Medical Marijuana: What HIV Providers Need to Know

Trainer Guide
# Medical Marijuana: What HIV Providers Need to Know

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Integrating Care through the Use of Screening and Brief Intervention in HIV Settings

Background Information

The purpose of this half-day, introductory training is to provide HIV clinicians (including, but not limited to physicians, dentists, nurses, and other allied medical staff, therapists and social workers, and counselors, specialists, and case managers) with an overview of medical marijuana, its use among individuals living with HIV, and strategies on how to work with HIV patients who are using medical marijuana. The learning activities that will be utilized include: didactic teaching, role plays, group discussions, and peer evaluation. The introductory training includes an 120-slide PowerPoint presentation, Trainer Guide, reference list, and 2-page fact sheet. The duration of the training is approximately 2 ½ to 3 hours, depending on whether the trainer chooses to present all of the slides, or a selection of slides.

“Test your Knowledge” questions have been inserted at the beginning and end of the presentation to gauge training participants’ experience and knowledge about medical marijuana, and assess change in the audience’s level knowledge after the key content has been presented. An answer key is provided in the Trainer’s notes for slides 5-11 and slides 115-118. Audience Response System can be utilized, if available, when facilitating the Test Your Knowledge question sessions.

In addition, discussion activities have been inserted in the presentation (slide 14, slide 59, slide 89, and slides 97-98) to encourage dialogue among the training participants, and to illustrate how the information contained within the presentation can be used in clinical practice.

What Does the Training Package Contain?

- PowerPoint Training Slides (with notes)
- Trainer’s Guide with detailed instructions for how to convey the information and conduct the interactive exercises
- Reference List
- Two-page fact sheet entitled, “Medical Marijuana: What HIV Providers Need to Know”
**What Does This Trainer’s Manual Contain?**

- Slide-by-slide notes designed to help the trainer effectively convey the content of the slides themselves
- Supplemental information for select content to enhance the quality of instruction
- Suggestions for facilitating the “Test Your Knowledge” questions and group activities/role plays

**How is This Trainer’s Guide Organized?**

For this manual, text that is shown in bold italics is a “Note to the Trainer.” Text that is shown in normal font relates to the “Trainer’s Script” for the slide.

It is important to note that some slides in the PowerPoint presentation contain animation. Animations are used to call attention to particular aspects of the information or to present the information in a stepwise fashion to facilitate both the presentation of information and participant understanding. Getting acquainted with the slides, and practicing delivering the content of the presentation are essential steps for ensuring a successful, live training experience.

**General Information about Conducting the Training**

The training is designed to be conducted in small- to medium-sized groups (10-40 people). It is possible to use these materials with larger groups, but the trainer may have to adapt the small group exercises (case studies) to ensure that there is adequate time to cover all of the content.
**Materials Needed to Conduct the Training**

- Computer with PowerPoint software installed (2003 or higher version) and LCD projector to show the PowerPoint training slides.

- When making photocopies of the PowerPoint presentation to provide as a handout to training participants, it is recommended that you print the slides three slides per page with lines for notes. Select “pure black and white” as the color option. This will ensure that all text, graphs, tables, and images print clearly.

- Flip chart paper and easel/white board, and markers/pens to write down relevant information, including key case study discussion points.

**Overall Trainer Notes**

It is critical that, prior to conducting the actual training, the trainer practice using this guide while showing the slide presentation in Slideshow Mode in order to be prepared to use the slides in the most effective manner.

**Icon Key**

- Note to Trainer
- Activity
- References
- Audience Response System (ARS)-Compatible Slide
Medical Marijuana: What HIV Providers Need to Know

Slide-By-Slide Trainer Notes

The notes below contain information that can be presented with each slide. This information is designed as a guidepost and can be adapted to meet the needs of the local training situation. Information can be added or deleted at the discretion of the trainer(s).

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Slide 1: Title Slide

Welcome participants and take care of housekeeping announcements, such as location of restrooms, turning off cell phones, participating actively, etc.

The purpose of this half-day, introductory training is to provide HIV clinicians (including, but not limited to physicians, dentists, nurses, and other allied medical staff, therapists and social workers, and counselors, specialists, and case managers) with an overview of medical marijuana, its use among individuals living with HIV, and strategies on how to work with HIV patients who are using medical marijuana.

“Test your Knowledge” questions have been inserted at the beginning and end of the presentation to gauge training participants’ experience and knowledge about medical marijuana, and assess change in the audience’s level knowledge after the key content has been presented. An answer key is provided in the Trainer’s notes for slides 5-11 and slides 115-118.

Audience Response System can be utilized, if available, when facilitating the Test Your Knowledge question sessions.

In addition, discussion activities have been inserted in the presentation (slide 14, slide 59, slide 89, and slides 97-98) to encourage dialogue among the training participants, and to illustrate how the information contained within the presentation can be used in clinical practice.

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Slide 2: Training Collaborators

This PowerPoint presentation, Trainer Guide, and companion fact sheet were developed by Howard Padwa, Ph.D. (UCLA Integrated Substance Abuse Programs), Christine Grella, Ph.D. (UCLA Integrated Substance Abuse Programs), Beth Rutkowski, M.P.H. (Associate Director of Training of UCLA Integrated Substance Abuse Programs) and Thomas Freese, Ph.D. (Director of Training of UCLA Integrated Substance Abuse Programs and Principal Investigator/Director of the Pacific Southwest ATTC) through supplemental funding provided by the Pacific AIDS Education and Training Center, based at Charles R. Drew University of Medicine and Science. We wish to acknowledge Phil Meyer, L.C.S.W., Maya Talisa Gil-Cantu, M.P.H., and Tom Donohoe, M.B.A., from the PAETC.

Slide 3: Educational Objectives

To set the tone for the training, notify participants that medical marijuana may not always be problematic for patients. Also, highlight that the goal of the training is not to communicate that medical marijuana is “good” or “bad” per se, but rather to give participants information they need to develop a more informed understanding of medical marijuana and be able to more effectively interact with patients who are using medical marijuana or considering medical marijuana.

Review the four educational objectives. Ask participants what else they are hoping to learn from the training session. Note these issues on the flipchart/white board, and refer back to audience-generated objectives as they are addressed throughout the course of the training session.

Additional Information for the Trainer(s)

Ask participants what else they are hoping to learn from the training session. Plant the seed early about the fact that medical marijuana may not be problematic for some patients. This training will not tell participants if marijuana is good or bad, just gives the facts so participants can have a more informed understanding of marijuana and how to communicate effectively with patients about their marijuana use.
Slide 4 [Transition Slide]: Medical Marijuana and HIV: What Do You Think? Test Your Knowledge Questions

The purpose of the following questions is to gauge participants’ opinions and experiences working with patients who use medical marijuana, and also to evaluate their current level of knowledge concerning various areas concerning medical marijuana and HIV. Read each question and the possible responses aloud, and give training participants time to jot down their response before moving on to the next question.

When the audience shares their responses to each slide, review their responses out loud. Slides 5-7 refer to providers’ experience or perception/opinion, and do not have a correct answer. Do not reveal the answers to the questions on Slides 8-11 until the end of the training session, as they will be asked again and answered on slides 115-118).

Slide 5: “Is the use of medical marijuana a problem at your clinic?”

Is the use of medical marijuana a problem at your clinic?
A. Yes – clients/patients came to clinic stated
B. No
C. Unsure/Undecided

Read the question and choices, and review audience responses out loud.

**Audience Response System (ARS)-compatible slide**
Slide 6: “What percent of your patients use marijuana?”

Read the question and choices, and review audience responses out loud.

**Audience Response System (ARS)‐compatible slide**

Slide 7: “Your patients use marijuana mostly for…”

Read the question and choices, and review audience responses out loud.

**Audience Response System (ARS)‐compatible slide**

Slide 8: Test Your Knowledge Question #1: “Marijuana has been shown to harm developing fetuses.”

Answer Key:

Correct response: A (True)

**Audience Response System (ARS)‐compatible slide**
<table>
<thead>
<tr>
<th>Slide 9:</th>
<th>Test Your Knowledge Question #2: “Marijuana is better than medicine for HIV-related symptoms.”</th>
</tr>
</thead>
<tbody>
<tr>
<td>Answer Key:</td>
<td>Correct response: C (Not necessarily)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Slide 10:</th>
<th>Test Your Knowledge Question #3: “If you are caught with marijuana in California and claim you are using it for medical reasons, you cannot be arrested.”</th>
</tr>
</thead>
<tbody>
<tr>
<td>Answer Key:</td>
<td>Correct response: C (It depends who catches you)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Slide 11:</th>
<th>Test Your Knowledge Question #4: “Marijuana is proven to be effective in treating symptoms associated with HIV.”</th>
</tr>
</thead>
<tbody>
<tr>
<td>Answer Key:</td>
<td>Correct response: A (True)</td>
</tr>
</tbody>
</table>
Slide 12: Roadmap for the Training

**Part 1** of the training will provide an overview of marijuana, how it works, who tends to use it, and its effects. **Part 2** of the training will focus on the use of marijuana as a medicine and the legal questions surrounding medical marijuana. **Part 3** of the training will focus on medical marijuana and use among people living with HIV. Finally, **Part 4** of the training will focus on strategies that HIV providers can use when working with patients who are either using medical marijuana or considering using medical marijuana. Highlight that there is no clear “right” or “wrong” answer when it comes to medical marijuana use by people living with HIV, so providers should be able to share the facts with patients, and help them make informed decisions regarding medical marijuana in order to improve their overall health and well-being.

