

# Medical Marijuana: What Providers Need To Know



**Thomas E. Freese, Ph.D.**

Director of Training, UCLA Integrated Substance Abuse Programs

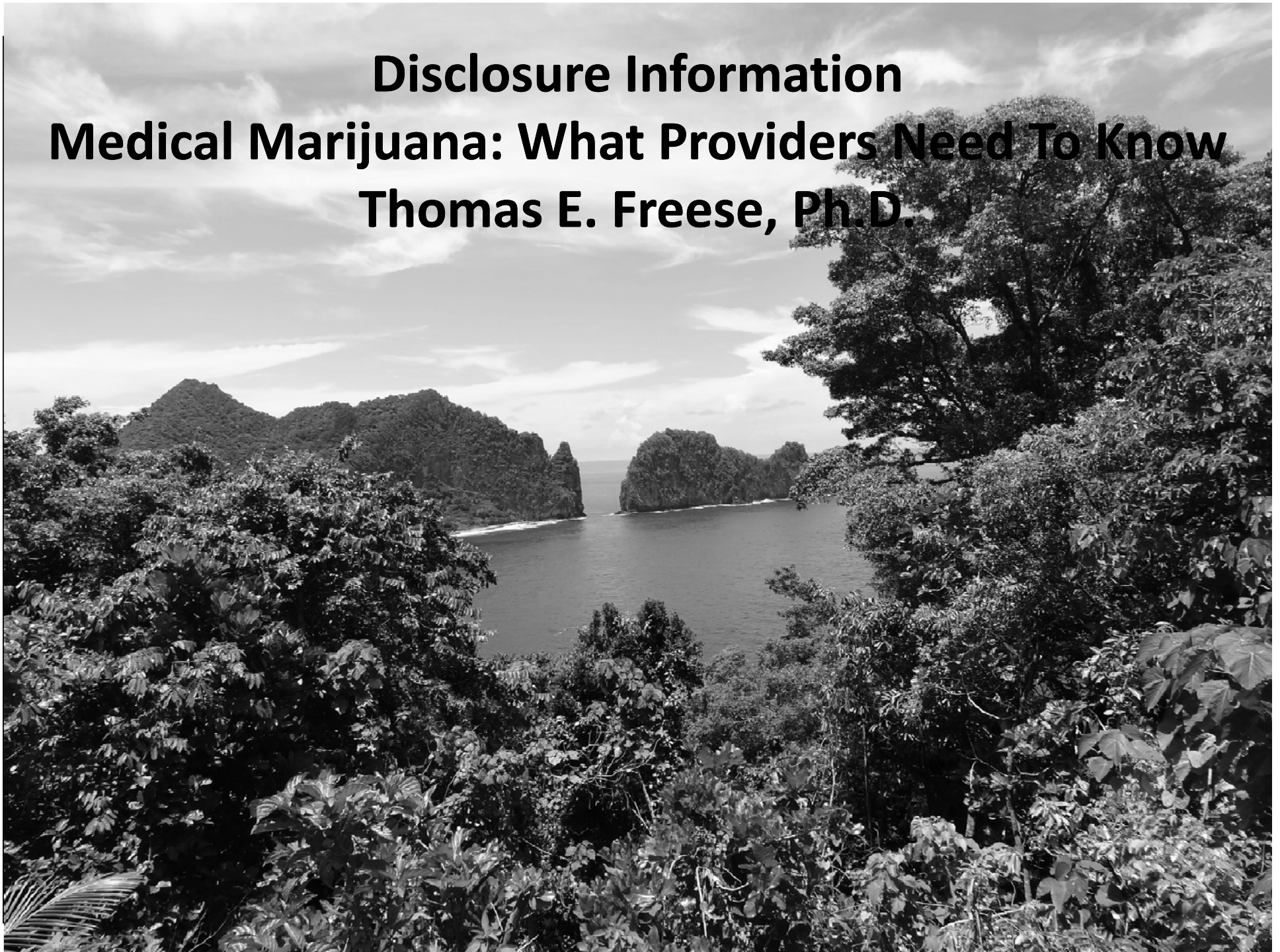
Director, Pacific Southwest Addiction Technology Transfer Center

Universal City, CA

October 22, 2014



**Disclosure Information**  
**Medical Marijuana: What Providers Need To Know**  
**Thomas E. Freese, Ph.D.**



# Training Collaborators

- Pacific AIDS Education and Training Center
  - Charles R. Drew University of Medicine and Science
  - University of California, Los Angeles
- Pacific Southwest Addiction Technology Transfer Center (HHS Region 9)
- UCLA Integrated Substance Abuse Programs

# Educational Objectives

At the end of this training session, participants will be able to...

1. Describe the mechanism of action of marijuana.
2. Discuss marijuana's effects on health and its potential medical use.
3. Explain at least three reasons why individuals with HIV may use medical marijuana.
4. Discuss at least two strategies for effectively working with HIV patients who use medical marijuana.



**Medical Marijuana—  
An Expert Speaks**



**Medical Marijauna–  
*Another* Expert Speaks**

# Part I

## Understanding Marijuana



# “Marijuana”

## What Do You Think?

- When you think of marijuana, what comes to mind?
- When you think of marijuana users, what kind of people come to mind?
- Why are you interested in medical marijuana?



# Who Uses Marijuana?

- Joe (23 years old)
  - First used at a party when he was 15, continued using through college
  - Now uses when he goes out or is playing video games with friends
  - Also uses when he's stressed out
  - On average, uses about four-five times/week



# Who Uses Marijuana?

- Maria & Terry  
(46 & 48 years old)
  - Used in college; stopped when she got pregnant
  - Now smoke socially and when they go to concerts
  - Maria uses when work stresses her out
  - Terry uses for pain stemming from HIV-related neuropathy



# Who Uses Marijuana?

- Elise (78 years old)
  - Never used marijuana until she turned 63
  - First used to improve her appetite during chemotherapy for breast cancer
  - Cancer has returned and metastasized to her spine.
  - Conventional painkillers don't work; now uses several times a day for pain relief



