVALI have occurred though the number has declined [Soerianto and Jaspers 2025]. No cases of vaping lung injury have been attributed to New York State medical cannabis vaped products.

Cannabis smoking may predispose individuals to pneumonia through damage of central airways and local immune response changes [Shay, et al. 2003; Baldwin, et al. 1997; Fligiel, et al. 1997].

Smoked cannabis contains carcinogens, raising concerns about lung cancer risk. Observational studies show mixed findings: increased risk of lung cancer in all users of smoked cannabis [Zhang, et al. 2015], only among heavy users [Aldington, et al. 2008], and not at all [Aldington, et al. 2008]. These studies included potential confounders (e.g., tobacco use, environmental exposures) that may have skewed the results. Further research is needed to understand how individuals using cannabis should be monitored for cancer.

Cessation of medical cannabis: In patients with chronic cannabis use, abrupt cessation may lead to symptoms of cannabis withdrawal, which include but are not limited to irritability, anxiety, insomnia, depressed mood, strange dreams, headaches, and stomach pain [Bonnet and Preuss 2017]. Clinicians should inform patients who want to stop using cannabis about the risk of cannabis withdrawal symptoms. Treatment of cannabis withdrawal symptoms has not been well studied, but short-term symptoms may be managed (e.g., zolpidem for insomnia or benzodiazepines for anxiety) [Brezing and Levin 2018]. Few data exist on the effects of tapering cannabis, but individuals may experience fewer withdrawal symptoms with a gradual reduction in dose rather than an abrupt stop. Clinicians should discuss these factors with the patient and, if requested, help develop a tapering plan. To decertify patients for medical cannabis use, see New York State Medical Cannabis Program: Patient Certification Instructions.

Urine toxicology testing: In patients using controlled substances, urine toxicology testing is commonly used to confirm compliance with agreed-upon treatment plans and identify signs of diversion, misuse, or substance use disorder. However, there is a paucity of evidence on the utility of urine toxicology testing for patients using medical cannabis. Urine toxicology testing for cannabis use cannot specify timeline, source (regulated versus unregulated), route of administration, or amount of use [Miller, et al. 2024; Sazegar 2021; Smith, et al. 2009], and only tests for metabolites of THC, not cannabidiol (CBD) or delta-8-tetrahydrocannabinol. Urine toxicology results may remain positive for up to 4 to 5 days after a single use of cannabis or for a month or more after chronic daily use. Urine toxicology testing, specifically for medical cannabis but also for other substances, should only be performed to answer a specific clinical question and only after shared decision-making and patient agreement.

Appendix: Office of Cannabis Management (OCM) Dear Colleague Letter

July 29, 2025

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NEW YORK STATE | Office of Cannabis Management

Dear Colleagues:

As the medical and regulatory landscape surrounding cannabis continues to evolve, healthcare professionals have a critical opportunity—and responsibility—to lead the conversation with science, compassion, and clinical integrity.

I'm Dr. June Chin, a physician with over two decades of experience in integrative care and health equity, now serving as the Chief Medical Officer for the New York State Office of Cannabis Management (OCM). During my time in practice, I've treated patients with conditions that rarely respond to conventional therapies: chronic pain, anxiety, epilepsy, endometriosis, and more. Many of these individuals turned to cannabis not as a first-line option, but as a last resort—after pharmaceuticals fell short and invasive interventions failed to provide relief.

The results, in many cases, were undeniable. Patients regained mobility, found restful sleep, and restored quality of life. Yet I've also witnessed the potential harms that can arise when patients are left to navigate the complexities of cannabis on their own: inconsistent products, inadequate guidance, lingering stigma, and a healthcare system still catching up with the science.

This clinical guidance marks a pivotal moment: we now have both the clinical insight and the regulatory framework to bring medical cannabis out of the shadows and into the clinical mainstream. But to do so, we must continue to collectively shift how we practice, educate, and communicate.

Medical cannabis is not a cure-all, but it is a powerful tool—particularly when used as part of a comprehensive treatment plan. It is already proving beneficial in the management of chronic pain, PTSD, chemotherapy-induced nausea, seizure disorders, and other complex conditions.

Yet, despite growing evidence and increased patient interest, many clinicians remain uncertain about how to guide their patients. As cannabis becomes more visible and accessible, our role as providers has never been more vital. Patients are asking questions. They deserve answers grounded in science—not silence, stigma, or speculation.