Slide 13 [Transition Slide]: Part I – Understanding Marijuana

**Part 1** of the training will provide an overview of marijuana, how it works, who tends to use it, and its effects.

**IMAGE SOURCE:**

http://teens.drugabuse.gov/drug-facts/marijuana

Slide 14: “Marijuana” – What Do You Think?

**Allow 15 minutes for this activity**

Break the audience into groups of 4-5 (or by table) to discuss the questions on the slide for 5-7 minutes. Then, bring the group back together to discuss for another 5 minutes; during the group de-brief, write down major points/concepts/keywords on a whiteboard or flip chart, highlighting stereotypes and common conceptions. Refer to salient points on the whiteboard/flip chart throughout the remainder of the training session. You will address many of the points participants make during this exercise on slides 15-17.
Slides 15-17 describe three different types of people who use marijuana. The purpose of these slides is to show that there is no single type of marijuana user, but many different types of people use the drug for many different reasons and in many different ways. Review the example described on the slide.

Review the example described on the slide.

Review the example described on the slide. Highlight that many different types of people of various ages use marijuana for a wide variety of reasons.
Slide 18: Marijuana Use is Common

Marijuana is the most commonly used illicit drug (rates of alcohol use are higher). The rate of current use (i.e., use in past month) has been increasing in recent years, from 5.8% in 2008 to 7% in 2011 of the general population aged 12 or older. It is most commonly used by young adults age 18-25; almost one-fifth of the population in this age group uses marijuana.

Additional Information for the Trainer(s)

Because of its increased prevalence, many people have either tried marijuana themselves or know of a friend or loved one who has tried the drug. As a result, public attitudes towards the drug have shifted in recent years. In 1990, only 16% of Americans favored the legalization of marijuana, and 81% wanted it to remain illegal. By 2013, 52% favored legalization, and just 45% want it to remain illegal.

Young people are the most supportive of marijuana legalization. Sixty-five percent (65%) of Millennials – people who are now between the ages of 18 and 32 – favor legalizing the use of marijuana, up from just 36% in 2008. Yet, there also has been a striking change in long-term attitudes among older generations, particularly Baby Boomers. This change in attitudes is most likely driven by changes in the perception of harm or risk associated with marijuana use.

Among youth who first tried marijuana in the past year, the average age was 16.2 years old. This is important because the earlier people begin using marijuana, the more likely they are to become dependent later, and also experience negative effects on cognitive functioning, educational attainment, and income as adults, and they are more likely to develop mental disorders. Nevertheless, this relationship is one of correlation, so it does not prove causation. That is, youth with poorer cognitive skills may seek out marijuana use, and other factors (e.g., risk taking propensity, lower socioeconomic status, and exposure to childhood trauma or other environmental risks) may also underlie poorer educational attainment. Some longitudinal research has been performed, however, showing that people who started smoking marijuana as teenagers and used it heavily for decades lost IQ points over time, while those who started smoking as adults did not.

REFERENCES (refer to reference list for full citations):

1. SAMHSA, 2012.
Why Do People Use Marijuana?

This chart highlights the findings from a study released in 2013 in which 47% of respondents who used marijuana in the past year reported using it just for fun, 30% reported using it for medical reasons, and 23% reported using it for fun and medical reasons. In other words, over half of the respondents who used marijuana in the past year used it at least in part for medical reasons.

Marijuana – What is it?

Marijuana is a dry shredded mixture of leaves, flower, stems, and seeds from common *cannabis sativa* and *cannabis indica*, which are two sub-species of the hemp plant. Hemp plants grow abundantly throughout the world. Marijuana gets its effects from many chemicals—it contains over 400 chemical compounds. Marijuana has many common street names—among the most widely used are “grass,” “weed,” “pot,” “reefer” “Mary Jane” and “ganja.”

How is Marijuana Used?

The purpose of this slide is to review the three main ways that marijuana can be consumed. The most common way that marijuana is used is by being smoked, either in a pipe, a bowl, or rolled into a cigarette (also known as a “joint”). When smoked, marijuana has rapid effects. The process of burning marijuana, however, releases toxins from the plant, and these can cause serious pulmonary problems. An alternative way to use marijuana is with a vaporizer, which is a machine that converts the active compounds from marijuana into inhalable form, but without burning them. This allows users to have rapid effects like when they smoke, but without inhaling the toxins that are produced in the process of burning marijuana. A third method to consume marijuana is by eating or drinking it. In this form, marijuana is an ingredient in baked goods, candies, or sodas. When consumed orally within food or drink, marijuana takes time to reach the brain, since it first goes through the digestive system. When eaten, it does not release the toxins that cause pulmonary problems that are produced when marijuana is smoked.
Increasingly, people are using other more potent derivatives of marijuana or synthetic drugs that have similar effects. These forms of marijuana are not as common in the US, and there has not been as much research on their effects. Consequently, most of the information presented in this training will not focus on these forms of marijuana. Still, since patients may be using these forms of marijuana, it is important for HIV providers to be aware of these different types of marijuana and their effects. One commonly used alternative to the marijuana plant is hashish, which is a compressed resin derived from the cannabis plant. Hashish is more concentrated and potent than regular marijuana. Another form that has become increasingly common in the past few years has been hash oil, which is commonly referred to as “wax.” Hash oil is extracted from cannabis plants using butane, and contains high concentrations of the main psychoactive ingredients in marijuana. It is estimated that hash oil is three to four times as potent as regular marijuana. Another trend that has become common in recent years has been the use of synthetic marijuana, which is often called “spice” or “K2.” These are herbal and chemical mixtures that produce experience similar to marijuana. The Drug Enforcement Agency has classified the five most common chemicals in synthetic marijuana as illegal substances in the United States.

Additional Information for the Trainer(s)

The Pacific Southwest ATTC co-produced a Synthetic Drugs Training Curriculum, which is available for free download from:

Slide 23: Marijuana – How Does it Work?

THC works by acting on specialized cells called neurons in the brain (refer to illustration). Neurons do not touch each other, and the gap between them—called the synaptic space—needs to be bridged for messages to get from one neuron to the next. To get messages across the space, neurons release chemicals, or neurotransmitters. The receiving neuron contains special proteins called receptors that neurotransmitters will bind to, similar to the way a key fits into a lock. After a neurotransmitter has bound to a receptor, proteins called transporters or reuptake pumps will carry neurotransmitters back to the neurons that released them. The reason this process is important is that certain neurotransmitters and receptors are associated with specific emotional and functions. Any changes to these steps—the way neurotransmitters are released, the way receptors work, or the way transporters or reuptake pumps work—can have profound effects on sensation, perception, thought, mood, and behavior. When people take drugs, these processes are altered, leading to changes in the way they feel and behave.

Marijuana gets its effects because it contains over 60 chemicals called cannabinoids. The main active chemical is a cannabinoid called delta-9-tetrahydrocannabinol, often referred to as THC. Cannabinoids trigger cannabinoid receptors, which are particularly dense in parts of the brain that affect pleasure, memory, thinking, concentration, and coordination. The effects of marijuana generally last 1-4 hours.
Review the immediate effects of marijuana described on the table. Highlight that these are the effects of the marijuana “high” and that for people who eat/drink marijuana, the effects are not as immediate. Then review the key points below.

The effects of marijuana can also vary by strain. Two main strains of marijuana exist—sativa and indica. Sativa marijuana tends to create stronger feelings of euphoria and stress relief. The effects are more mental than physical. Indica strands of marijuana create stronger feelings of physical relaxation and pain relief. Sometimes growers and dispensaries mix strains to create marijuana that has a specific type of effect. Marijuana users often talk about using either “sativa” or “indica”—the two most common sub-species in the US. Since preparations are not standardized, it is hard to tell the precise effects a sativa or indica strain would have; it depends on their chemical composition. Even if someone says they just use one type or another, it is difficult to know for sure the composition of what they’re actually consuming.