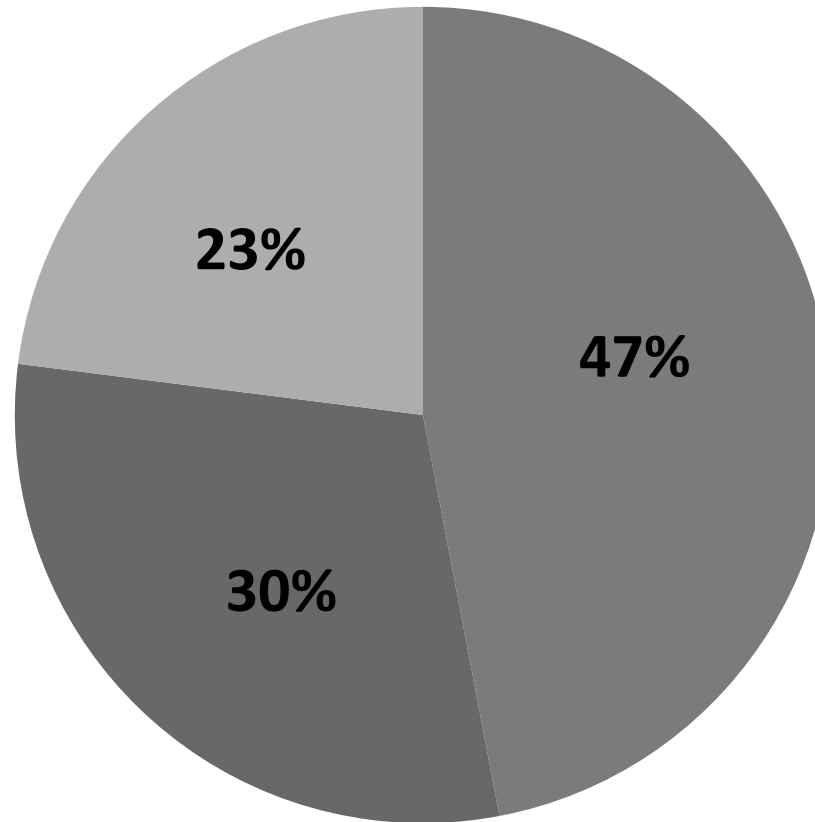
# Marijuana Use is Common

- Marijuana is the most commonly used illicit drug in the U.S.
- Any use among general population age 12+ in past month:
  - 2011: 7%
  - 2008: 5.8%
- Use is most common among people age 18-25 (19% of population)
- 48% of adults in the US report having used marijuana at some time in their life

# Why Do People Use Marijuana?

Among people who used marijuana in the past year:

■ For Fun    ■ For Medical Reasons    ■ For Fun and for Medical Reasons

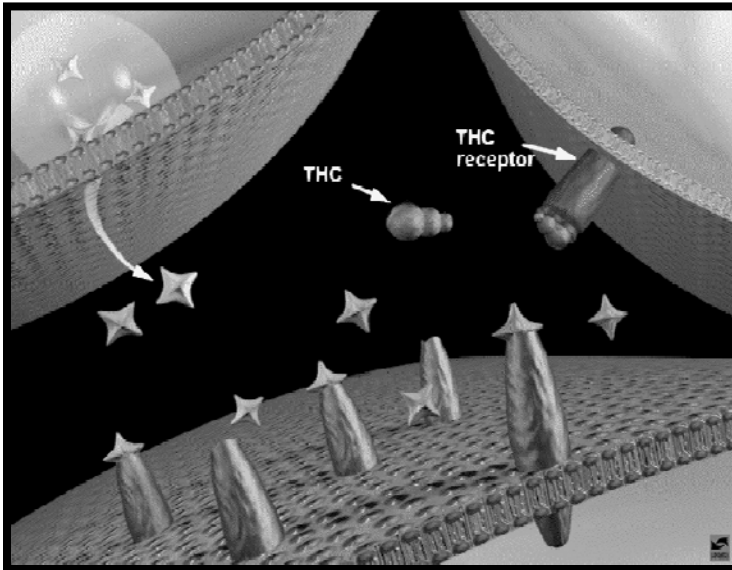


# Marijuana: What is it?

- Dry, shredded mix of leaves, flowers, stems, and seeds, usually from *Cannabis sativa* or *Cannabis indica* plant
- Both are common subspecies of the hemp plant, which is common throughout the world
- Contains over 400 chemical compounds
- Common names: grass, weed, pot, reefer, Mary Jane, ganja



# Marijuana: How Does it Work?



- Contains over 60 cannabinoids: main active chemical is  $\Delta$ -9-tetrahydrocannabinol (THC)
- Stimulates “high” by triggering receptors in parts of brain that influence pleasure, memory, thinking, concentration, coordination
- THC’s molecular structure is similar to that of neurotransmitters that affect cannabinoid receptors (affect pain, appetite, vomiting reflex)
- Effects generally last 1-4 hours

# How is Marijuana Used?

SMOKED	VAPORIZED	EATEN/DRUNK
Smoked in a pipe, bowl, cigarette	Inhaled through machine that converts active compounds into inhalable form	Consumed as ingredient in baked goods, candies, sodas
Rapid effects	Rapid effects	Takes time to reach brain, so effects are delayed
Burning marijuana releases toxins that can cause pulmonary problems	Does not release toxins that cause pulmonary problems	Does not release toxins that cause pulmonary problems



# Marijuana: Other Forms

- Hashish
  - Compressed resin of cannabis plant
  - More concentrated and potent than marijuana plant
- Hash Oil (“Wax”)
  - Psychoactive chemicals extracted from cannabis plant with butane
  - Three to four times as potent as marijuana plant
- Synthetic Marijuana (“Spice”, “K2”)
  - Herbal and chemical mixtures that produce experiences similar to marijuana
  - The five most common active chemicals in synthetic marijuana are now illegal in the U.S.

# Marijuana: Immediate Effects

Altered Mood	Reduced Anxiety
Cognitive Impairment (Attention, Judgment)	Sedation/Drowsiness
Altered Perception	Sensory Intensification
Impaired coordination/balance	Increased heart rate
Hunger	Hallucinations (in large doses)

- Effects can vary by strains
  - *Sativa*: More euphoria, stress relief
  - *Indica*: Relaxation, physical (especially pain) relief
  - *Sativa* and *Indica* often combined, leading to variable effects

# Marijuana: Negative Effects on Behavior and Mental Health

- Similar to alcohol/other drugs if misused (impairment)
- Long term use has negative impact on learning and memory
- Long term use reduces motivation (“amotivational syndrome”)
- Associated with mental health problems
  - Unclear if marijuana use is cause or effect
  - Heavy use is highly associated with serious mental illness – particularly among those with high risk (e.g., family history)

# Marijuana: Negative Effects When Smoked

- Can lead to respiratory illness
  - One marijuana cigarette causes as many pulmonary problems as 4-10 tobacco cigarettes
  - Increased risk for bronchitis, emphysema, lung cancer
- Can cause cardiovascular complications
  - Raises blood pressure & heart rate 20-100%
  - 4.8 times risk of heart attack in hour after use

# Marijuana: Negative Effects in Pregnancy

- There is increasing evidence that prenatal exposure may result in:
  - Increased risk of motor, social, and cognitive disturbances.
  - Higher rate of low birth weight infants, and childhood leukemia
- Marijuana has been found in breast milk although levels are generally considered subclinical.

