



# Clinical Information and Considerations for Cannabis Use in Senior Care Settings

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# Clinical Information and Considerations for Cannabis Use in Senior Care Settings

## I. INTRODUCTION

Cannabis emerged as a topic of increasing interest since the legalization of Cannabis in Minnesota. As societal attitudes and legal landscapes surrounding cannabis continue to evolve, health care professions in senior care settings are faced with the need to navigate the clinical implication of its use among residents. The Minnesota Association of Geriatrics Inspired Medicine (MAGIC), Alliance for Clinical Excellence (ACE) created cannabis clinical considerations for use in senior care settings (skilled nursing and assisted living settings).

As new laws are passed and cannabis products become more mainstream, long-term care facilities face evolving questions about how they will, or will not, support residents who wish to utilize these products. The complexity of cannabis-based products combined with changing laws, increases the need for education and resources to assist senior care settings navigate this landscape while respecting resident rights.

This document addresses clinical, but not policy considerations. Health care facilities may adopt reasonable restrictions on use of medical and nonmedical cannabis products and should incorporate these in policies/procedures and resident rules and handbooks. These can apply to forms of cannabis, where they can be consumed, and how they may be stored. There are also legal restrictions on locations that smoked products can be used, including anywhere smoking is prohibited, federal buildings, and anywhere minors can encounter second-hand smoke.

### **Cannabis and Cannabinoids**

Cannabinoids are a class of chemical compounds found in the Cannabis plant, with over 100 different cannabinoids identified to date. The two most well-known and studied cannabinoids are delta-9-tetrahydrocannabinol (THC) and cannabidiol (CBD). These compounds interact with a complex cell-signaling system in the body responsible for regulating various physiological processes. The mechanism of action of cannabinoids involves their interaction with specific receptors. The effects of cannabinoids can vary based on factors such as the specific type of cannabinoid, its concentration, the presence of other compounds in the cannabis plant, and individual differences of the user.

## Definitions

**Cannabis:** all products derived from the Cannabis sativa and Cannabis indica plant.

- **CBD:** Cannabidiol (a cannabinoid). CBD is the second most prevalent ingredient in cannabis and is generally sourced from hemp plants. It is easily obtained, legal, generally considered safe, and has been used to help with anxiety, insomnia, nausea, weight loss, chronic pain, and addiction. It is administered in various forms including extracts, capsules, patches, creams, and vapes. CBD may create a feeling of well-being without the feeling of euphoria caused by tetrahydrocannabinol (THC).
- **THC:** Tetrahydrocannabinol (a cannabinoid). THC is a crystalline compound and is the primary active ingredient in most cannabis products. THC is the psychoactive compound that creates a feeling of euphoria. THC can help with nerve pain, spasticity in multiple sclerosis, nausea, appetite, sleep, and other symptoms.
- **Hemp:** Hemp is defined as a cannabis plant that contains not more than 0.3 % THC on a dry-weight basis. Hemp is a botanical class of cannabis. (2018 Farm Bill).
- **Marijuana:** The Controlled Substances Act (CSA) identifies marijuana as a Schedule I drug. Marijuana is defined as the cannabis plant, including seeds and its derivative products, with THC concentration **over** >0.3 % on a dry-weight basis.
- **Medical Cannabis:** Medical cannabis is any species of the genus Cannabis plant, or any mixture or preparation of them, including whole plant extracts and resins, and is delivered in the form of liquid, pill, vaporized delivery method, combustion with use of dried raw cannabis, any other method approved by the commissioner (MN Statute 152.22, Subd. 6). The term cannabis is favored over the more colloquial term marijuana.