Additional Information for the Trainer(s)

Pharmacologically, C. indica landraces tend to have higher cannabidiol (CBD) content than C. sativa strains. Most commercially available indica strains have been selected for low levels of CBD (which is not psychoactive), with some users reporting more of a “stoned” feeling and less of a “high” from C. indica when compared to C. sativa. The Cannabis indica high is often referred to as a “body buzz” and has beneficial properties such as pain relief in addition to being an effective treatment for insomnia and an anxiolytic, as opposed to sativa’s more common reports of a “spacey” and mental inebriation, and even, albeit rarely, comprising hallucinations. Differences in the terpenoid content of the essential oil may account for some of these differences in effect.
Marijuana use can have very negative effects on behavior and mental health. Since marijuana is a psychoactive drug, it causes significant impairment, just like alcohol and other drugs. This means that when experiencing a marijuana “high” people are impaired, both physically and mentally. It is unsafe to drive, operate heavy machinery, or do other things that require concentration and physical coordination when under the influence of marijuana. Long-term marijuana use has a negative impact on learning and memory. Long-term marijuana use also causes amotivational syndrome, as it makes regular users less motivated to do things.

Marijuana use is also associated with mental health problems and mental illness, particularly mood disorders. It is unclear if marijuana is what causes these problems, or if people who have mood disorders are more likely to use marijuana to self-medicate. Research also shows that heavy marijuana use is associated with serious mental illness, particularly among people who are at risk for serious mental illness because of family history.

Additional Information for the Trainer(s)

Serious mental illness differs from “mental illness” in general in that it lasts longer and is more disabling, often preventing people from working or functioning in their day to day lives. Among individuals who meet diagnostic criteria for marijuana abuse, 36% have had a mood disorder in their life, and 25% have had an anxiety disorder in their life. Among individuals who meet diagnostic criteria for marijuana dependence, 60.5% have had a mood disorder in their life, and 48.5% have had an anxiety disorder in their lifetime. Overall, marijuana dependence increases the odds of a co-occurring mood disorder by 6.5 times, and of an anxiety disorder by 4.6 times. Further, there is a significant gender difference with regard to major depression, with marijuana dependence increasing the odds for men by 4.6 times and 7.2 times for women.
Slide 25: Marijuana – Negative Effects on Behavior and Mental Health

**REFERENCE:**

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**Notes for Slide 25, continued**

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Slide 26: Marijuana – Negative Effects When Smoked

When smoked, marijuana can also have serious health effects. Smoked marijuana can cause respiratory illness. In fact, marijuana can cause significantly more lung damage than tobacco cigarettes, and increases risk for many lung diseases and conditions. When marijuana is smoked, it can also cause cardiovascular complications. It raises the heart rate and blood pressure significantly, and in the first hour after use, people who smoke marijuana are at nearly five times the risk of having a heart attack.
Slide 27: Marijuana – Negative Effects in Pregnancy

Marijuana can also have significant effects on the offspring of mothers who use the drug. Research shows that mothers who use marijuana during pregnancy are more likely to have children with impaired motor skills, social skills, and cognitive problems. Mothers who use marijuana during pregnancy are more likely to give birth to children who are underweight, thus increasing children’s risk for many health problems. Also, maternal marijuana use is associated with increased risk for childhood leukemia among offspring. When mothers use marijuana while nursing, the drug can also get passed on to the baby through breast milk. Though the amounts of marijuana that are passed on have not been shown to damage babies’ health, it is still worth considering for mothers who are thinking about using marijuana while breastfeeding.

Additional Information for the Trainer(s)

Cannabis has enormous affinity for milk and produces a milk/plasma ratio of 8, although the levels in milk are generally considered subclinical. THC crosses the placenta readily, and there is increasing evidence that it may increase rates of growth retardation, adverse neurodevelopment following prenatal exposure. One report suggests that THC may produce changes in certain hormones by inhibiting prolactin, growth hormone and thyroid stimulating hormone secretions and stimulating the release of corticotropin. Recent longitudinal studies suggest an increased risk of motor, social and cognitive disturbances in offspring who were exposed to cannabis prenatally. One study indicated a increased incidence of reduced head circumference in young adolescents (9-12 years of age) who were exposed in utero to heavy marijuana use. Prenatal exposure resulted in a higher rate of low birth weight infants, and childhood leukemia. Recent studies have suggested a reduction in long and short-term memory retrieval and retention in children exposed to prenatal cannabis. These children were also weak in planning, integration and judgment skills.

In a study of 42 postmortem fetal brain samples from pregnant women at mid gestation (18-22 weeks of gestational age) who voluntarily underwent saline induced abortion, a decrease in dopamine receptor (D2) mRNA expression in amygdala with significant prevalence in male fetuses. Extensive marijuana exposure in utero was associated with the lowest reported mRNA levels. Unfortunately, this study did not indicate whether this change is transient or permanent.
Slide 27: Marijuana – Negative Effects in Pregnancy

REFERENCE:
Texas Tech University, Health Sciences Center. (2013). Effects of Marijuana on the Fetus and Breastfeeding Infants. Available online at:

Slide 28: Marijuana – Why Start Using It?

Before reviewing the points on the slide, ask the audience what reasons they think motivate people to start using marijuana, and write their responses down on your white board or flip chart. After you have gathered audience responses, click, and review the reasons people may start using marijuana that are listed on the slide.

Slide 29: Marijuana – Why Keep Using It?

The purpose of this slide is to highlight some of the reasons people continue may continue using marijuana once they’ve started. Review the points on the slide. After reviewing the points on the slide, ask the audience what reasons they think motivate people to continue using marijuana once they’ve started, and write their responses down on your white board or flip chart.
**Slide 30: Marijuana Abuse/Dependence**

Prolonged and heavy marijuana use can eventually lead to substance abuse and dependence, which together are known as **substance use disorders**. Substance use disorders fall on a continuum of problematic alcohol and drug use. Highly problematic levels of substance use—called substance abuse and substance dependence—are defined as “disorders,” instead of just “problematic” substance use. A substance use disorder is a state in which an individual compulsively uses alcohol or drugs even when faced with negative consequences. This behavior is reinforcing, or rewarding. A major feature of a substance use disorder is the loss of control in limiting intake of the addictive substance. When working with patients who use alcohol or drugs, it is important to figure out where patients fall on this spectrum; some may have serious problems and need to abstain from alcohol and drugs, while others may not need to stop all together, but reduce use to prevent adverse effects.

**Slide 31: Marijuana – Potential for Abuse/Dependence**

Regular and prolonged use of marijuana can lead to profound changes in the way that the brain works, leading to marijuana abuse or dependence. In particular, individuals with mental health disorders are at risk for developing marijuana use disorders. In 2011, marijuana was the primary substance used by 22.9% of people entering addiction treatment in the United States. Marijuana addiction can be very difficult to break. The average adult entering treatment for marijuana abuse or dependence in the US has used marijuana daily for ten years, and tried to quit six times.

**Slide 32: Marijuana Abuse/Dependence**

Although marijuana can be addictive, a smaller proportion of people who try marijuana ever become dependent on it when compared to other substances listed on the table. A major reason that such a low percentage of people who try marijuana ever become addicted is that such a large number of people try the drug but are not heavy users. This statistic should not be read to indicate that marijuana is not addictive; just that many people who try the drug never become heavy users.
Slide 33: Marijuana Abuse/Dependence

As the previous slide illustrated, most people who try marijuana do not become addicted. However, since so many people use marijuana, even though only a small proportion develop marijuana use disorders, this leads to large overall numbers of people who experience difficulties because of their marijuana use. In Los Angeles County, marijuana is the most common substance for SUD treatment admissions, more common even than alcohol.

Slide 34: Marijuana – Signs of Abuse/Dependence

Given how common marijuana use disorders are, it is important for clinicians and service providers to be aware of the signs of marijuana abuse and dependence. Many of the signs of marijuana tolerance and withdrawal are the opposite of what we think of as the effects that marijuana has. For example, instead of being mellow, people with marijuana abuse/dependence become angry and aggressive; instead of being calm, they become irritable; instead of getting the munchies, they have decreased appetite; instead of being relaxed and sleepy, they become nervous, restless, and have trouble sleeping. With marijuana dependence, we also see symptoms that are common to SUD related to other substance as well; pre-occupation with use, loss of control over use, continued use despite adverse consequences, and cognitive distortions about use and denial that use is a problem.
Slide 35: Marijuana Abuse/Dependence Treatment

Treatments for marijuana abuse and dependence are behavioral, generally involving the use of talk to restructure the way people approach marijuana use and the role that marijuana plays in their lives. Some of the common treatments include motivational enhancement therapies (motivating behavior change by highlighting how marijuana may be inhibiting the achievement of life goals), cognitive behavioral therapy (changing individuals’ beliefs and thought processes surrounding drug use), contingency management (using incentives and behavioral psychology techniques to motivate drug use behavior change), and family-based treatment. Though these approaches are successful, it is very difficult for people who abuse or are dependent on marijuana to stop using; only 10-30% of people who receive treatment for marijuana use disorders are able to remain abstinent from the drug one year later. There are currently no medications available to treat or manage marijuana dependence, though there are drugs currently being developed to help treat marijuana withdrawal symptoms.

