“Is medical cannabis safe for my patients?” A Practical Review of Cannabis Safety Considerations

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Introduction

The use of cannabis for medical purposes is increasing worldwide. Clinicians must be comfortable determining if medical cannabis can be safely used in their patients.

- Most patients using cannabis for medical reasons report that they do not receive guidance from a health care professional (HCP)[1]
- Medical cannabis is commonly used in medically complex patients. This increases the risk of safety concerns
- Cannabis can increase the risk of adverse events, impairment, and drug interactions
- Even if a HCP does not initiate medical cannabis, they must be able to assess its safe use in their patients

We propose a model to help facilitate the safe initiation, titration and monitoring of patients using medical cannabis. This model can help HCPs assess their patients to determine the safe use of medical cannabis.

Initiating and Titrating Medical Cannabis

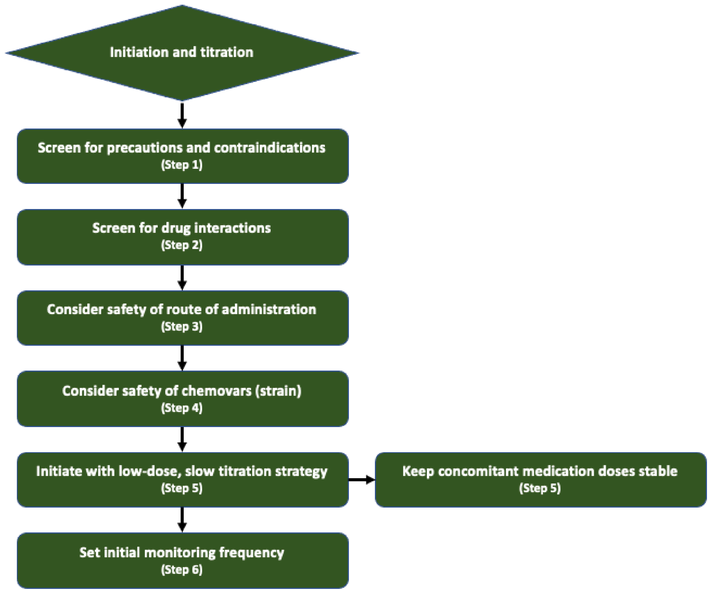

Figure 1. Key considerations when initiating and titrating medical cannabis

Step 1. Screen for precautions and contraindications

- Indication of how well patient may tolerate cannabinoids → assess risk of adverse outcomes and benefit vs risk ratio

Considerations	Precautions	Relative Contraindications	Contraindication
• Immunocompromised • Chronic Kidney Disease • Older adults • Patients with concurrent medical conditions • Polypharmacy • Potential drug interactions	• Concurrent mood or anxiety disorder • Have risk factors for cardiovascular disease • Tobacco use • E-cigarette use • Severe liver dysfunction /disease • Medications associated with sedation or cognitive impairment • Driving or safety sensitive occupations	• Under 25 years of age • Current or past cannabis use disorder • Current or past substance use disorder	• Unstable cardiovascular disease • Respiratory disease (if smoking cannabis) • Personal or strong family history of psychosis/ bipolar • Pregnant, planning on becoming pregnant, or breastfeeding

Step 2: Screen for drug interactions

- Assess for the risk of both pharmacodynamic and pharmacokinetic interactions.
- Most concern = pharmacodynamic interactions with CNS depressants [2]
- Cannabis metabolized in liver by CYP 450 isoenzymes. = CYP inhibitors or inducers may have pharmacokinetic drug interactions [3,4]

Step 3 and 4: Consider route of administration and chemovars

Route of Administration	Strain Selection	Appropriate Patient Population
Oral Oil or Capsules	Based on safety concerns for the following patient populations, consider initiating with a CBD dominant product: ○ Older adults ○ <25 years of age ○ History of mental health ○ Heart conditions ○ Personal or strong family history of psychosis/ bipolar ○ Concurrent mood or anxiety disorder ○ Severe liver disease ○ Other conditions or medication regime associated with sedation or cognitive impairment (may compound effects of THC) ○ Individuals in safety-sensitive occupations ○ Polypharmacy ○ At risk for pharmacodynamic drug interactions	Recommended for most patients with chronic symptoms Strongly recommended for patients with or at risk for respiratory disease
Vaporization	Clinicians should assess risk vs benefit for using different cannabis chemovars by this route.	Recommend for patients requiring rapid onset of action • Migraines • Nausea • Acute pain • Appetite • Initiation of sleep Generally, not recommended for patients with respiratory disease
*insufficient safety evidence for other dosage forms (eg. sprays, suppositories, topicals, edibles) to make recommendations		

Step 5: Initiate with low-dose, slow titration strategy

- Helps builds tolerance and is the best approach to avoiding impairment or other adverse events.