# Marijuana: Why Start Using It?

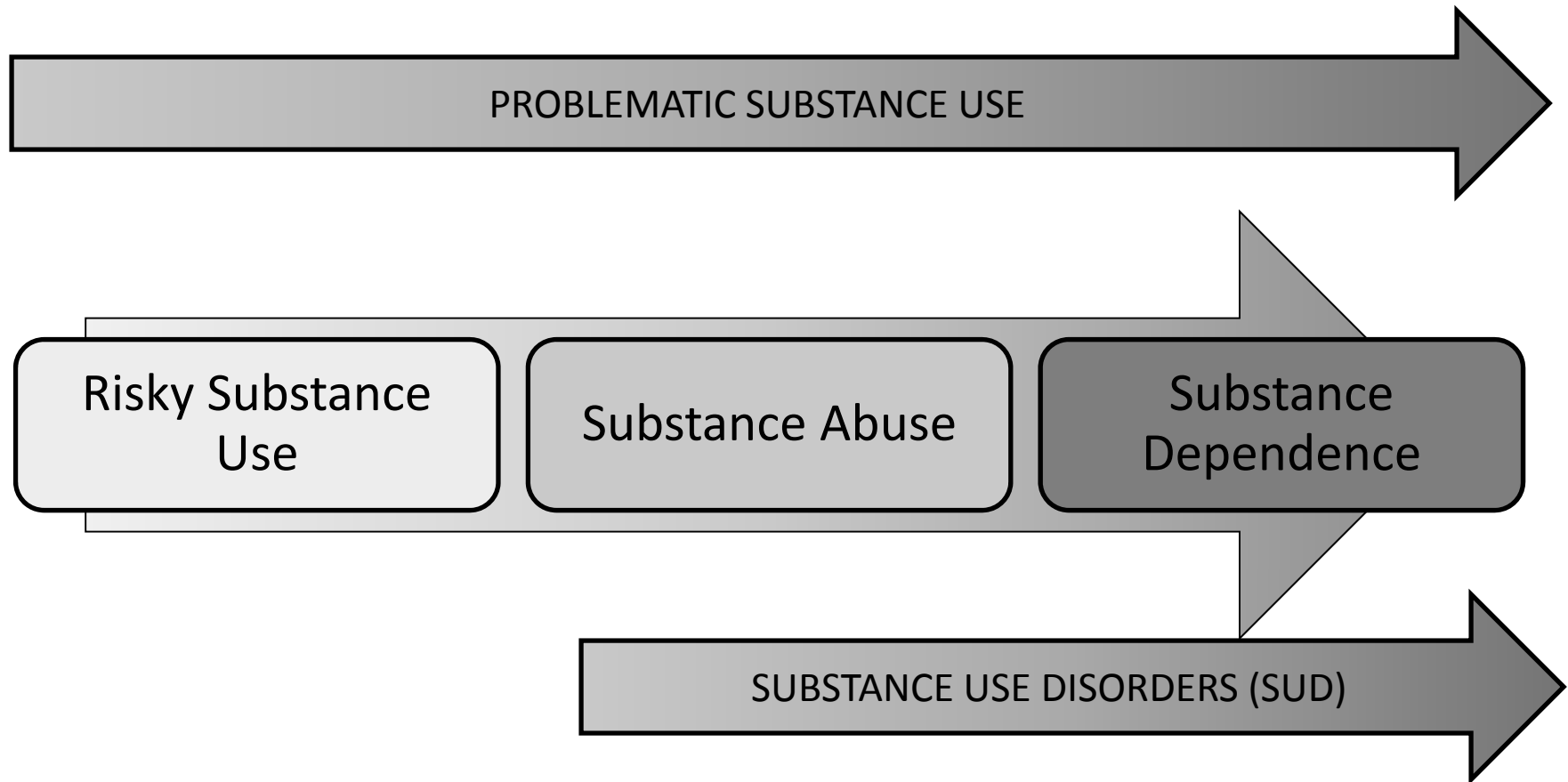
- To get high
  - Fun
  - New experiences
- To fit in
- To socialize
- To cope with physical/emotional discomfort

# Marijuana: Why Keep Using It?

- Rely on it to alleviate mental/emotional distress
- Like it, it's fun
- Use socially/to fit in
- Rely on it to alleviate physical pain/discomfort or sleep problems
- Habit/fear of stopping
- Most people who continue using marijuana use it for many of these reasons

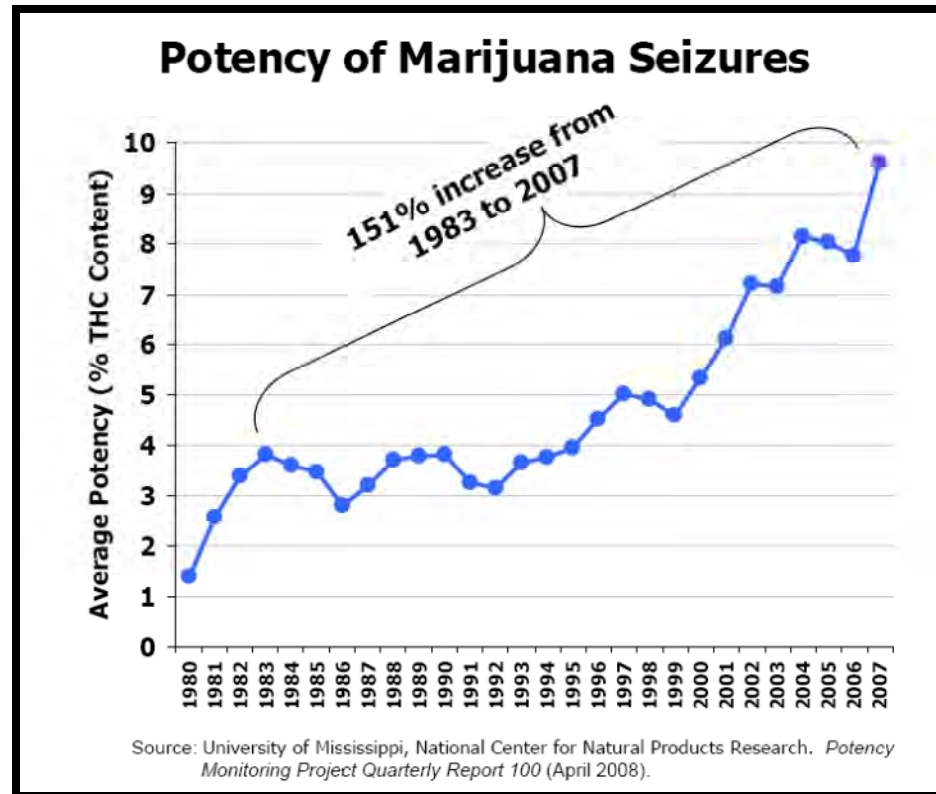
# Marijuana Abuse/Dependence

- SUD fall on a continuum of alcohol and drug use





# *“It’s not your dad’s ‘pot’ anymore”*



- Marijuana growers have worked to make the drug as potent as possible.
- In 1960s-70s average THC concentrations were 1-2%. Today, they are as high as 20%

# Marijuana: Potential for Abuse/Dependence

- Regular and prolonged use can change the way the brain works, leading to abuse or dependence
- Marijuana abuse/dependence most common among individuals with mental health disorders
- In 2011, 22.9% of people in US who received addiction treatment received treatment for marijuana use disorders
- Average adult entering treatment for marijuana abuse/dependence has used daily for ten years, tried to quit six times

# Marijuana Abuse/Dependence

<b>DRUG</b>	<b>LIFETIME RISK OF DEPENDENCE</b>
Nicotine	32%
Heroin	23%
Cocaine	17%
Alcohol	15%
Marijuana	9%

# Marijuana Abuse/Dependence

- Most individuals use marijuana without developing SUD.
- However, because use is so widespread, more people use marijuana problematically than other drugs.
- In Los Angeles County, marijuana use accounts for more substance use disorders treatment admissions (23.3%) than any other drug, including alcohol (22%).