Additional Information for the Trainer(s)

Currently, research with the following medications is being conducted to see if any of them have effects on marijuana abuse/dependence and marijuana withdrawal symptoms: Buspirone, diazepam, quetiapine, dronabinol + clonidine, lofexidine, Gabapentin, vilazodone, N-acetylcystein, zolpidem, nicotine patch, guanfacine, aprepitant, citicoline, tiagabine, escitalopram, oxytocin, H-coil Deep TMS.


Slide 36: “It’s not your dad’s ‘pot’ anymore”

This slide highlights the notion that growers have developed methods to make marijuana much more potent than it was twenty-thirty years ago. Data from DEA seizures (illustrated on the chart) shows that the THC levels in marijuana increased 150% from 1983-2007. More recent research shows that recently, marijuana has become even more potent, with THC levels of 20-30%. This is compared to levels of just 2%-3% in the 1970s. Because the potency of marijuana has been increasing, it is increasingly likely that its use may have negative consequences or side effects. This also highlights that common perceptions that marijuana is “harmless” are based on ideas from 30-40 years ago, when the drug was not nearly as potent as it is today. Since the drug has become much more powerful, it is more important to be aware of marijuana’s potential dangers today than in the past.
Part II – Medical Marijuana

Part 2 of the training focuses on the use of marijuana as a medicine and the legal questions surrounding medical marijuana.

How Can Marijuana be a Medicine?

• Marijuana affects:
  - Mood/relaxation
  - Memory/Thinking
  - Coordination
  - Pain Control
  - Appetite
  - Crying
  - Smoking Behaviors
  - 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, spams
• Reduces tics (Krabbe’s syndrome)
• Reduces convulsions (epilepsy)

Marijuana’s Medical Potential – Ongoing Clinical Trials

• Studies potential of marijuana and novel cannabis-based medications for:
  - Multiple sclerosis
  - High heart rate
  - Pain, muscle pain, spasm
  - Autism
  - Stroke
  - Cancer
  - Liver problems
  - Dementia
  - Dementia
• Many of these trials on individuals with multiple physical and/or mental health problems.
Three major types of marijuana-based medicine exist: marijuana itself (botanical cannabis), synthetic THC medications, and other marijuana-based medications. The first kind, botanical cannabis, is what people mean when talking about “medical marijuana”. This is using the marijuana plant either by smoking, eating, or vaporizing, but for medical purposes instead of recreational ones. Two synthetic THC medications have been approved for use in the United States. The more common one is dronabinol, which goes by the trade name Marinol®, and is approved by the FDA for the treatment of nausea among people living with HIV. Another THC medication, nabilone, which goes by the trade name Cesamet®, has been approved by the FDA for the treatment of nausea among people with cancer. However, it can also be prescribed to people living with HIV off-label (safe and effective, but not as recommended by the FDA). Two other medications are based on marijuana, but they are not yet approved for use in the United States. The first, nabiximols, which goes by the trade name Sativex®, is a mouth spray that can be used for pain relief and to control muscle spasms. This medication is available in other countries, and is currently being investigated by the FDA, meaning that it may soon become approved for use in the United States as well. The other marijuana-based medication that is currently available in other countries is rimonabant, which goes under the trade names Accomplia® and Zimulti®, and can be used for the treatment of obesity and nicotine dependence.
The purpose of this slide and the four slides that follow is to compare the pros and cons of botanical cannabis (“medical marijuana”) compared to the synthetic THC medications that are currently available in the USA. Slides 42 and 43 highlight ways that medical marijuana may be preferable, Slides 44-45 highlight that THC medications may be preferable, and Slide 46 summarizes the pros and cons of both side by side.

One thing to consider is that THC medications, like marijuana, have psychoactive effects that lead people to feel “high.” If anything, marijuana may be preferable to THC medications because there are chemicals in marijuana that moderate THC’s psychoactive effects that are not present in THC medications. Another advantage of medical marijuana is that it is significantly cheaper than THC medications, which are made by the pharmaceutical industry and subject to expensive patents. Even marijuana that is sold on the street (not through dispensaries) is cheaper than THC medications.

Another advantage of medical marijuana, compared to THC medications, is that it takes effect in minutes instead of an hour. This means that users can tell if they got enough marijuana to feel its effects right away, and then stop consuming more once they have taken enough. Due to the rapid relief that comes from smoking marijuana, many researchers believe that people actually consume less if they smoke than if they take THC medications. The way the body absorbs THC medications is erratic and less concentrated, making their effects more unpredictable and variable than those of smoked medical marijuana.
One major drawback of marijuana is that unlike THC medications, it is not FDA approved. The FDA (Food and Drug Administration) is responsible for assuring that medications are effective, safe, and properly labeled. It is impossible for the FDA to evaluate medical marijuana as a drug since it is a plant, and not a manufactured pharmaceutical drug. Depending on the specific marijuana plant and where it was grown, it can have different concentrations of THC and other key chemical components. It is also difficult to know if medical marijuana is pure because it is a plant. Depending on how it is grown, it can be contaminated by pesticides, molds, and fungus. Given these issues, it is difficult for the FDA to approve marijuana as a medicine.

Another issue that complicates the use of medical marijuana is that it is hard to recommend a substance that is smoked as a medicine. When marijuana is smoked, it has negative effects on the lungs, just like any other substance that is smoked. Marijuana undergoes different types of chemical changes when it is burned, and it is difficult to predict precisely how these chemical changes might affect its medicinal properties. It is also difficult to use smoked marijuana as a medicine since it is difficult to standardize dosage. Unlike pills (which everyone digests the same way), people inhale differently, depending on their size, lung capacity, etc. Thus it is difficult to recommend standard dosages of smoked marijuana as one would for other medications.

This is a summary slide. From the perspective of people who use medical marijuana, it is not necessarily clear if medical marijuana or THC medications are more effective. It may depend on personal preferences, or what people are more comfortable with. Which one’s better? It’s complicated.
Slide 47: Medical Marijuana vs. THC Medications

The purpose of this slide is to introduce the legal questions surrounding medical marijuana into the discussion of the relative merits and drawbacks of medical marijuana and THC medications; it is critical to take these legal considerations into account when weighing the pros and cons of medical marijuana. The legal status of medical marijuana will be explored in detail on the following 11 slides.
Slide 48: Medical Marijuana and Federal Law

Under the Controlled Substances Act of 1970, potentially addictive drugs are placed on a schedule by the Drug Enforcement Administration (DEA) based on their abuse potential and recognized therapeutic value. Marijuana is currently classified as a Schedule 1 substance, which means it has a high abuse potential and has NO accepted medical benefits (and therefore is NOT available by prescription).

According to federal law, all marijuana use is illegal, whether it is “medical” or “recreational.” The distinction between the two types of use is not recognized by the federal government. The fines for violations involving Schedule 1 substances are severe. The first possession offense can lead to up to a year in federal prison and a fine of up to $100,000, and manufacturing offenses can carry penalties of up to five years in federal prison and a fine of $250,000.

Additional Information for the Trainer(s)

For perspective on the Controlled Substances Act scheduling system, below is a sample of some of the drugs placed on different schedules:

Other Schedule I drugs: Heroin, LSD, MDMA, quaaludes, GHB, mescaline, peyote, marijuana.

Schedule II: Morphine, cocaine, amphetamines, Oxycodone, Methadone

Schedule III: Barbiturates, non-narcotic analgesics, anabolic steroids, Marinol

Schedule IV: Valium, Librium, Xanax, Miltown, sleep aids (Ambien, Lunesta)

Schedule V: OTC cough medications w/codeine (e.g. Robitussin-C); anti-diarrheals (e.g., Lomotil)

The marijuana legalization/advocacy movement has petitioned the DEA to reclassify marijuana to a lower-level classification, in recognition that it is potentially less harmful than other Schedule 1 substances, and may have some therapeutic benefits, however, all of these challenges have been rejected by the DEA. At present, the Department of Justice has said that it will issue a policy statement regarding how they will proceed with regard to the recent (2012) voter-initiated legislation enacted in Colorado and Washington that decriminalized marijuana for recreational use, but have not thus far.
Recent decisions at the federal level have reinforced the federal government’s anti-marijuana policies. In 2001, the Supreme Court ruled that medical necessity is no excuse to break federal laws concerning medical marijuana. In 2006, the FDA reaffirmed its position that it does not consider smoked marijuana a legitimate medicine.

**Additional Information for the Trainer(s)**

The 2001 Supreme Court Case was “U.S. v. Oakland Cannabis Buyers’ Cooperative.” The case involved a civil suit that the US Department of Justice filed in 1998 to close six medical marijuana distribution centers in northern California. The Oakland Cannabis Buyers Cooperative fought the injunction, but was eventually forced to close and appeal to the Ninth Circuit Court of Appeals. The key issue was whether a medical marijuana distributor could use medical necessity as a defense against federal marijuana distribution charges. In 1999 the Ninth Circuit ruled in favor of the Buyer’s cooperative, but the Supreme Court overruled this decision in the 2001 case in an 8-0 ruling that found medical necessity was not a valid defense against federal charges. This decision had no effect on state medical marijuana laws, which continued to protect patients and primary caregivers from arrest by state and local law enforcement agents in the states with medical marijuana programs.