A Call for Clinical Engagement

At OCM, we are committed to building a health-forward, equity-first model for cannabis regulation. But policy alone is not enough. We need the clinical community to stand with OCM and to lead with knowledge and compassion. We urge healthcare professionals across New York State to:

- Educate themselves on the endocannabinoid system and the effects of cannabis on the human body.
- Foster open non-judgmental conversation with patients about cannabis use to build trust and ensure accurate disclosure.

Page 2

- Integrate cannabis into routine patient assessments—without judgment. This includes adolescents, older adults, those with complex comorbidities, and individuals with histories of substance use.
- Provide evidence-based harm reduction guidance to patients who use or are considering using cannabis including information on dosing delivery methods and potential drug interactions. The phrase "start low and go slow" is more than a catchphrase—it's critical to patient safety.
- Recognize and report adverse events related to cannabis use accurately and promptly. Surveillance strengthens our public health response. Use the OCM Incident Reporting Form to help us track trends and inform future policy.
- Advocate for cannabis education in medical and nursing schools, residency training, and continuing education platforms.
- Stay informed on the latest clinical research and regulatory developments surrounding both medical and adult use cannabis.
- Refer patients interested in medical cannabis to https://cannabis.ny.gov/patients to learn more information about participating in the program.
- Consider becoming a certifying practitioner in the New York State Medical Cannabis Program. For additional information on how to participate, please visit: https://cannabis.ny.gov/practitioners.

Meeting the Moment with Science and Empathy

This is a transformative moment in public health. The end of cannabis prohibition is not the end of our work—it is the beginning of a more honest, evidence-driven approach to care. Legalization has lifted barriers, allowing more people to seek care openly. Healthcare providers are the most trusted voices in their communities. Your leadership is essential in ensuring that cannabis is used safely, effectively, and equitably.

At OCM, we are listening. We are learning. And we are building tools in partnership with clinicians like you. Your expertise is shaping our training programs, educational initiatives, and clinical guidance. Let us move forward—together—toward a future where cannabis is used not in isolation, but in alignment with patient-centered, evidence-based care. A future where science replaces stigma, and where every patient feels heard, safe, and supported.

Thank you for your commitment to healing. Let's continue this work—on behalf of our patients, our communities, and the future of medicine.

With respect and solidarity,

Dr. Junella Chin, D.O.
Chief Medical Officer
New York State Office of Cannabis Management

Subscribe for updates at: cannabis.ny.gov/subscribe-to-updates.To share insights or ideas: MCPOutreach@ocm.ny.gov.

All Recommendations

☑ ALL RECOMMENDATIONS: THERAPEUTIC USE OF MEDICAL CANNABIS IN NEW YORK STATE

Assessment

- Before certifying a patient for medical cannabis use or guiding patients on reducing harm when using cannabis, clinicians should determine the following:
  - Current and previous use of medical, regulated adult-use, or unregulated cannabis, including amount and administration method (A3)
  - Method used for smoking cannabis (e.g., pipe or rolling papers), if applicable (A3)
  - Known history of arrhythmia, CAD, SUD, or psychosis or family history of schizophrenia (A2)
  - Current diagnosis of cannabis use disorder based on *DSM-5-TR* diagnostic criteria (A3)
  - Potential drug-drug interactions with medical cannabis (A*)
- Clinicians should assess and document the qualifying condition for medical cannabis based on medical records and patient evaluation with standardized tools (A*), such as:
  - PEG Scale
  - DSM-5 PTSD Checklist

Administration Method and Dose

- Clinicians should counsel patients on the risks and benefits of available medical cannabis administration methods, advise patients against using vaped, smoked, or dab/wax cannabis products, and engage in shared decision-making on the most appropriate method. (A3) See Table 2: Medical Cannabis Administration Methods Currently Available in New York State.
- Clinicians should recommend a medical cannabis method and dose based on a patient's symptoms and the frequency, amount, and type of cannabis they currently use, if applicable. (A3)
- To initiate cannabis, clinicians should recommend (A3):
  - For cannabis-naive patients, a dose of 2.5 mg THC daily or lower
  - For cannabis-experienced patients and patients who are currently using nonmedical cannabis, an initial dose of medical cannabis equivalent to 50% of the patient's current amount of THC, with titration to an effective daily dose
- Clinicians should inform patients of the risks associated with unregulated cannabis use and recommend discontinuation after medical cannabis is initiated. (A3)