# Marijuana: Signs of Abuse/Dependence

- Tolerance/withdrawal
  - Anger or Aggression
  - Decreased Appetite / Weight Loss
  - Irritability
  - Nervousness / Anxiety
  - Restlessness
  - Sleep Difficulties / Strange Dreams
- Preoccupation
- Loss of control
- Continued use in the face of adverse consequences
- Cognitive distortions/denial

# Marijuana Abuse/Dependence Treatment

- Treatments are behavioral
  - Motivational Enhancement Therapy
  - Cognitive Behavioral Therapy
  - Contingency Management
  - Family-based Treatment
- Only 10-30% success rate in achieving abstinence from marijuana after one year
- No medications available, but drugs to treat withdrawal symptoms in development

# Part II

## Medical Marijuana



# How Can Marijuana be a Medicine?

- Marijuana affects:
  - Pleasure/relaxation
  - Memory/thinking
  - Coordination
  - Pain Control
  - Appetite
  - Vomiting Reflex



- What medical problems do you think this would be helpful for?



# Marijuana's Medical Potential: Research Evidence

- Reduces nausea
- Stimulates appetite
- Pain relief
- Controls muscle pain, spasms
- Reduces tics (Tourette's Syndrome)
- Reduces convulsions (epilepsy)

# Marijuana's Medical Potential: Ongoing Clinical Trials

- Studying potential of marijuana and marijuana-based medications to treat:
  - Multiple Sclerosis
  - High Heart Rate
  - Non-Cardiac Chest Pain
  - Chronic Obstructive Pulmonary Disease
  - Sickle Cell Disease
  - Spinal Cord Injury Pain
  - Inflammatory Bowel Disease (Crohn's disease)
  - Liver Problems
  - Cancer-Related Pain
  - Brain Tumors
  - Dementia
- Many of these trials on individuals with multiple physical and/or mental health problems

# Different Kinds of Marijuana-Based Medicine

- Botanical cannabis (plant): “Medical Marijuana”
- Synthetic THC medications available in U.S. for nausea/appetite stimulation:
  - Dronabinol (Marinol<sup>®</sup>) (FDA approved for HIV)
  - Nabilone (Cesamet<sup>®</sup>) (FDA approved for cancer; HIV off-label)
- Other medications not available in U.S.:
  - Nabiximols (Sativex<sup>®</sup>) THC/cannabidiol mouth spray for pain relief, muscle spasms; currently being investigated by FDA
- Cannabinoid Antagonist, not available in U.S.:
  - Rimonabant (Accomplia<sup>®</sup>, Zimulti<sup>®</sup>) for treatment of obesity and nicotine dependence (selective cannabinoid receptor-1 blocker)

# Medical Marijuana vs. THC Medications: Is Medical Marijuana Better?

- THC medications still have psychoactive effects (make you high)
- There are chemicals in medical marijuana that moderate THC's psychoactive effects
  - These chemicals are not present in medications
- Medical marijuana is cheaper
  - Not made/patented by pharmaceutical industry

# Medical Marijuana vs. THC Medications: Is Medical Marijuana Better?

- Smoked medical marijuana takes effect in minutes; THC medications take over an hour
  - Instant feedback allows users to take more if needed for relief
  - Due to rapid relief, may consume less if smoked
- When swallowed, THC absorption is more erratic, and less concentrated
  - THC effects more unpredictable and variable, possibly less effective

# Medical Marijuana vs. THC Medications: Are THC Medications Better?

- Medical Marijuana is **not** FDA approved
  - FDA approval assures that medications are effective, safe, and properly labeled
  - FDA cannot evaluate medical marijuana as a drug since it is a plant, not a standardized medical formulation
  - Medical marijuana is different everywhere, depending on how it is bred, under what conditions it is grown, etc.
  - No way to know if medical marijuana is pure. Can be contaminated by pesticides, mold, fungus.

# Medical Marijuana vs. THC Medications: Are THC Medications Better?

- Difficult to approve something that is smoked as “medicine”
  - Negative effects of smoking
  - Depending on type of marijuana, can undergo different types of chemical changes when burned
  - No standard measurement of dosage (inhalations vary by the individual, unlike pills)

# Medical Marijuana vs. THC Medications

<b>Advantages of Medical Marijuana</b>	<b>Advantages of THC Medications</b>
Chemicals that moderate THC's psychoactive effects	FDA approved
Less expensive	Standardized medical formulation
More immediate relief	Purity
Instant feedback allows for moderation, possibly less consumption	Not smoked
Less erratic absorption than THC medications	Standardized dosing



# Medical Marijuana vs. THC Medications

ACCORDING TO FEDERAL LAW, MARIJUANA IS ILLEGAL



How can marijuana be used as a medicine  
while it is illegal?

# Medical Marijuana and Federal Law



- Controlled Substances Act (1970)
  - Marijuana is a Schedule I drug:  
*“No currently accepted medical use”*
  - No legal distinction between medical and recreational use
  - Up to 1 year in federal prison, \$100,000 fine for first possession offense
  - Up to 5 years in federal prison, \$250,000 fine for first manufacturing offense

# Medical Marijuana and Federal Law

- Supreme Court ruled that medical necessity is no excuse to break federal law (2001)
- FDA affirmed smoked marijuana is not considered medicine (2006)



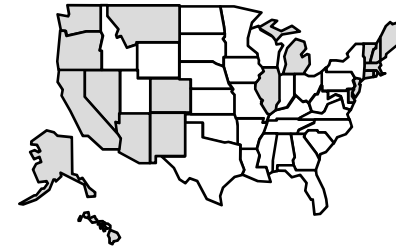
# Marijuana and its Derivatives as Medicine: Federal Law

- Investigational New Drug Program
  - Individuals could apply for marijuana from the federal government
  - Under 100 patients given marijuana in program
  - Large numbers of people with HIV/AIDS applied
  - Program shut to new enrollees in 1992 due to high demand
  - Handful of people still getting drug through program today
- Dronabinol (Marinol<sup>®</sup>) approved by FDA for cancer chemotherapy (1985) and HIV/AIDS (1992)
- Nabilone (Cesamet<sup>®</sup>) approved by FDA 1985, became available for cancer chemotherapy in 2006