On April 20, 2006, the FDA issued an interagency advisory restating the federal government’s position that “smoked marijuana is harmful” and has not been approved “for any condition or disease indication.” The one-page announcement did not refer to new research findings. Instead, it was based on a “past evaluation” by several agencies within HHS that “concluded that no sound scientific studies supported medical use of marijuana for treatment in the United States, and no animal or human data supported the safety or efficacy of marijuana for general medical use.” Media reaction to this pronouncement was largely negative, asserting that the FDA position on medical marijuana was motivated by politics, not science. In Congress, 24 House Members sent a letter to the FDA acting commissioner requesting the scientific evidence behind the agency’s evaluation of the medical efficacy of marijuana. However, the FDA’s decision remained intact, and is still its policy today.
**Slide 50: Marijuana and its Derivatives as Medicine – Federal Law**

In spite of these decisions, there are a few exceptions to the federal opposition to the use of marijuana and its derivatives as medicine. One that is still in operation today, though limited, is the **Investigational New Drug Program**, which allows for individuals to apply for new experimental drugs—including marijuana—from the federal government. Originally, fewer than 100 patients were given marijuana under the program, but when the HIV epidemic broke out in the 1980s, larger numbers of people began applying. The program was shut to new enrollees in 1992 because of high demand, but there are still a handful of people (under 15 across the country) who still get the drug through the program today. The other exceptions are the FDA approved THC medications Marionol® and Cesamet®.

<table>
<thead>
<tr>
<th>Investigational New Drug Program</th>
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<tbody>
<tr>
<td>- Study protocols varied for enrollees from the federal government</td>
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<tr>
<td>- Over 250 patients given marijuana in program</td>
</tr>
<tr>
<td>- Large numbers of people with HIV/AIDS applied</td>
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<tr>
<td>- Eligibility included patients with refractory symptoms</td>
</tr>
<tr>
<td>- Hundreds of patients still on drug through program today</td>
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</tbody>
</table>

**Slide 51: Medical Marijuana and State Law**

Even though medical marijuana is still illegal under federal law, many states (18, plus the District of Columbia) now allow for the medical use of marijuana. Most of these laws were passed through votes in state legislatures or ballot measures approved by the voting public. This is a highly unconventional approach to making decisions about medicine. Normally, drugs are approved for medical use through scientific research and clinical trials; in the case of medical marijuana, approval came through political processes. Through 2010, California had the vast majority of medical marijuana users in the US, over 200,000. This statistic is probably out of date, however, because of changes to medical marijuana laws in other states.

<table>
<thead>
<tr>
<th>Medical Marijuana and State Law</th>
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<tbody>
<tr>
<td>- 18 states and the District of Columbia allow for the use of marijuana medically</td>
</tr>
<tr>
<td>- Through state and local legislation</td>
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<tr>
<td>- Through ballot measures</td>
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<tr>
<td>- An unconventional approach to making decisions about medical use</td>
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<tr>
<td>- Only drug approved for medical use through political process</td>
</tr>
<tr>
<td>- Over 200,000 individuals in California obtain marijuana through medical use since 1996</td>
</tr>
<tr>
<td>- 2010, 80% of medical marijuana users were in California</td>
</tr>
</tbody>
</table>
Slide 52: Medical Marijuana and State Law – California

California was the first state to legalize medical marijuana with the Compassionate Use Act, which was approved by California voters as Proposition 215 in 1996. The California legislature amended the law in 2003. The Compassionate Use Act is the most open to interpretation of any medical marijuana laws. It legalized marijuana for the treatment of many medical conditions (including HIV/AIDS). It also stipulated that it could be used to treat “any other illness for which marijuana provides relief.” This phrase is open to interpretation, and means that the drug can be recommended for the treatment of any condition—whether or not there is medical evidence supporting its medical effectiveness.

Additional Information for the Trainer(s)

The individuals who drafted the Compassionate Use Act that legalized medical marijuana in California purposely left it open-ended with regard to “any other illness for which marijuana provides relief” because they believe that future research may provide evidence of marijuana’s widespread benefits to other illnesses that are not currently understood. Thus, they intentionally left the acceptable medical reasons for its use open-ended. This component of the legislation underlies why California’s medical marijuana policy is skeptically viewed as allowing many individuals without valid medical problems to obtain marijuana for “recreational” purposes. This is not the case in some other states, (e.g., New Mexico, Vermont), where distribution of medical marijuana is more strictly regulated by limiting the number of “valid” medical conditions for medical MJ use and requiring more extensive verification by physicians. There are currently bills in the California Legislature that propose establishing a state medical marijuana commission that would impose more uniform regulation on medical marijuana distribution within the state.
The California Compassionate Use Act removed state penalties for use, possession, or growth of certain amounts of marijuana with a “recommendation” from a physician. The law in California allows for the possession of the amount of necessary needed for personal medical purposes—8 ounces of dried marijuana, and six mature marijuana plants (and 12 immature plants). The California Medical Marijuana Program (MMP) in the California Department of Public Health oversees medical marijuana, and is responsible for developing and maintaining an online registry and verification system for Medical Marijuana Identification Cards or “MMICs.” The MMIC is used to help law enforcement identify the cardholder as being able to legally possess certain amounts of medical marijuana under specific conditions. It is recognized statewide – but not necessarily out-of-state.

**Additional Information for the Trainer(s)**

From 2004 to June 11, 2013, a total of 68,479 cards had been registered. All patient information provided for the ID card is covered under HIPAA and cannot be released without the patient’s signature or a court subpoena. The Medical Marijuana Application System does not contain any personal information such as name, address, or social security number. It only contains the unique user ID number and when entered the only information provided is whether the card is valid or invalid. Individuals must apply in person in the county in which they reside; a photo is taken for the ID. Both state and county fees exist. County fees vary, but total cost generally ranges from $200-$300. Because of the high costs, only a minority of individuals decide to get the ID card. Medi-Cal provides for a 50 percent reduction in fee for recipients.
Slide 54: Medical Marijuana and State Law – California (continued)

In California, doctors do not prescribe marijuana like they do other medications – they don’t prescribe the amount of marijuana, how many refills patients should get, what the medication should contain, or how it should be taken (smoked, vaporized, eaten/drank). Often, staff in dispensaries, which distribute marijuana directly to patients, recommend specific strains or routes of administration to patients. However, they do often make recommendations based on what patients say, rather than on specific information from the doctor who evaluated the patient or recommended marijuana. Doctors in California simply recommend marijuana to patients after one visit, and patients can either then grow it personally or purchase it at a dispensary. After issuing recommendations, doctors do not have to monitor patient progress, how they respond to marijuana, or changes in their symptoms.

Additional Information for the Trainer(s)

Doctors do not prescribe, but staff at Medical Marijuana dispensaries often may recommendations to consumers about which strains to use in order to produce the desired effects (i.e., sedation vs. energetic) or to “treat” specific conditions. Unlike with other medications, doctors do not monitor the effects of the medication (i.e., marijuana) on patients, whether symptoms are reduced or track effects of the “medication” with biological measures. By contrast, when you are being treated for hypertension, you will be required to return to your doctor regularly for follow-up visits where your blood pressure will be monitored to verify the effectiveness of the medication on lowering it. Other examples: monitor cholesterol levels with blood tests; monitor effects of chemo on treating cancer with X-rays or body scans to chart size of tumors, etc. This type of monitoring and follow-up does not have to occur for patients who use medical marijuana.
Medical marijuana dispensaries have developed since 2003 as places that can cultivate and distribute medical marijuana. In 2007, the City of Los Angeles capped the number of licensed dispensaries that could operate in the city at 187, but thousands of unregulated dispensaries still are in operation. Because of conflicts over land use and zoning, delivery services that deliver marijuana directly to patients’ places of residence have developed.

Additional Information for the Trainer(s)

The original Compassionate Use Act was amended in 2003 by SB420, which allowed for the development of “collectives” or “cooperatives” to act as surrogate caregivers on behalf of patients in need of medical marijuana. This lead to the development of Medical Marijuana dispensaries that we have today. Dispensaries are regulated at the local (city) level, and may be restricted by zoning ordinances that limit them to certain areas (e.g., not adjacent to schools). Medical marijuana dispensaries developed as a means to cultivate and distribute marijuana to “patients” with doctor’s “recommendations” for its use (note: it is not a medical “prescription” but a “recommendation”). The dispensaries MUST be non-profit (which is the source of conflict with Federal government that views them as profit-driven--the equivalent of organized “drug dealing”). Dispensaries are often referred to as “collectives” and emphasize their role as “caregivers,” consistent with California based regulations that recognizes them as surrogate “caregivers” to patients.
Slide 56: Federal Law vs. State Law – What Does it Mean?