Potential Adverse Effects

- Clinicians should use caution when initiating medical cannabis in patients with a known history of arrhythmia, CAD, SUD, or psychosis or a family history of schizophrenia (see guideline section Assessment > Conditions that require caution). (A2)
- Clinicians should inform patients about and provide education on the management of potential acute adverse effects of medical cannabis use (A2):
  - Inform patients of the potential for intoxication (i.e., feeling "high"), dizziness, or impaired concentration; recommend that patients lie down and wait for these effects to resolve and then reduce their dose of THC.
  - Ensure that patients know to seek emergency medical evaluation if they experience any serious adverse effects, including hallucinations, psychosis, severe anxiety, paranoia, pulmonary or cardiac symptoms, or hyperemesis.
  - Inform patients, particularly elderly individuals, that cannabis use may increase the risk of falls.
- Clinicians should advise patients to take the first dose of medical cannabis before bedtime and at home in a safe environment to limit potential immediate adverse effects. (A3)
- Clinicians should caution patients about the potential for impaired driving while taking cannabis and advise them to avoid driving or operating heavy machinery while using medical cannabis. (A2)

☑ ALL RECOMMENDATIONS: THERAPEUTIC USE OF MEDICAL CANNABIS IN NEW YORK STATE

Medical Cannabis During Pregnancy

- For patients who may become or are currently pregnant, clinicians should (A3):
  - Inform them about the risks, to themselves and the neonate, of using cannabis while pregnant.
  - Recommend using contraception while using cannabis.
  - If a cannabis-naive patient is pregnant, advise against initiating any cannabis use.
  - If a pregnant patient is currently using unregulated cannabis, advise against continued use; if the pregnant patient plans to continue using cannabis, encourage a switch to regulated adult-use or medical cannabis and discuss harm reduction strategies.

Medical Cannabis in Patients Younger Than 25 Years

- Clinicians should inform patients younger than 25 years of the potential for long-term changes in brain development, mental health, and cognition associated with cannabis use in people whose brains are still developing (A2):
  - If a cannabis-naive patient is younger than 25 years, advise against initiating cannabis.
  - If a patient younger than 25 years is currently using unregulated cannabis and intends to continue use, advise a switch to regulated adult-use or medical cannabis and discuss harm reduction strategies.

Monitoring

- For all patients taking medical cannabis, clinicians should perform an annual assessment of benefits, undesired effects, and risks, including consideration for CUD using the *DSM-5-TR* diagnostic criteria. (B*)
  - If CUD is diagnosed, clinicians should work with the patient to develop an individualized treatment plan that maximizes benefits and minimizes harm. The plan may include referral to treatment, cannabis cessation, or harm reduction approaches. (A3)
- If a patient experiences new or worsening signs or symptoms of a psychiatric disorder while taking medical cannabis, the clinician should discontinue medical cannabis certification and consult with a psychiatrist or refer the patient for psychiatric assessment and treatment. (A2)
- Clinicians should ask patients about any symptoms of cannabis hyperemesis syndrome (nausea, vomiting, abdominal pain) and discontinue medical cannabis treatment if the syndrome is identified. (A3)
- If a patient chooses to vape medical cannabis, the clinician should ask about any breathing changes, including reduced exercise tolerance, shortness of breath, or wheezing. (A3)
- If breathing changes occur in patients who vape medical cannabis, the clinician should:
  - Advise the patient to avoid vape products purchased outside of registered facilities. (A*)
  - Encourage the patient to switch to an administration method other than vaping and advise against future use of inhaled cannabis. (A3)
- If a patient wants to stop using medical cannabis, the clinician should:
  - Inform the patient that cessation of chronic use may result in cannabis withdrawal symptoms, such as irritability, negative mood, nausea, and stomach pain. (A3)
  - Help the patient develop a plan to taper the dose and ultimately discontinue cannabinoid use. (A3)
- Clinicians should not perform urine toxicology testing unless the patient and clinician have engaged in shared decision-making and the patient agrees to testing. (A3)

Abbreviations: CAD, coronary artery disease; CUD, cannabis use disorder; *DSM-5-TR*, *Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition, Text Revision*; PEG, Pain, Enjoyment of Life, and General Activity; PTSD, posttraumatic stress disorder; SUD, substance use disorder; THC, delta-9-tetrahydrocannabinol.

