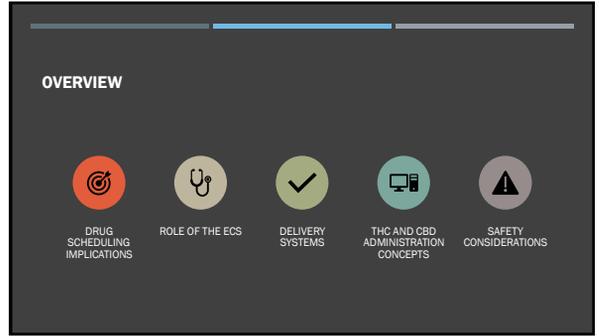
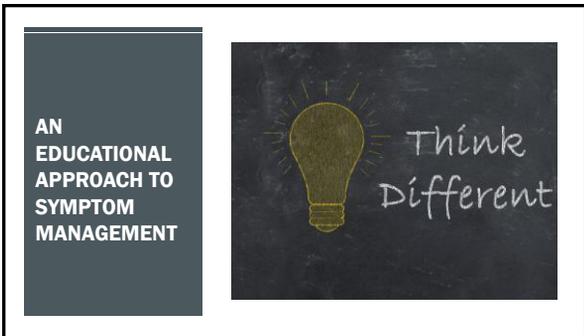


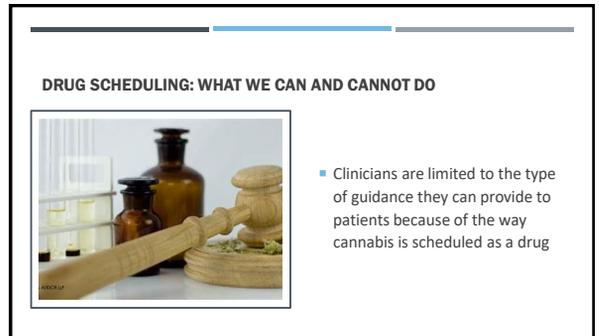
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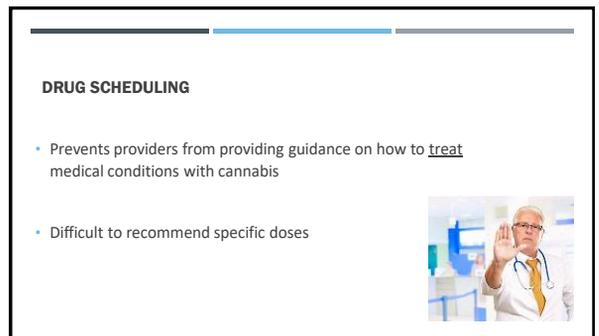
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DEA Schedule	Abuse Potential	Example of Drugs	Medicinal Use
Schedule I	Highest	Heroin, LSD, Marijuana, Psilocybin	No accepted use; limited use for research purposes
Schedule II	High	Morphine, PCP, Cocaine	Accepted use with restrictions
Schedule III	Medium	Selected Amphetamines, Anabolic Steroids, Codeine with aspirin	Accepted use
Schedule IV	Low	Diazepam, Ambien, Xanax	Accepted use
Schedule V	Lowest	Over the counter prescription drugs containing codeine	Accepted use

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WHAT WE CAN DO



- **The patient *must* be the one in charge** of their cannabis medicine. The patient must determine the frequency, amount, and route.
- **We can provide education** on potency and routes of administration.
- **We can teach** patients how to use cannabis safely to avoid experiencing unpleasant side effects by teaching basic concepts of administration and the **Endocannabinoid System**

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ENDOCANNABINOID SYSTEM



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ENDOCANNABINOID SYSTEM

- *"The ECS - named for a plant that led to its discovery - is one of the most important physiologic systems involved in establishing and maintaining human health." -Bradley E. Alger, Ph.D.*
- *"One could easily argue that you can't understand how the neurotransmitters in the brain work without knowledge of the endocannabinoid system." - Dr. Ethan Russo*