The current policy situation is very complicated since federal law and state law conflict. In practice, state law is generally the rule that is enforced. Most drug law enforcement is done by state and local law enforcement, who enforce state laws—these authorities allow for medical marijuana because they operate under the Compassionate Use Act. Federal law enforcement, on the other hand, does not allow for medical marijuana, since they operate under the Controlled Substances Act. However, federal law enforcement of medical marijuana laws is rare, and varies depending on the political climate. When federal authorities do crack down on medical marijuana, they take action against dispensaries that they believe are “profit making” drug dealing enterprises rather than non-profit distributors of medical marijuana.

Additional Information for the Trainer(s)

The current policy situation is very complicated and in conflict. Federal, state, and local (municipal) laws conflict to varying degrees. In California, regulation of medical marijuana is at the local level (municipal), although there are currently proposals in the state legislature to create a state-level regulatory system for medical marijuana, including for quality control and taxation. Other states have more highly regulated and centralized systems for medical marijuana distribution.
Slide 57: Federal Law vs. State Law – What Does it Mean?

In 2005, the Supreme Court ruled that federal marijuana laws do have precedence over state law when the two conflict. What this means is that patients can be charged with federal marijuana violations even if they are obeying state regulations. This could only happen, however, if the state was brought by the federal authorities, not state authorities. This happens rarely, but it can/does happen on occasion. It has been ruled by the Supreme Court, however, that the federal government cannot investigate physicians just because they recommend marijuana to a patient.

Additional Information for the Trainer(s)

Regarding the 2005 Supreme Court case stipulating that federal marijuana laws have precedence over state laws (Gonzales vs. Raich): In response to DEA agents’ destruction of their medical marijuana plants, two patients and two caregivers in California brought suit. They argued that applying the Controlled Substances Act to a situation in which medical marijuana was being grown and consumed locally for no remuneration in accordance with state law exceeded Congress’s constitutional authority under the Commerce Clause, which allows the federal government to regulate interstate commerce. In December 2003, the Ninth Circuit Court of Appeals in San Francisco agreed, ruling 2-1 that states are free to adopt medical marijuana laws so long as the marijuana is not sold, transported across state lines, or used for nonmedical purposes. Federal appeal sent the case to the Supreme Court. The issue before the Supreme Court was whether the Controlled Substances Act, when applied to the intrastate cultivation and possession of marijuana for personal use under state law, exceeds Congress’ power under the Commerce Clause. The Supreme Court, in June 2005, reversed the Ninth Circuit’s decision and held, in a 6-3 decision, that Congress’s power to regulate commerce extends to purely local activities that are “part of an economic class of activities that have a substantial effect on interstate commerce.” Raich does not invalidate state medical marijuana laws. The decision does mean, however, that the DEA may continue to enforce the CSA against medical marijuana patients and their caregivers, even in states with medical marijuana programs. Although Raich was not about the efficacy of medical marijuana or its listing in Schedule I, the majority opinion stated in a footnote: “We acknowledge that evidence proffered by respondents in this case regarding the effective medical uses for marijuana, if found credible after trial, would cast serious doubt on the accuracy of the findings that require marijuana to be listed in Schedule I.”
### Slide 57: Federal Law vs. State Law – What Does it Mean?

**Additional Information for the Trainer(s), continued**

The majority opinion, in closing, notes that in the absence of judicial relief for medical marijuana users there remains “the democratic process, in which the voices of voters allied with these respondents, may one day be heard in the halls of Congress.” Thus, the Supreme Court reminds that Congress has the power to reschedule marijuana, thereby recognizing that it has accepted medical use in treatment in the United States. Congress, however, does not appear likely to do so. Neither does the executive branch, which could reschedule marijuana through regulatory procedures authorized by the Controlled Substances Act.

Regarding the 2002 Supreme Court ruling that the federal government cannot investigate physicians just because they recommend marijuana: In the case Conant v. Walters (2002), a group of California physicians and patients filed suit in federal court, claiming a constitutional free-speech right, in the context of the doctor-patient relationship, to discuss the potential risks and benefits of the medical use of cannabis. A preliminary injunction, issued in April 1997, prohibited federal officials from threatening or punishing physicians for recommending marijuana to patients suffering from HIV/AIDS, cancer, glaucoma, or seizures or muscle spasms associated with a chronic, debilitating condition. The court subsequently made the injunction permanent in an unpublished opinion. On appeal, the Ninth Circuit affirmed, in a 3-0 decision, the district court’s order entering a permanent injunction. The federal government, the opinion states, “may not initiate an investigation of a physician solely on the basis of a recommendation of marijuana within a bona fide doctor-patient relationship, unless the government in good faith believes that it has substantial evidence of criminal conduct.”63 The Bush Administration appealed, but the Supreme Court refused to take the case.

### Slide 58: Effects of Medical Marijuana Legalization

It is clear that marijuana use is more common in states that have medical marijuana laws than in states that don’t. However, it is unclear if this is an effect of marijuana legalization, or its cause. It is highly likely that rates of marijuana use were already high in states that legalized medical marijuana, thus leading to softer attitudes towards marijuana and making it more likely that these states would pass more permissive medical marijuana legislation. Rates of marijuana use and dependence are higher in states that have medical marijuana laws. However, rates of dependence are not higher among users in these states. Among individuals who use marijuana in states that have medical marijuana laws, rates of marijuana dependence are the same as they are in states that do not have medical marijuana laws.
Slide 59: Role Play – Medical Marijuana

**Allow 10 minutes for this activity**

Split the audience into pairs. Have one person play the role of the brother-in-law and the other person the role the person giving advice in the scenario on the slide for 3 minutes. After 3 minutes, have the participants switch roles. Upon completion of the exercise, ask audience to share responses to each of the three questions on the slide that came up in the course of the role-play exercise. Write down audience responses on the flip-chart/white board during the course of the group discussion.

Slide 60: Who Uses Medical Marijuana?

**ANIMATION INSTRUCTIONS**

This slide and the following slide are based on research studying the question of who uses medical marijuana and why. On each slide, follow the following steps: (1) Review the information on the slide; (2) click to advance forward once; (3) Read the quote out loud, which is from a real-life marijuana dispensary patient in Los Angeles.

Slide 61: Who Uses Medical Marijuana?

**ANIMATION INSTRUCTIONS**

The content on this slide is based on research studying the question of who uses medical marijuana and why. On each slide, follow the following steps: (1) Review the information on the slide; (2) click to advance forward once; (3) Read the quote out loud, which is from a real-life marijuana dispensary patient in Los Angeles.
Slide 62: Who Uses Medical Marijuana?

Many individuals who use medical marijuana use it as a substitute for alcohol or other drugs. In Los Angeles, 41% of dispensary patients report using it as a substitute for alcohol, and 30% report using it as a substitute for other illicit drugs.

Additional Information for the Trainer(s)

These findings are important because they suggest that individuals may use medical marijuana as a substitute for alcohol or other drugs; this may be because they recognize that use of these other substances is causing them problems and having negative effects on their health or functioning. Use of marijuana may be viewed as safer and less harmful than these other substances. Yet, it’s unclear whether such individuals are aware of potential problems associated with use of marijuana, particular at a high level of use.

Slide 63: Why do People Use Medical Marijuana?

*ANIMATION INSTRUCTIONS*

When people who go to marijuana dispensaries are asked what marijuana helps them with, these are the answers they give. Review the contents of the table with the audience.

Slide 64: Why do People Use Medical Marijuana?

**ANIMATION INSTRUCTIONS**

Review the information on the slide, highlighting that these are the disorders people in dispensaries claim are bringing them in for treatment. Click, and “HIV” and “Cancer” will become highlighted. This is important because these are the two conditions that have the strongest base supporting the medical use of marijuana, but they are very low on this list. Most people use marijuana for conditions that do not have very strong research evidence for medical marijuana use.
Slide 65: How do People Use Medical Marijuana?

The vast majority of medical marijuana patients—two-thirds of them—report that they use the drug daily. Over 86% of dispensary patients use the drug by smoking it.

Slide 66 [Transition Slide]: Part III – Medical Marijuana and HIV

Part 3 of the training will focus on medical marijuana and use among people living with HIV.

Slide 67: Medical Marijuana and HIV

It is critical for providers working with people living with HIV to be knowledgeable about marijuana because significant numbers of people living with HIV use marijuana. Between 23% and 56% report that they used the drug in the previous month. This is a rate that is 3-8 times as high as the rate among the general population. Rates are highest among young gay men living with HIV—almost ¼ of them smoke marijuana daily. About 16% of women living with HIV use marijuana weekly.

Slide 68: Medical Marijuana and HIV – What’s the Connection?

Several reasons exist for why the rates of marijuana use are so high among individuals living with HIV. Marijuana can help relieve symptoms associated with HIV disease. Marijuana can be used to help individuals cope with the stress of receiving HIV diagnosis. Further, research shows that individuals living with HIV are likely to use medical marijuana not only to treat symptoms of HIV, but other medical conditions and problems, as well.
This slide and the three slides that follow address the ways that medical marijuana can be used to address direct symptoms of HIV.