# Medical Marijuana and State Law

- 20 states and the District of Columbia allow for the use of marijuana medically
  - Through votes in state legislatures
  - Through ballot measures
- An unconventional approach to making decisions about medicine
  - Only drug approved for medical use through political process rather than scientific trials and research
- Over 200,000 individuals in California obtain marijuana through medical marijuana dispensaries
  - In 2010, 69% of medical marijuana users in US were in California



# Medical Marijuana and State Law: California

- California Compassionate Use Act (1996)
  - Approved as Proposition 215 by 56% of California voters; amended in 2003 by SB 420
  - First medical marijuana law and the most open to interpretation
  - Legalized for treatment of many medical conditions (including HIV/AIDS) and “*any other illness for which marijuana provides relief*” (open to broad interpretation)

# Medical Marijuana and State Law: California (continued)

- California Compassionate Use Act (1996)
  - Removed state penalties for use, possession, or growth with a physician's recommendation
  - Allows possession of amount needed for personal medical purposes (8 oz dried marijuana, 6 mature marijuana plants)
- CA Medical Marijuana Program administers the Medical Marijuana Identification Card program
  - The ID card is voluntary and there is a fee for registering
  - The intent is to help law enforcement and qualified patients by creating an official ID that is recognized throughout the state.

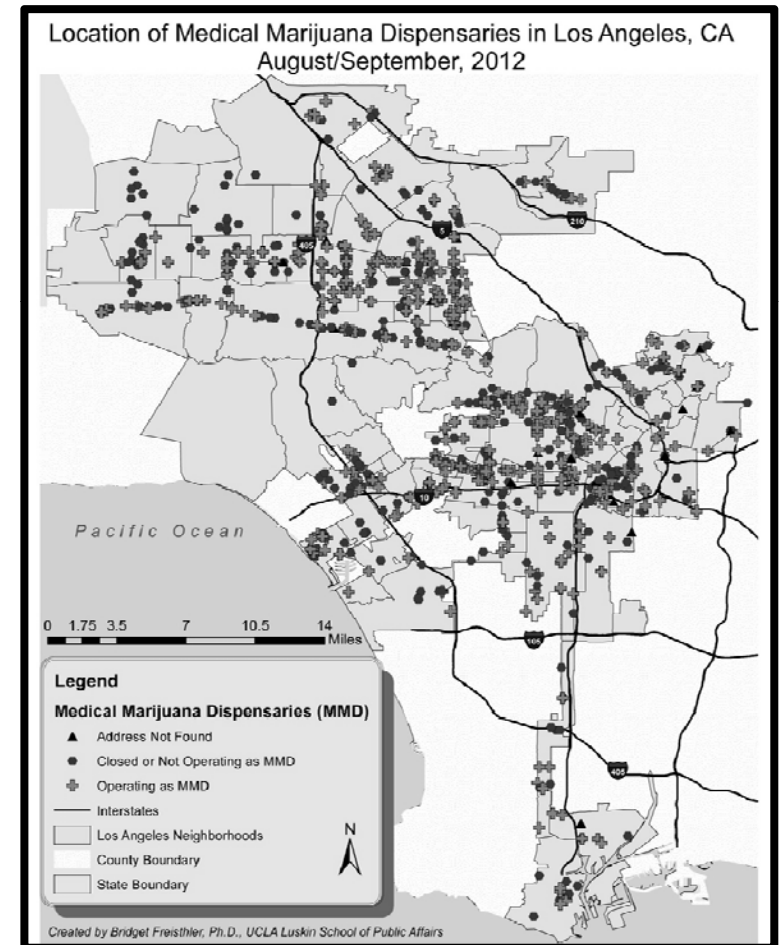


# Medical Marijuana and State Law: California (continued)

- Unlike other medications, doctors do not prescribe amount of marijuana, number of refills, content of medication, or route of administration
  - Dispensary staff often recommend specifics
- Doctor simply recommends the drug after one visit
  - Cost of a visit generally \$40-\$100
  - Patients obtain a “recommendation” for medical marijuana
  - Grow marijuana personally, or purchase it at marijuana dispensaries
- Doctor does not have to monitor patient progress (e.g., response to medicine, changes in symptoms)

# Medical Marijuana Dispensaries in Los Angeles County

- Medical marijuana dispensaries developed as a means to cultivate and distribute medical marijuana
- In 2007, the City of Los Angeles capped the number of licensed dispensaries at 187
- Thousands of unregulated dispensaries still operate
- Because of conflicts over land use and zoning, marijuana delivery services have developed



# Federal Law vs. State Law: What Does it Mean?

- Most drug arrests are made by local/state law enforcement, who enforce state laws
  - Local/state law enforcement in CA operates under Compassionate Use Act (allows for medical marijuana)
  - Federal law enforcement operates under Controlled Substances Act (does not allow for medical marijuana)



- Federal law enforcement of marijuana laws is rare, varies depending on political climate
  - Federal authorities have been shutting down dispensaries they believe are “profit-making” enterprises

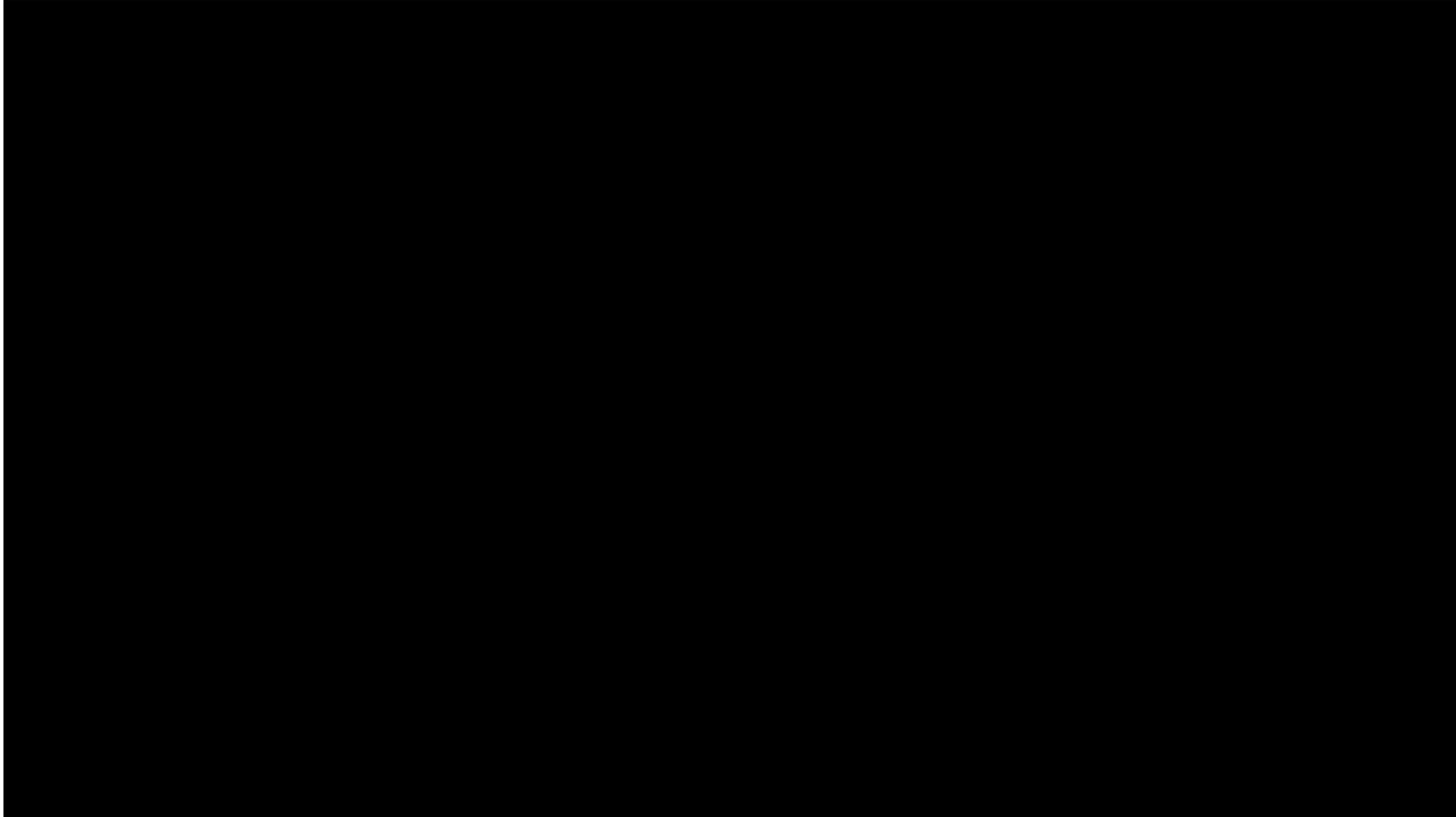
# Federal Law vs. State Law: What Does it Mean?