## Forms

Type	Forms	
Oral	Tablets Capsules Solutions	Edibles Beverages
Sublingual	Oral Solution Spray	
Topical	Lotions Solutions Oils	
Inhalants	Smoking	Cartridges

	Vaping	
Suppositories		

### **Metabolism**

- Onset
  - Inhaled: 1-10 minutes, peak 15-30 minutes
  - Ingested: 30 minutes-3 hours
- Duration
  - Inhaled: up to 4 hours
  - Ingested: up to 12 hours
- **Metabolism considerations in older adults**
  - Cannabis is a fat-soluble substance, and with aging we see an increase in fat. This may result in a longer duration of action, as well as increased risk of side effects. Cannabis is metabolized by the CYP450 system, which may have decreased activity in aging, resulting in longer duration of action and increased side effects.
  - Due to aging-related changes in balance and proprioception, older adults may have a higher risk of falls and motor impairment due to cannabis.



## II. USES

### Possible indications

Anorexia	Muscle Spasms (multiple sclerosis)
Nausea and Vomiting	Seizure Disorders
Sleep Disturbances	PTSD
Chronic Pain	Anxiety

### Dosage

It is recommended to start at low doses and slowly increase as needed for effect, but high doses are generally not required. There can be development of tolerance, and some users will take “breaks” from cannabis use to reset tolerance. Given the long duration of action of edible or ingested forms, it is important that new users are counseled on the duration of action, to avoid repeat dosing that can cause additive effects and higher chances of side effects.

### Minnesota Medical Cannabis Program and Registry

The Minnesota Medical Cannabis Program, also known as the "Minnesota Medical Cannabis Program," was established to provide qualifying patients with access to medical cannabis for specific medical conditions. Here are key points about the program:

#### Qualifying Medical Conditions:

Patients must have one or more qualifying medical conditions to be eligible for the program. These conditions include but may not be limited to Alzheimer’s disease, ALS, autism spectrum disorder, Tourette’s syndrome, chronic tic disorder, seizures, glaucoma, HIV/AIDS, IBS, IBD including Crohn’s, OCD, PTSD, sickle cell disease, severe and persistent muscle spasms such as multiple sclerosis; chronic or intractable pain, cancer or terminal illness with life expectancy less than 1 year if the illness or its treatment produces one or more of the following: severe or chronic pain; nausea or severe vomiting; or cachexia or severe wasting.

#### Registration

Residents interested in participating in the program need to register with the Minnesota Department of Health (MDH). The registration process involves working with a healthcare practitioner who is registered with the program. The healthcare practitioner must certify that the patient has a qualifying medical condition, that the practitioner is treating them for that condition in an ongoing



relationship, and that cannabis is a reasonable treatment for that patient. The new law has eliminated the registration and renewal fee for the joining Medical Cannabis program.

### **Medical Cannabis Manufacturers**

Minnesota has licensed two medical cannabis manufacturers, who are responsible for cultivating, processing, and distributing medical cannabis products to registered patients, as well as sampling and quality assurance.

### **Forms of Medical Cannabis**

The program allows the use of smokable and non-smokable forms of medical cannabis. Residents can choose from various formulations that suit their preferences and medical needs.

### **Medical Dispensaries**

Medical cannabis products are dispensed through authorized Patient Care Centers (PCCs) or dispensaries. These centers provide a controlled environment where residents can access their prescribed medical cannabis products. These dispensaries have pharmacists on staff that can assist with problem solving.

### **Caregiver Provision**

The program allows registered patients to designate a caregiver to assist with obtaining and administering medical cannabis. Caregivers must also register with the MDH.

### **Ongoing Monitoring and Adjustments**

The program is subject to ongoing monitoring and adjustments by the Minnesota Department of Health. Changes may be made to the list of qualifying medical conditions, allowable forms of medical cannabis, and other aspects of the program based on evolving research and patient needs.

It is crucial to check the official website of the Minnesota Department of Health or consult with healthcare professionals for the most up-to-date and accurate information regarding the Minnesota Medical Marijuana Program. Additionally, as laws and regulations can change, it is advisable to verify any recent updates or amendments to the program.