Step	Oil	Vaporization**
Step 1	Start with 5 mg CBD oil BID	Start with one inhalation
Step 2	Titrate dose by 5 mg CBD every 2-3 days (if no adverse events or until patient reaches goals of therapy)	Wait 15-30 minutes
Step 3	THC: If CBD alone is not reaching treatment goals, clinicians can consider adding THC after assessment of the benefit vs risk (see Table C). Recommended starting dose is 1- 2.5 mg THC at bedtime. Titrate by 1-2.5mg THC every 2-7 days If daytime THC is needed, starting dose is 1 mg THC. Titrate by 1-2.5mg THC every 2-7 days.	Increase by 1 inhalation every 15-30 minutes (if no adverse events, until patient reached goals of therapy)
Step 4	Doses above 40 mg/day of THC rarely required – if reached, clinicians should re-assess risk-benefit ratio for patient	Final dose = total consecutive inhalation doses required to reach goals of therapy

Step 6: Set initial monitoring frequency

- Monitoring is an essential component to ensuring safety, allowing continued assessment of risk vs benefit ratio
- Typically 1-3 months post initiation, sooner if patient in special populations

Follow up

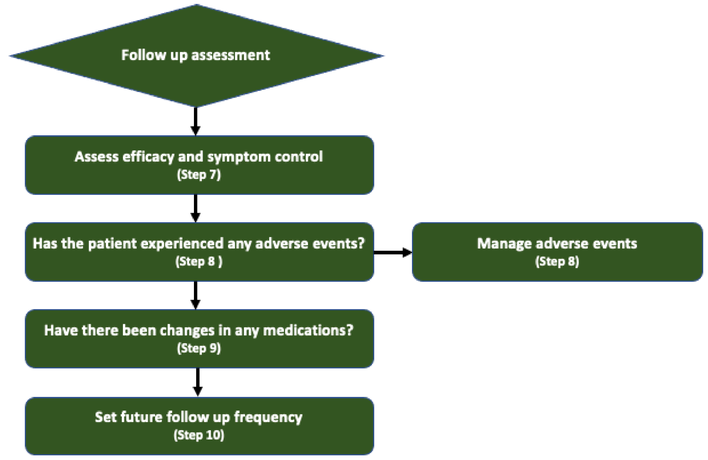

Figure 2. Key considerations for follow up assessments for medical cannabis

Step 7: Assessing efficacy and symptom control

- Reevaluates risk vs benefit
- Track product details (chemovar, route, dose), improvements and worsening of symptoms

Step 8: Assessing and managing adverse events

- Assess if the patient has any cannabis-related adverse effects and develop a strategy to manage them

Step 9: Assess medication changes

- From an outcome and drug interaction perspective

Step 10: Set future follow up frequency

- Individualizing follow-up based on the patient
- Once stabilized, follow-up tends to occur less often

Conclusions

A safety focused approach at each step of a patient's cannabis journey is necessary.

Before initiation:

- Screen for precautions/contraindications and potential drug interactions

Initiation and titration:

- Chemovar selection based on individual patient
- Important to know if patient belongs to a group with safety risk of THC or CBD use
- Safest route of administration and starting dose specific to patient should be considered
- During initiation low dose, slow titration method should be used

Follow up:

- Following initiation, monitoring for adverse events and drug interaction is crucial.
- Adjustments to treatment plans made to mitigate any issues or potential risks that arise

Just as more research must be completed on the efficacy and usefulness of medical cannabis, more robust efforts in assessing safety factors regarding medical cannabis use with a wide range of conditions.

- For more resources on cannabis safety visit: Safe-cannabis.com

References

Based on manuscript: MacCallum, C. A., Lo, L. A., & Boivin, M. (2021). “Is medical cannabis safe for my patients?” A practical review of cannabis safety considerations. European journal of internal medicine, 89, 10–18. Additional references:

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