- Supreme Court ruled that federal marijuana laws have precedence over state law (2005)
- Can be charged with federal marijuana violations even if obeying state regulations
  - Case would have to be brought by federal authorities
  - Rare, but can/does happen
- Supreme Court ruled that federal government cannot investigate physicians just because they recommend marijuana (2002)

# Effects of Medical Marijuana Legalization

- Marijuana use is more common in states that have medical marijuana laws
  - It is unclear if higher rates of use are cause or effect of medical marijuana laws
- Rates of marijuana abuse and dependence are higher in states that have medical marijuana laws
  - Higher rates of abuse/dependence due to increased rates of use
  - No increase in rate of dependence among users

# One Drug, Two Stories



# Who Uses Medical Marijuana?

- People who have a history of non-medical marijuana use
  - 95% of California medical marijuana patients were using the drug even before they got physician approval
  - Use can evolve from recreational to medical



# Who Uses Medical Marijuana?

- People often prefer using medical marijuana instead of prescription medications
  - 58% of dispensary patients in Los Angeles said they used marijuana in place of prescription drugs for health problems
  - Many people believe that marijuana is more effective than prescription medications, and/or they prefer it because they believe it has fewer side effects





# Who Uses Medical Marijuana?

- People often use medical marijuana as a substitute for alcohol or other drugs
- Among patients at dispensaries in Los Angeles:
  - 41% used marijuana in place of alcohol
  - 30% used marijuana in place of other illicit drugs

# Why do People Use Medical Marijuana?

REASON FOR USE	% REPORTING REASON
Pain Relief	82.6%
To Sleep	70.6%
To Relax	55.6%
Muscle Spasms	41.3%
Anxiety	38.1%
To Stimulate Appetite	38.0%
Nausea	27.7%
Depression	26.1%

# Why do People Use Medical Marijuana?

DISORDER THAT REQUIRES TREATMENT	% CITING AS REASON FOR MJ USE
Chronic Pain	58.2%
Mental Health Disorders	22.9%
Sleep Disorders	21.3%
Neurological Disorders	16.6%
HIV	1.6%
Cancer	1.5%
Glaucoma	1.3%

# How do People Use Medical Marijuana?

- 67% of medical marijuana patients use the drug daily
- Over 86% smoke the drug



# Part III

## Medical Marijuana and HIV



# Medical Marijuana and HIV

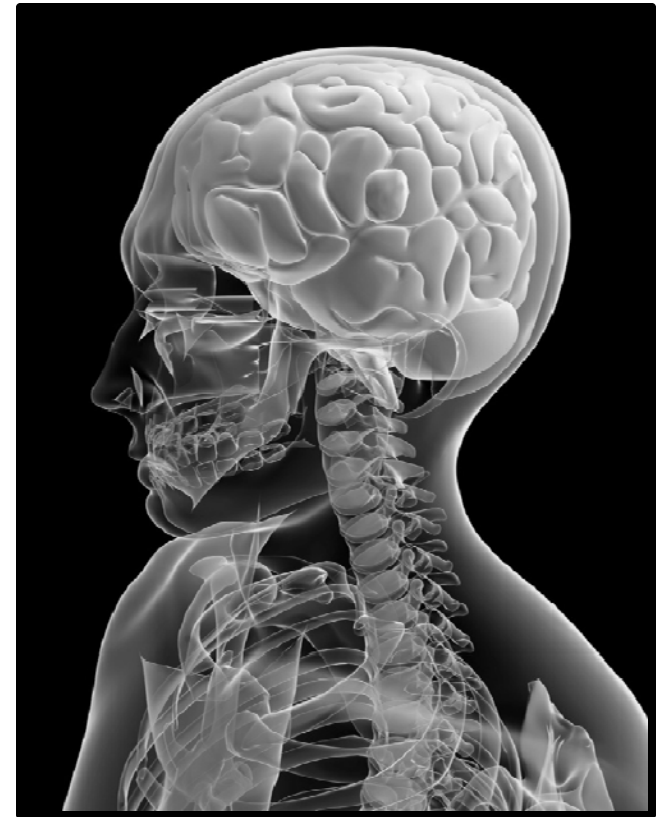
- Between 23% and 56% of people living with HIV/AIDS have used marijuana in the past month
- 3-8 times more common than in the rest of the population
- Most prevalent among young HIV+ gay men
  - 16% smoke marijuana weekly
  - 23% smoke marijuana daily
- About 16% of HIV+ women use marijuana weekly

# Medical Marijuana and HIV: What's the Connection?

- Marijuana can help relieve symptoms associated with HIV disease
- Marijuana can help HIV+ individuals cope as they learn their diagnosis and engage in treatment
- People living with HIV are likely to use medical marijuana for conditions/problems other than HIV

# Medical Marijuana and HIV Symptoms: Neuropathy

- Neurological complications associated with HIV disease
  - Numbness/pain in hands and feet
  - Normal stimuli (touch) can cause pain
  - In late stages of disease, muscle weakness
  - Often described as burning, shooting, tingling, stabbing, or like a vise or electric shock
- Can also be a side-effect of antiretroviral medications