<https://www.health.state.mn.us/people/cannabis/index.html>



### III. GENERAL CLINICAL CONSIDERATIONS

#### **Cannabis Products Obtained Outside the Medical Cannabis Program**

The Minnesota Office of Cannabis Management was established in 2023 to design the regulatory framework and implement retail sales, with a goal of starting retail sales in 2025. Hemp-derived THC products legalized in 2022 will continue to be available. Consumers should carefully review packaging—though products currently available are supposed to contain 5 mg or less per serving, many products have been found on shelves that contain multiple servings or higher levels of THC. It is also possible that CBD-labelled products can also contain small amounts of THC. It is important for consumers and caregivers to know that these products are not FDA-regulated and not subject to the quality assurance process of Medical Cannabis, so they may vary in quality, components, and dose listed on package.

**\*\*\*It is important to note that when obtaining cannabis from somewhere other than a medical marijuana dispensary, products contain varying levels and dosages of THC\*\*\***

#### **Disease Considerations**

Avoid the use of cannabis or use caution with the following:

- Cognitive disorders: Individuals with any degree of cognitive impairment may be at increased risk of impaired memory, concentration, and executive function.
- Psychiatric diseases/symptoms: Can trigger or exacerbate depression and psychosis
- Coronary artery disease, cerebrovascular disease, and arrhythmia: There is an increased risk of arrhythmia, elevated heart rate, stroke, and heart attack. Avoid cannabis use in unstable cardiac disease.
- Hepatic encephalopathy or severe liver disease
- Substance use disorder

#### **Medication Interactions**





THC and CBD are metabolized by cytochrome P450 enzymes and may interact with other CYP450-active medications. CYP450 enzymes are found in liver and other tissues, and play a crucial role in breaking down and processing various substances, including medications. For medications this breakdown is essential because it helps the body get rid of the drug after it is done working, but some substances can inhibit or speed up this metabolism, affecting the drug levels and duration of action in critical ways.

The CANNabinoid Drug Interaction Review (CANN-DIR™) through Penn State College of Medicine is a comprehensive interaction tool available online. <https://cann-dir.psu.edu/>

The following are common drug interactions, but this is NOT a complete list.

Medication	Potential risks
Anticholinergics	Increased tachycardia, hypertension & CNS depression
Beta blockers	Bradycardia, hypotension
Citalopram, Escitalopram	QTc prolongation
Clozapine, Olanzapine	in those who smoke cannabis, olanzapine and clozapine concentrations may be reduced
CNS depressants (antiepileptics, benzodiazepines, muscle relaxants, opioids)	Increased CNS depression/additive sedation, cognitive impairment
Mirtazapine	Increased CNS depression
Nicotine	Increased tachycardia, stimulant effects
Stimulants	Increased tachycardia, hyperthermic effects
Tricyclic antidepressants (ex, Amitriptyline)	Increased tachycardia, blood pressure, sedation, QTc prolongation
Valproic acid	Avoid combination if possible. If unable to avoid, monitor for CNS depression and LFTs
Warfarin	Increased INR
cimetidine, cyclosporine, fluconazole, macrolides, verapamil	Increased cannabis exposure. May increase psychoactive effects
glucocorticoids, phenytoin, primidone, rifampin, St John's Wort	Reduced cannabis exposure