One of the more painful symptoms of HIV comes from neuropathy, a set of neurological complications that include the symptoms described on the slide. Neuropathy can also be a side effect of the anti-retroviral medications used to manage HIV.

Marijuana may be useful for HIV-related neuropathy because many traditional neuropathy medications don’t well with antiretrovirals. Marijuana is effective at helping reduce feelings of pain. Between 20% and 28% of individuals living with HIV who use marijuana report using it as a pain reliever. Almost 20% of people living with HIV who have neuropathy report using marijuana to manage pain.

Another symptom of HIV disease that marijuana can help address is wasting syndrome. Wasting syndrome is defined as a loss of 10% or more of body weight plus over 30 days of diarrhea. It is caused by a variety of factors associated with HIV and its symptoms. Wasting syndrome can occur even among people whose HIV is well-controlled with medications. Eating enough and getting adequate nutrition is key to helping avoid wasting syndrome.
Slide 72: Medical Marijuana and HIV Symptoms – Wasting Syndrome

Marijuana can help address wasting syndrome because of its effect on appetite. As discussed earlier, marijuana stimulates hunger. Between 53% and 70% of people living with HIV report using it to stimulate their appetite. Marijuana also dulls the vomiting reflex. Between 1/3 and 2/3 of individuals living with HIV report using marijuana to control their nausea.

Slide 73: Medical Marijuana and Treatment – Learning HIV Diagnosis

Marijuana can also be used by people living with HIV to cope with the stress of learning their diagnoses. Most people experience stress, shock, sadness, and denial when they learn their diagnosis. Nearly half of individuals living with HIV meet diagnostic criteria for anxiety or depression. Women are at particular risk, as they have more psychological distress and difficulty adjusting to life with HIV than their male counterparts.

**ANIMATION INSTRUCTIONS**

Read the two points on the slide, which highlight how individuals living with HIV may use marijuana to cope with or mask feelings associated with adjusting to life with HIV; (2) Click once to advance; (3) Read the quote from a real-life young male describing the way he used marijuana upon learning his HIV diagnosis.

Slide 74: Medical Marijuana and Treatment – Learning HIV Diagnosis

Another common reason for people living with HIV to use marijuana is to address the side-effects of anti-retroviral therapy, which include nausea and neuropathy. Side effects are a major reason people don’t stick with ART, so it is important to control them in order to help patients remain engaged in treatment. Marijuana is often used to control many of the symptoms that are common side effects of ART, such as nausea and pain.
Slide 76: Medical Marijuana and HIV – Use for Other Reasons

Another reason marijuana use may be common among individuals living with HIV is because people with HIV tend to come from socioeconomically disadvantaged groups. This means that they are likely to have high rates of chronic health problems other than HIV, poor access to health care, and high rates of drug use compared to the rest of the population. All of these factors increase the likelihood that individuals living with HIV might use marijuana, either medically or recreationally. Other health problems are common among individuals living with HIV, especially those who are older than 50. Conditions such as hypertension, chronic pain, hepatitis, and arthritis are common among these older individuals living with HIV. It is not uncommon for them to self-medicate for these conditions with medical marijuana.

Slide 77: Who in the HIV Population Uses Marijuana Medically?

This is a summary slide that reviews reasons for medical marijuana use among HIV-positive patients.

Slide 78: Why Do People Living with HIV Use Medical Marijuana?

This slide presents data from a 2004 study that interviewed HIV+ individuals who used medical marijuana and asked them why they used it. The three most common answers were a) to relieve anxiety/depression, b) to improve appetite, and c) to relieve pain. It is likely that these will be the most common reasons for marijuana use among people living with HIV today, as well.
Slide 79: Medical Marijuana and HIV – Is it always the Best Option?

Review the table on the slide that presents data from an international study (including the U.S.) asking people living with HIV about the relative effectiveness of marijuana and other medications in treating various HIV-related medical conditions and problems. In presenting the table, highlight that there is not strong evidence showing that medical marijuana is more effective than conventional treatments for many of the conditions that individuals living with HIV are likely to use it for. Highlight the following key points.

People living with HIV report that marijuana is slightly more effective than regular medication in addressing anxiety, nausea, and neuropathy. However, they also reported that medication was slightly more effective than marijuana at addressing depression, diarrhea, and fatigue. Though marijuana is slightly more effective for some conditions, it is not necessarily more effective than regular medication for all problems. Highlight that for each condition, the difference was only slight and that for many people marijuana may not be significantly more effective, or more effective at all. Given the risks associated with marijuana use, people living with HIV need to balance the potential risks of marijuana use with the potential drawbacks. The following nine slides will explore these risks in detail.

Slide 80: Medical Marijuana and HIV/AIDS – Reasons for Caution

One of the major reasons people living with HIV should be cautious with marijuana is because HIV disease can cause HIV-Associated Neurocognitive Disorders (HAND) in advanced stages. The main symptoms of HAND include confusion, forgetfulness, and headaches. Three different types of HAND exist—asymptomatic neurocognitive HAND, mild neurocognitive disorders, and HIV-Associated Dementia.
Slide 81: Medical Marijuana and HIV/AIDS – Reasons for Caution

Given the effects HIV can have on cognition, people living with HIV should be careful with marijuana, which also affects learning and memory. Almost half of HIV+ marijuana users report having memory problems, and the drug’s cognitive effects may be particularly strong for people experiencing HAND. Cognitive impairment may also compromise adherence to ART, since forgetting medication is the leading cause for ART non-adherence. Research shows that the use of most recreational drugs and alcohol is associated with lower ART adherence, less virologic suppression, and slower CD4 cell response rate.

Slide 82: Medical Marijuana and HIV/AIDS – Reasons for Caution

Research shows that depending on how it is used, marijuana can lead to better or worse ART adherence. If used to control nausea, marijuana can actually help improve ART adherence. However, if used for reasons other than nausea or used heavily, it is associated with non-adherence.

Slide 83: Medical Marijuana and HIV/AIDS – Reasons for Caution

Another reason for caution is that marijuana is associated with increased occurrence and severity of mental health disorders. Individuals living with HIV are already at increased risk for these conditions, as between one-third and one-half have a mental health and/or substance use disorder. Given these risks, it is important for people living with HIV to be careful about behaviors that are risky for their mental health, such as marijuana use.

Additional Information for the Trainer(s)

Mental health problems may precede onset of HIV, or be a consequence of an HIV diagnosis. Research has shown that individuals with serious mental disorders are at higher risk for HIV than individuals without serious mental health disorders. This risk is compounded among individuals with multiple vulnerabilities, such as individuals who are homeless, have a history of trauma or exposure to violence and victimization, or live in poverty. Incidence of HIV is now highest among lower income and minority populations who often face multiple risk factors stemming from poverty, drug abuse, and lack of educational and economic resources.
Slide 84: Medical Marijuana and HIV/AIDS – Reasons for Caution

Marijuana can also be risky for people living with HIV because it increases risk for pulmonary disease and cardiovascular complications. These are conditions that people living with HIV are particularly at risk for, as well; they have higher rates of pulmonary disease and cardiovascular disease than people who do not have HIV. Furthermore, ART increases risk for cardiovascular complications. Given these risks, it is important for people living with HIV to be careful about behaviors that are risky for their pulmonary or cardiovascular health, such as marijuana use.

Slide 85: Medical Marijuana and HIV/AIDS – Reasons for Caution

Marijuana can also cause problems for individuals living with HIV because its use is associated with alcohol and tobacco use. Heavy alcohol use is associated with decreased uptake and adherence to ART and decreased viral suppression, while tobacco increases risk for HIV-related oral lesions. People living with HIV are also at increased risk for tobacco-related pulmonary disease compared to the rest of the population.

Slide 86: Medical Marijuana and HIV/AIDS – Reasons for Caution

For people living with HIV who have little experience using marijuana, the psychological effects of the drug may feel particularly strong and uncomfortable. What feels like a “good high” for someone who is used to using marijuana can feel like a “toxic effect” for someone not used to the drug. The risk of adverse effects is particularly great because marijuana has become much more potent in recent years. The long-term effects of the drug and the problems it can cause, therefore, may be more intense now than they were in the past.

Slide 87: Medical Marijuana and HIV/AIDS – Reasons for Caution

Other factors that make medical marijuana risky for individuals living with HIV are similar to those that make it risky for everyone else; it is not standardized, it is unclear what patients ingest when they use medical marijuana, and there are currently no regulations to ensure product safety or quality control. Another risk is the legal ramifications of getting caught using or in possession of marijuana, because marijuana is still illegal under federal law.
Slide 88: Medical Marijuana and HIV/AIDS – Reasons for Caution

In addition to the reasons listed above, people living with HIV should now be concerned with the risks associated with medical marijuana for everyone else. People living with HIV can manage the disease and live long lives, so they need to be concerned with their long-term health and well-being, just like everyone else. Dependence on marijuana poses a risk to physical and mental health for everyone, whether or not they are living with HIV.

Slide 89: Medical Marijuana and HIV/AIDS – What is your Experience? What do you Think?