# Medical Marijuana and HIV Symptoms: Neuropathy

- Many medications normally used for neuropathy don't mix well with antiretroviral medications
- Marijuana helps dull/relieve feelings of physical pain by 34%
- 20%-28% of HIV+ individuals who use marijuana report using it as a pain reliever
- Over 19% of individuals with neuropathy report using marijuana to manage pain

# Medical Marijuana and HIV Symptoms: Wasting Syndrome

- Loss of 10% or more of body weight plus 30+ days of diarrhea, weakness, or fever
- Causes
  - HIV disease/infections interfere with nutrient absorption
  - People with HIV need more calories than usual to maintain body weight due to increased immune system activity
  - Low appetite common with HIV
- Can occur even among people whose HIV is well-controlled with medications
- Eating enough and getting adequate nutrition is key to avoiding wasting syndrome

# Medical Marijuana and HIV Symptoms: Wasting Syndrome



- One of the strongest effects of the marijuana “high” is appetite stimulation
  - 53%-70% of HIV+ individuals who use marijuana report using it to stimulate their appetite
- Marijuana also dulls the vomiting reflex
  - 33%-66% of HIV+ individuals who use marijuana report using it to control nausea

# Medical Marijuana and Treatment: Learning HIV Diagnosis

- Learning HIV+ diagnosis is jarring for most people
  - Stress
  - Shock
  - Sadness/depression
  - Feeling that diagnosis is unreal
- Nearly ½ of HIV+ individuals meet criteria for anxiety or depression
- Women have more psychological distress adjusting to life with HIV than men

# Medical Marijuana and Treatment: Learning HIV Diagnosis

- Marijuana a way to cope with/mask feelings associated with adjusting to HIV diagnosis
- 20%-66% of HIV+ marijuana users report using it to cope with feelings of anxiety and depression



# Medical Marijuana and Treatment: Antiretroviral Therapy (ART)

- ART can have serious side-effects, including nausea and neuropathy
- ART side effects are a major reason people don't stick with it
- If side-effects are well-controlled, likely to remain engaged/adherent in treatment
- Marijuana is often used to control ART side effects
  - 33% of HIV+ marijuana users control nausea with marijuana
  - 20-28% of HIV+ marijuana users control pain with marijuana

# Medical Marijuana and HIV: Use For Other Reasons

- Rates of HIV high among socioeconomically disadvantaged
  - High rates of chronic health problems other than HIV
  - Poor access to health care – later diagnosis
  - High rates of drug use even prior to HIV infection
- Comorbidities common, especially among people living with HIV over age 50
  - 94% have a chronic condition other than HIV (hypertension, chronic pain, hepatitis, arthritis)
  - Self-medicate for physical/mental health symptoms associated with these conditions

# Who in the HIV Population Uses Marijuana Medically?

- People who have chronic health conditions other than HIV/AIDS
- People who have tried other alternative therapies
- People who have experienced HIV/AIDS-related illness/symptoms
- People who suffer from nausea; not as much people suffering from pain



# Why Do People Living With HIV Use Medical Marijuana?

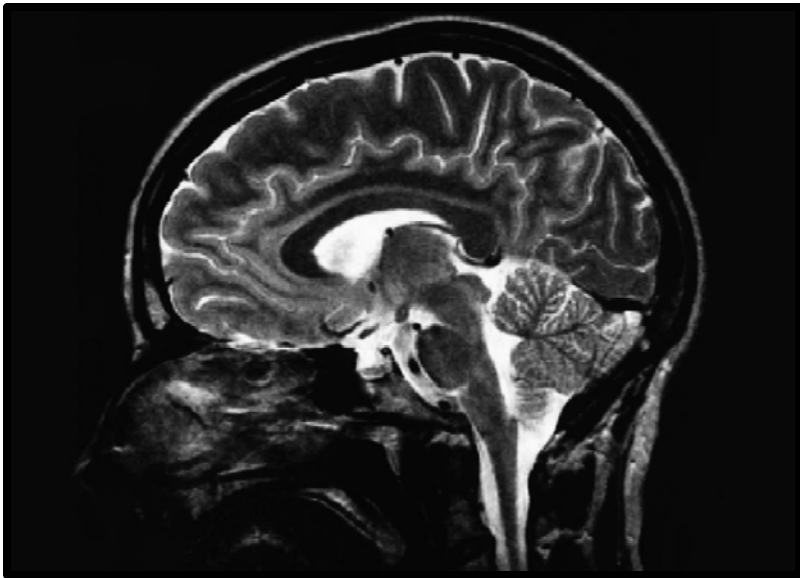
- When asked why they use medical marijuana, the most common answers are:
  - To relieve anxiety/depression
  - To improve appetite
  - To relieve pain

# Medical Marijuana and HIV: Is it always the Best Option?

CONDITION	PERCEIVED EFFECTIVENESS OF MARIJUANA COMPARED TO CONVENTIONAL TREATMENT
Anxiety	MJ slightly more effective than antianxiety medication
Depression	Antidepressants slightly more effective than MJ
Nausea	MJ slightly more effective than medication
Neuropathy	MJ slightly more effective than medication
Diarrhea	Medication slightly more effective than MJ
Fatigue	Medication slightly more effective than MJ
All Symptoms	Marijuana slightly more effective

- Overall slightly more people living with HIV find marijuana more effective than other treatments; many prefer traditional treatment
- There are risks associated with marijuana use for people living with HIV

# Medical Marijuana and HIV/AIDS: Reasons for Caution



- In advanced disease stage, HIV enters nervous system, leading to HIV-Associated Neurocognitive Disorders (HAND)
  - Symptoms: Confusion, forgetfulness, headaches
- Three main types of HAND
  - Asymptomatic Neurocognitive: Impairment: impaired cognitive ability, but able to function
  - Mild Neurocognitive Disorder: Impaired cognitive ability, mild interference in daily activity
  - HIV-Associated Dementia: Major impairments in cognition, daily functioning

# Medical Marijuana and HIV/AIDS: Reasons for Caution

- Long-term marijuana use impairs learning and memory
- 47% of HIV+ marijuana users report memory problems
- Marijuana's cognitive effects particularly strong for people experiencing HAND
- Concern that cognitive impairment may compromise ART adherence
  - Forgetting to take medication is the leading cause of ART non-adherence
  - Use of most recreational drugs and alcohol is associated with lower ART adherence, less virological suppression, slower CD4 cell response rate

# Medical Marijuana and HIV/AIDS: Reasons for Caution

- Depending on how it is used, marijuana can lead to better or worse ART adherence
  - When used to control nausea, increases ART adherence
  - When used for indications other than nausea, associated with non-adherence
  - Heavy cannabis use associated with non-adherence

# Medical Marijuana and HIV/AIDS: Reasons for Caution

- Marijuana use is associated with increased occurrence and severity of mental health disorders
  - Between one-third and one-half of individuals living with HIV have a mental health and/or substance use disorder