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ENDOCANNABINOID SYSTEM



- Cellular balance and functioning
- Modulates pleasure, energy, well-being
- Healing and repair
- Goal: homeostasis

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ENDOCANNABINOID SYSTEM ▪ **Endocannabinoids** = Molecules our bodies make to interact with the cannabinoid receptors

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ENDOCANNABINOID SYSTEM

- Endocannabinoids and their receptors are found in the brain, glands, immune cells, organs, and connective tissues
- Small doses of cannabinoids can signal the body to make more endocannabinoids



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ENDOCANNABINOID SYSTEM: BENEFITS OF CANNABIS

- Sleep
- Pain
- Muscle spasms
- Anxiety
- Mood
- Tremors, abnormal involuntary movement
- Neuroprotective
- Appetite, nausea
- Enhanced quality of life



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WHERE TO BEGIN

- **Identify the purpose for use.**
 - Ask the patient which symptom is the most troubling for them
 - Cannabis will be helpful for multiple issues at once, but if the patient can zero in on their biggest complaint, it will help them determine the overall effectiveness of the product



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WHERE TO BEGIN

- **Determine the delivery system.**
 - Ask the patient which form appeals to them the most
 - Once you know, you can teach concepts specific to that delivery system such as onset, duration, and frequency
 - Once you identify the preferred delivery method, you can help the patient determine starting points for serving sizes



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CANNABIS DELIVERY METHODS

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DELIVERY METHODS

Inhalants

- Immediate effects
- Lasts 1-4 hours
- Easy to control dosing
- Minimal amount to be effective
- Easy to administer around other pharmaceuticals



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DELIVERY METHODS: INHALED CANNABIS

- Patients with any type of lung condition should speak with their physician to determine whether inhaled cannabis is safe



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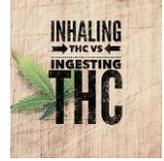
DELIVERY METHODS: INHALED VS. EDIBLE FORM

- When THC is inhaled, the molecule is in a form called Delta-9-THC
- When THC is ingested, the liver changes the form to 11-hydroxy THC (in most individuals), by the CYP2C9, CYP219, or CYP3A4 enzymes

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DELIVERY METHODS: INHALED VS. EDIBLE FORM

- 11-hydroxy is a compound that is more potent and longer-lasting, and is about 5 times as psychoactive



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DELIVERY METHODS: INHALED VS. EDIBLE FORM

- In certain individuals who have remarkably efficient liver metabolism, edibles may not be effective.
- If edibles are ineffective for a patient, recommend products that can be taken under the tongue (sublingually) or inhaled



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DELIVERY METHODS: EDIBLES**Edibles**

- Slower onset: 30 min-2 hrs
- Can last 4-10 hours
- Instruct patients to space edibles away from their regular medications by 1-2 hours to avoid any possible interactions
- Take with food to help absorption and prevent surprises



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DELIVERY METHODS: TINCTURES**Tinctures**

- Onset 15-30 Minutes (if placed under the tongue)
- May be taken about every 2-4 hours
- Allows for micro-dosing



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DELIVERY METHODS: TOPICALS**Salve**

- Not psychoactive
- Onset: 5-10 min
- Duration: 1-3 hours



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ADMINISTRATION CONSIDERATIONS

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ADMINISTRATION CONSIDERATIONS

- CBD and THC dosing is highly individualized and depends on multiple factors, such as:
 - Medical condition
 - Lifestyle, goals for use
 - Ingestion method
 - Body weight
 - Liver metabolism, sensitivity to cannabis
 - Endocannabinoid tone (receptors/endocannabinoids/enzymes)
 - Financial ability
 - Pharmaceuticals
 - Other factors



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ADMINISTRATION CONSIDERATIONS

- Find the smallest amount that works!
- Starting amounts for THC: <1 mg - 2.5mg

< = >

LESS IS MORE.