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Supplement: Guideline Development and Recommendation Ratings

Table S1: Guideline Development: New York State Department of Health AIDS Institute Clinical Guidelines Program	
Developer	New York State Department of Health AIDS Institute (NYSDOH AI) Clinical Guidelines Program
Funding source	NYSDOH AI
Program manager	Clinical Guidelines Program, Johns Hopkins University School of Medicine, Division of Infectious Diseases. See Program Leadership and Staff.
Mission	To produce and disseminate evidence-based, state-of-the-art clinical practice guidelines that establish uniform standards of care for practitioners who provide prevention or treatment of HIV, viral hepatitis, other sexually transmitted infections, and substance use disorders for adults throughout New York State in the wide array of settings in which those services are delivered.
Expert committees	The NYSDOH AI Medical Director invites and appoints committees of clinical and public health experts from throughout New York State to ensure that the guidelines are practical, immediately applicable, and meet the needs of care providers and stakeholders in all major regions of New York State, all relevant clinical practice settings, key New York State agencies, and community service organizations.
Committee structure	• Leadership: AI-appointed chair, vice chair(s), chair emeritus, clinical specialist(s), JHU Guidelines Program Director, AI Medical Director, AI Clinical Consultant, AVAC community advisor • Contributing members • Guideline writing groups: Lead author, coauthors if applicable, and all committee leaders
Disclosure and management of conflicts of interest	• Annual disclosure of financial relationships with commercial entities for the 12 months prior and upcoming is required of all individuals who work with the guidelines program, and includes disclosure for partners or spouses and primary professional affiliation. • The NYSDOH AI assesses all reported financial relationships to determine the potential for undue influence on guideline recommendations and, when indicated, denies participation in the program or formulates a plan to manage potential conflicts. Disclosures are listed for each committee member.
Evidence collection and review	• Literature search and review strategy is defined by the guideline lead author based on the defined scope of a new guideline or update. • A comprehensive literature search and review is conducted for a new guideline or an extensive update using PubMed, other pertinent databases of peer-reviewed literature, and relevant conference abstracts to establish the evidence base for guideline recommendations. • A targeted search and review to identify recently published evidence is conducted for guidelines published within the previous 3 years. • Title, abstract, and article reviews are performed by the lead author. The JHU editorial team collates evidence and creates and maintains an evidence table for each guideline.
Recommendation development	• The lead author drafts recommendations to address the defined scope of the guideline based on available published data. • Writing group members review the draft recommendations and evidence and deliberate to revise, refine, and reach consensus on all recommendations. • When published data are not available, support for a recommendation may be based on the committee's expert opinion. • The writing group assigns a 2-part rating to each recommendation to indicate the strength of the recommendation and quality of the supporting evidence. The group reviews the evidence, deliberates, and may revise recommendations when required to reach consensus.

Table S1: Guideline Development: New York State Department of Health AIDS Institute Clinical Guidelines Program	
Review and approval process	• Following writing group approval, draft guidelines are reviewed by all contributors, program liaisons, and a volunteer reviewer from the AI Community Advisory Committee. • Recommendations must be approved by two-thirds of the full committee. If necessary to achieve consensus, the full committee is invited to deliberate, review the evidence, and revise recommendations. • Final approval by the committee chair and the NYSDOH AI Medical Director is required for publication.
External reviews	• External review of each guideline is invited at the developer's discretion. • External reviewers recognized for their experience and expertise review guidelines for accuracy, balance, clarity, and practicality and provide feedback.
Update process	• JHU editorial staff ensure that each guideline is reviewed and determined to be current upon the 3-year anniversary of publication; guidelines that provide clinical recommendations in rapidly changing areas of practice may be reviewed annually. Published literature is surveilled to identify new evidence that may prompt changes to existing recommendations or development of new recommendations. • If changes in the standard of care, newly published studies, new drug approval, new drug-related warning, or a public health emergency indicate the need for immediate change to published guidelines, committee leadership will make recommendations and immediate updates and will invite full committee review as indicated.

Table S2: Recommendation Ratings and Definitions		
Strength	**Quality of Evidence**	
A: Strong B: Moderate C: Optional	1	Based on published results of at least 1 randomized clinical trial with clinical outcomes or validated laboratory endpoints.
	*	Based on either a self-evident conclusion; conclusive, published, in vitro data; or well-established practice that cannot be tested because ethics would preclude a clinical trial.
	2	Based on published results of at least 1 well-designed, nonrandomized clinical trial or observational cohort study with long-term clinical outcomes.
	2†	Extrapolated from published results of well-designed studies (including nonrandomized clinical trials) conducted in populations other than those specifically addressed by a recommendation. The source(s) of the extrapolated evidence and the rationale for the extrapolation are provided in the guideline text. One example would be results of studies conducted predominantly in a subpopulation (e.g., one gender) that the committee determines to be generalizable to the population under consideration in the guideline.
	3	Based on committee expert opinion, with rationale provided in the guideline text.