# Part IV

## Medical Marijuana and HIV – What to do about it



# If Patients are Using Marijuana

- Screen for signs of abuse/dependence
  - Tolerance/withdrawal
    - Anger or Aggression
    - Decreased Appetite / Weight Loss
    - Irritability
    - Nervousness / Anxiety
    - Restlessness
    - Sleep Difficulties / Strange Dreams



# If Patients are Using Marijuana

- Other signs of abuse/dependence
  - Preoccupation
  - Loss of control
  - Continued Use in the face of adverse consequences
  - Cognitive Distortions/Denial

# If Patients are Abusing/Dependent on Marijuana

- Motivational Interviewing
- Refer to specialty SUD services
  - Motivational Enhancement Therapy
  - Cognitive Behavioral Therapy
  - Contingency Management
  - Family-based Treatment

# If Patients are not Abusing/Dependent: Three Steps



1. Decisional Balance



2. Feedback Sandwich



3. Explore options

# 1. Decisional Balance

- Have patient explore what they perceive to be the benefits/costs of using medical marijuana



## 2. Feedback Sandwich

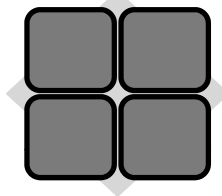


- Ask permission to give patient feedback on how marijuana may be affecting his/her health
- Give feedback
  - Acknowledge pros/cons patients mentioned
  - Mention concerns about marijuana's effects as they pertain to the patient (physical/behavioral health issues, regulatory/legal issues)
  - Present information in a non-judgmental manner
- Ask for patient response to feedback

# Decisional Balance/Feedback Sandwich: Role Play



1. Decisional Balance



2. Feedback Sandwich



3. Explore options

Do this

# Decisional Balance/Feedback Sandwich: Role Play

1. How did it make you feel discussing marijuana use? How did it make you feel being asked?
2. What strategies did you use to get patient permission to give feedback about marijuana use?
3. How did you assure that you weren't being judgmental when you presented your concerns about marijuana use?
4. How can you incorporate this knowledge into the way you talk about these issues with your patients?

# 3. Explore Options

- If Steps 1 and 2 show that reducing marijuana use would benefit patient, explore additional strategies to achieve symptom relief
  - Behavioral interventions
  - Pharmacological interventions
  - FDA-approved THC medication (Marinol<sup>®</sup>)





# Additional Strategies to Address Anxiety/Depression

- Most common reason people living with HIV report using medical marijuana is to cope with anxiety/depression
- Diagnosis
  - There is no biological “test”
  - Through observation and interview
  - Criteria laid out in the American Psychiatric Association’s *Diagnostic and Statistical Manual of Mental Disorders*

# Additional Strategies to Address Anxiety/Depression

- Psychotherapy and group therapy
  - Talk to learn about mental health conditions, moods, thoughts, and behavior
  - Learn better coping and stress-management skills
- Medications
  - Antidepressants and anti-anxiety medications
  - Work by altering neurotransmitter activity

# Additional Strategies to Address Nausea

- Nausea often occurs in the first few weeks on many HIV medications
  - Could be a sign of more serious problems; give proper evaluation of other causes
  - If caused by medications, it may pass in a few weeks
- Diet
  - Eat small frequent meals and snacks
  - The BRATT diet
    - Bananas
    - Rice
    - Apple sauce
    - Tea
    - Toast

# Additional Strategies to Address Nausea

- Diet
  - Dry crackers can help reduce nausea. Keep them by bed.
  - Herbal tea (peppermint, ginger)
  - Cold carbonated drinks (ginger ale, Sprite)
  - Things to avoid:
    - Alcohol
    - Aspirin
    - Caffeine
    - Smoking
    - Hot and spicy food
    - Greasy/fried foods

# Additional Strategies to Address Nausea

- Other tips
  - When cooking, open windows so smell of food isn't too strong
  - Don't lie down immediately after eating
  - If vomiting does occur, refuel body with fluids (broth, carbonated beverages, juice, popsicles)

# Additional Strategies to Address Nausea

- Anti-emetic medications
  - If nausea is related to taking medications, can be given approx. 30 minutes beforehand
  - Effective medications include:
    - Promethazine (Phenergan<sup>®</sup>)
    - Prochlorperazine (Compazine<sup>®</sup>)
    - Lorazepam (Ativan<sup>®</sup>)
  - Doctor or pharmacist should be consulted to avoid negative medication side effects, negative interactions with HIV medications

# Additional Strategies to Address Neuropathy and Pain

- Non-pharmacological options:
  - Physical therapy
  - Exercise
  - Relaxation techniques
  - Guided imagery
  - Massage
  - Biofeedback
  - Acupuncture
  - Hot/cold compresses
  - Deep breathing
  - Meditation
  - Hypnosis
  - Distraction

# Additional Strategies to Address Neuropathy and Pain

- Pharmacological options
  - Mild pain
    - Acetaminophen, nonsteroidal antiinflammatory drugs (NSAIDs), cyclooxygenase-2 (COX-2) inhibitors
  - Moderate pain
    - Combination of mild pain medications with opioids (e.g. oxycodone or tramadol combined with NSAIDs)
  - Severe pain
    - Opioid agonist drugs
- Medications for moderate/severe pain can be abused, and use needs to be monitored closely



# Additional Strategies to Address Sleep Difficulties

- Sleep is the second most common reason for medical marijuana use for among general population
- Tips to help with sleep:
  - Go to bed and wake up the same time every day
  - Avoid caffeine and nicotine
  - Avoid alcohol, large meals, and beverages before bed
  - Don't exercise late in the day
  - Relax before bed (hot bath)
  - Create a good sleeping environment without distractions (avoid noise, bright lights, TV/computer in bedroom)

# THC Medications

- Dronabinol (Marinol<sup>®</sup>)
  - Comes in capsules
  - Is on Medi-Cal formulary
  - Generally start by taking before lunch and dinner
  - Can exacerbate mental health problems

# THC Medications

- Dronabinol (Marinol<sup>®</sup>)
  - Should not be used while drinking alcohol or taking other drugs that affect the central nervous system
  - Use of marijuana while taking dronabinol can lead to overdose
  - Can cause feelings of marijuana high
  - Can cause dizziness, confusion, sleepiness

# Questions?



# THANK YOU FOR YOUR TIME!



For more information:

Tom Freese: [tfreese@mednet.ucla.edu](mailto:tfreese@mednet.ucla.edu)

Beth Rutkowski: [brutkowski@mednet.ucla.edu](mailto:brutkowski@mednet.ucla.edu)

Maya Talisa Gil-Cantu: [maya@HIVtrainingCDU.org](mailto:maya@HIVtrainingCDU.org)

Pacific Southwest ATTC: [www.psattc.org](http://www.psattc.org)

PAETC Training calendar: [www.HIVtrainingCDU.org](http://www.HIVtrainingCDU.org)