**Allow 10 minutes for this activity**

Take 5-10 minutes to review the questions on the slide in an open discussion with the audience.

Slide 90 [Transition Slide]: Part IV – Medical Marijuana and HIV – What to do about it

Part 4 of the training will focus on strategies that HIV providers can use when working with patients who are either using medical marijuana or considering using medical marijuana.

Slide 91: If Patients are Using Marijuana

If providers have patients who are using marijuana, they should screen for signs of abuse and dependence. Several signs of abuse/dependence are listed on the slide.
If providers have patients who are using marijuana, they should screen for signs of abuse and dependence. Several signs of abuse/dependence are listed on the slide.

If patients screen positive for abuse or dependence on marijuana, HIV providers should use motivational interviewing techniques to help patients reach a point where they are ready to change their substance use behaviors. Some patients may need referral to specialty SUD services for their marijuana use. These services could include, among other things, motivational enhancement therapy, cognitive behavioral therapy, contingency management, and family-based treatment.

Additional Information for the Trainer(s)

Motivational interviewing (or motivational enhancement therapy) is a method for eliciting the patient’s own concerns about their substance use and ways that it may interfere with their own goals and objectives. It is non-confrontation and based on a model that change occurs along a continuum and that the intervention should be tailored to the individual’s current stage of “readiness to change.”

This slide provides an overview of a three-step process HIV clinicians can use when working with patients who are using marijuana, but do not have marijuana use disorders. The first step is the decisional balance, the second step is the feedback sandwich, and the third step is exploring options. Teach of these steps will be described in detail in the following slides.
1. Decisional Balance

The decisional balance is a tool that can be used to help patients explore the perceived costs and benefits of marijuana use in a chart similar to the one on the slide. The two squares on the top of the chart capture the perceived benefits and drawbacks of patients’ current marijuana use. The squares on the bottom capture the perceived benefits and drawbacks of changing marijuana use behaviors. Upon completion of this exercise, providers should summarize the pros and cons of patient’s current marijuana use behaviors and potential behavior change with them. Providers need to be sure to use patients’ exact words to reflect what they said during the course of the exercise, and not add their own opinions or pros/cons to the summary.

2. Feedback Sandwich

The second step in this process is the use of the “feedback sandwich,” which consists of three parts. First, ask the patient’s permission to give feedback on how marijuana may be affecting his/her health. It is important that if the patient says no, to respect their wishes, and come back to this exercise at a later time when they are more receptive to your feedback. Second, give feedback; acknowledge the pros and cons the patient mentioned, mention your concerns about marijuana that pertain to the patient (physical effects, mental health effects, legal risks). Throughout, be sure to present all information in a non-judgmental manner. Third, ask the patient for their response to your feedback.

Decision Balance/Feedback Sandwich – Role Play

**Allow 15 minutes for this activity**

Split the room into groups of two or three, and have them role play for a total of 10 minutes, with one person playing the role of provider and another person the role of patient who reports using medical marijuana. Participants in the “provider” role should use the Decisional Balance and Feedback Sandwich approaches to discuss marijuana use with participants in the “patient” role. After 5 minutes, have participants switch roles. When providing feedback, participants should refer to the information presented earlier in the presentation. Ask participants to keep the questions on slide 98 in mind as they do the role play.
Slide 98: Decisional Balance/Feedback Sandwich – Role Play

At the conclusion of the exercise, reconvene the group and discuss their experiences for 5-10 minutes, using the questions on the slides as prompts. Write down responses on white board/flip chart during the course of the discussion.

Slide 99: 3. Explore Options

The third step when working with patients who are using medical marijuana is to explore options if Steps 1 and 2 show that reducing marijuana would benefit the patient. This involves exploring additional strategies to achieve symptom relief, such as behavioral intervention, pharmacological interventions, and the use of FDA-approved THC medications. These options are explored in detail on the following slides.

Slide 100: Additional Strategies to Address Anxiety/Depression

One of the most common reasons people living with HIV report using medical marijuana is to cope with anxiety and depression. These patients may benefit from receiving appropriate mental health treatment. The first step to appropriate mental health treatment is diagnosis. No test is available to prove a diagnosis of anxiety or depression; rather, they are diagnosed through observation and interview, using criteria laid out in the APA’s Diagnostic and Statistical Manual of Mental Disorders (DSM).

Slide 101: Additional Strategies to Address Anxiety/Depression

For individuals with anxiety and depression, treatment often involves the use of therapy, either individually or in groups. The main point of therapy is to learn about mental health conditions, and how the symptoms affect mood, thoughts, and behaviors. With this knowledge, patients can then learn better coping and stress-management skills. Some individuals with anxiety and depressions also benefit from the use of medications that treat depression and anxiety by altering neurotransmitter activity.
Slide 102: Additional Strategies to Address Nausea

For patients who use marijuana for nausea, it is important to evaluate whether nausea is an indicator of a more serious problem, or if it is being caused by antiretroviral medication (in which case it should pass within a few weeks). Changes to diet can help address nausea. Patients experiencing nausea should try to eat small and frequent meals, and stick with the “BRATT diet” (Bananas, Rice, Apple sauce, Tea, and Toast).

Slide 103: Additional Strategies to Address Nausea

Other strategies to reduce nausea include eating dry crackers; patients should keep them near their bed in case they need them. Herbal teas and cold carbonated non-caffeinated drinks can also help stave off nausea. Patients should avoid things that can trigger nausea, such as alcohol, aspirin, caffeine, smoking, hot/spicy food, and greasy/fried food.

Slide 104: Additional Strategies to Address Nausea

Other tips to address nausea include keeping windows open so the smell of food doesn’t get too strong and to avoid lying down after eating. If vomiting does occur, patients should try to refuel their bodies quickly with fluids to replenish lost electrolytes.

Slide 105: Additional Strategies to Address Nausea

Some patients may benefit from anti-emetic medication, which helps avoid nausea, especially if they get nauseous when they take their HIV medications. For these patients, it is best to take anti-emetic medications thirty minutes before taking HIV medications. Some of the effective medications include promethazine, prochlorperazine, and lorazepam. A doctor or pharmacist should always be consulted before taking anti-emetic medications, in order to avoid negative side effects or negative interactions with HIV medications.
**Slide 106: Additional Strategies to Address Neuropathy and Pain**

This slide lists options other than medication that can be used to address neuropathy and pain that patients with HIV may experience and manage with marijuana.

**Slide 107: Additional Strategies to Address Neuropathy and Pain**

Some patients may also benefit from the use of medications to manage pain. Depending on the severity of patients’ pain, treatment with different types of medications (listed on the slide) may be appropriate. Medications that include opioids and opioid agonists have the potential to be abused, so their use needs to be closely monitored by the prescribing physician.

**Slide 108: Additional Strategies to Address Sleep Difficulties**

A major reason people report using medical marijuana is to help them sleep. The tips listed on the slide can help patients sleep better if they use medical marijuana for this purpose.

**Slide 109: THC Medications**

Some patients with HIV may benefit from the THC medication Marinol®. The medication comes in capsules, and is available on the Medi-Cal formulary. Generally Marinol® is used to stimulate the appetite and avoid nausea; patients usually began their course by taking it before lunch and dinner. One risk of Marinol® is that it can exacerbate mental health problems.
Slide 110: THC Medications

Marinol® is made from marijuana, so it should not be used while also using marijuana; this can lead to an overdose. Patients using Marinol® should also avoid alcohol and other drugs that affect the central nervous system. Marinol® can have effects similar to marijuana, including feeling “high”, dizzy, confused, and/or sleepy.

Slide 111: Take-Away Points

Review the take-away points on the slide.

Slide 112: Take-Away Points

Review the take-away points on the slide.

Slide 113: Take-Away Points

Review the take-away points on the slide.
What Did You Learn?

The purpose of the following three questions is to see how much the audience learned about the factual questions that were first queried at the beginning of the training.

**Slide 115: What Did You Learn Question #1:** “Marijuana has been shown to harm developing fetuses.”

**Answer Key:**

Correct response: A (True)

**Slide 116: What Did You Learn Question #2:** “Marijuana is better than medicine for HIV-related symptoms.”

**Answer Key:**

Correct response: C (Not necessarily)

**Slide 117: What Did You Learn Question #3:** “If you are caught with marijuana in California and claim you are using it for medical reasons, you cannot be arrested.”

**Answer Key:**

Correct response: C (It depends who catches you)
Slide 118: What Did You Learn Question #4: “Marijuana is proven to be effective in treating symptoms associated with HIV.”

Answer Key:

Correct response: A (True)

**Audience Response System (ARS)-compatible slide**

Slide 119: Questions?

Entertain any final questions from the audience.

Slide 120: Final Slide

This concludes the presentation. Thank the participants for their time and address any last-minute questions about the content. Encourage participants to reach out to the Pacific Southwest ATTC or Pacific AETC, should they have questions or concerns following the training session.
Acknowledgements

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