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ADMINISTRATION CONSIDERATIONS

- Addressing reluctance
 - Although CBD is great for inflammation, healing, and neuropathy, it takes time and consistent, daily use before the effects become evident (at least 4 - 6 weeks)
 - THC provides immediate symptom relief



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ADMINISTRATION CONSIDERATIONS

- CBD minimizes some of the psychoactive effects of THC
- Hemp CBD vs. cannabis CBD:
 - Hemp CBD: Contains essentially no THC. Certain products may contain heavy metals
 - Cannabis CBD: Will contain some THC, which helps CBD work better. Products must be tested for heavy metals and impurities



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ADMINISTRATION CONSIDERATIONS

Addressing concerns of addiction:

- Substance produces *actual physical symptoms of withdrawal*
- Cannabis is about as "addictive" as caffeine
 - Mild irritability
 - Subtle mood changes
 - Difficulty sleeping
 - Symptoms resolve in 1-2 weeks



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SAFETY CONSIDERATIONS

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SAFETY CONSIDERATIONS

- CBD is a stronger inhibitor of the cytochrome p450 system than grapefruit
- CBD can reduce the enzymatic degradation of warfarin



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SAFETY CONSIDERATIONS



- **Patients on coumadin (warfarin):**
 - Patients should notify their doctor or coumadin clinic if taking oral CBD
 - Cannabis may increase the blood-thinning effects of coumadin
 - Patient may need additional INR monitoring

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SAFETY CONSIDERATIONS



Patients with heart issues:

- THC lowers blood pressure. Instruct patient to change positions slowly, stay hydrated
- Avoid high potency THC strains and strains high in pinene (due to inotropic and heart racing effects)
- Recommend low-dose THC products and combine with CBD

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SAFETY CONSIDERATIONS



Patients with kidney disease:

- Inform of the diuretic (increased urination) effect of THC. This is more pronounced with edibles
- This side effect resolves in about a week in most individuals
- Consider using the inhaled or sublingual form if necessary

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SAFETY CONSIDERATIONS



Patients with liver disease:

- Use caution with THC in the edible form, especially with high doses
- Suggest CBD products, as it can be healing to the liver cells

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SAFETY CONSIDERATIONS



- Take cannabis with food and drink plenty of water
- Understand the potency of all products purchased
- It takes the body 3-5 days to adjust to an amount of cannabis, so caution patients not increase amount too quickly
- Always wait at least **2 hours** before taking an additional amount of an edible

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SAFETY CONSIDERATIONS



- Be aware of your environment and situation to avoid feelings of paranoia
- Keep away from children and pets
- Never drive or operate heavy machinery while on cannabis
- Cannabis may intensify the intoxicating effects of alcohol and other controlled substances
- Do not consume cannabis if pregnant or breastfeeding

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QUALIFYING CONDITIONS UNDER NM LAW



Statutory Approved Conditions

- Amyotrophic Lateral Sclerosis (ALS)
- Alzheimer's Disease
- Autism Spectrum Disorder
- Cancer
- Cervical Dystonia
- Crohn's Disease
- Epilepsy
- Friedreich's Disorder
- Glaucoma
- Hepatitis C infection currently receiving antiviral treatment (proof of current anti-viral treatment required)
- HIV/AIDS
- Hospice Care
- Huntington's Disease
- Inclusion Body Myositis
- Inflammatory Autoimmune-Mediated Arthritis
- Intractable Nausea/Vomiting
- Lewy Body Disease
- Multiple Sclerosis
- Obstructive Sleep Apnea
- Opioid Use Disorder
- Painful Peripheral Neuropathy
- Parkinson's disease
- Post-Traumatic Stress Disorder
- Severe Chronic Pain
- Severe Anorexia/Cachexia
- Spasmodic Torticollis (Cervical Dystonia)
- Spinal Cord Damage with Intractable Spasticity
- Ulcerative Colitis

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THANK YOU!

The Verdes Foundation
Albuquerque
Rio Rancho

www.VerdesFoundation.org
(505) 280-2814



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