**Potential effects of cannabis use – mild, moderate, and severe**

Effect, Symptoms, and Interventions	Typical, expected	Mild to moderate intoxication	Severe intoxication, possible emergency
<b>Effects &amp; symptoms</b>	<ul style="list-style-type: none"> <li>• Red eyes</li> <li>• Sleepiness</li> <li>• Dry mouth</li> <li>• Briefly increased heart rate</li> <li>• Increased appetite</li> <li>• Feeling relaxed or euphoria</li> <li>• Feeling hot or cold hands/feet</li> <li>• Increased appetite</li> <li>• Can improve nausea</li> </ul>	<ul style="list-style-type: none"> <li>• nausea/vomiting</li> <li>• Dry mouth</li> <li>• Tachycardia</li> <li>• Increased respiratory rate</li> <li>• High or low blood pressure</li> <li>• Anxiety, dysphoria, panic</li> <li>• Impaired gait</li> </ul>	<ul style="list-style-type: none"> <li>• Delirium</li> <li>• One-sided weakness</li> <li>• Chest pain, other signs of possible heart attack</li> <li>• Unable to speak</li> <li>• Severe confusion</li> <li>• Unresponsive</li> <li>• Danger to self or others</li> <li>• Hyperemesis (if prolonged, concerned about dehydration)</li> </ul>
<b>Possible intervention</b>	<ul style="list-style-type: none"> <li>• Monitor</li> </ul>	<ul style="list-style-type: none"> <li>• Try to provide environment of decreased stimulation</li> <li>• Consider short-acting benzodiazepine</li> <li>• Encourage fluids and rest</li> </ul>	<ul style="list-style-type: none"> <li>• Consider ER evaluation</li> </ul>
<b>Withdrawal</b>			
<b>Effects &amp; symptoms</b>	<ul style="list-style-type: none"> <li>• anxiety</li> <li>• irritability</li> <li>• craving</li> <li>• dysphoria</li> <li>• insomnia</li> </ul>		
<b>Possible intervention</b>	Encourage fluids. Work with the resident’s provider.		

#### **IV. RESOURCES FOR FACILITY STAFF**

Nurses and clinical staff in senior care facility settings may be faced with situations where they know or believe a resident is under the influence of a cannabis product. This may have been used therapeutically, or recreationally. It may have been obtained through a Medical Cannabis registration and dispensary; or may have been obtained from another state’s legal dispensary, or through another means. It may be a CBD-only product, THC, or a combination; it may be different than what the person thinks they took; and it may be an ingested or inhaled form. The effects seen may be expected and mild, or may be significant and life-threatening, or anywhere in between.

In deciding to call the resident’s medical provider or other emergency medical help, it will be helpful to have information readily available as with any change-in-condition clinical call:

- Name, age
- What the change in condition is
- Have available the medication list, medical diagnoses, and ideally most recent laboratory data and recent medical history
- The SBAR format is recommended; some example calls:



## SBAR EXAMPLES

### Example 1

- Situation
  - I'm calling because Resident A had some Cannabis and I'm concerned about the effects.
- Background
  - She had some gummies that her son brought in and gave her. I believe she ate two of them.
- Assessment
  - She was giggling and thirsty for a while, but now she is sound asleep, and I can barely wake her up. Her heart rate was 110 when I first checked on her, but now it's 95 and regular.
- Recommendation
  - I am thinking I should keep her room quiet and just turn on a dim light in case she wakes up, keep her call light and water bottle within reach, make sure she is comfortable and not in a position to fall or trip easily if she wakes up, and monitor. How many hours do you think I should give it before I call you back if I can't wake her?

### Example 2

- Situation:
  - I'm calling because Resident B is having significant symptoms I'm concerned about.
- Background:
  - His roommate is on the Medical Cannabis program and has his supply locked up in his room, and the daughter is supposed to be the only one who accesses it and gives it to the roommate, but the lock box is wide open and empty.
- Assessment:
  - The resident is showing signs of possible toxicity including extreme confusion, garbled speech, heart rate 120, BP 180/84, and is grabbing at his chest.
- Recommendation:
  - Can I get an order to send him in to the ER?

## Resources

Minnesota Medical Cannabis <https://www.health.state.mn.us/people/cannabis/index.html>

Minnesota Office of Cannabis Management <https://cannabis.mn.gov/>

CANNabinoid Drug Interaction Review (CANN-DIR™) <https://cann-dir.psu.edu/>



A resource product completed by the MAGIC ACE Cannabis Workgroup.

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