Seeing Through the Smoke: Current Understanding of Marijuana Use, Science, Effects & Intervention Strategies

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Course Objectives

• Understand cannabis use (and its risks) from a public health perspective.

• Recognize cannabis (and other) substance abuse risk and protective factors

• Identify “motivators for cannabis use and recovery”.

• Learn about the development and use of the Cannabis Intervention Screener tool.

• Become familiar with a new paradigm for helpful interactions with cannabis users.
Be aware....

- Many written materials on cannabis including scientific studies are contradictory....A conclusion is made with absolute certainty in 2012 that is proven wrong in 2017.

- Critical thinking is strongly encouraged.

**Opioids and Pot: Inside the Fight for Real Research**

ASU research uncovers surprising data on teenage pot use

Pot During Pregnancy? Not A Lot Is Known, But New CU Research Suggests A Risk

Cannabinoids for treatment of chronic non-cancer pain; a systematic review of randomized trials.

Researchers find that just one puff of cannabis can treat depression.
INTRODUCTION

With the number of states that have legalized cannabis ever increasing, whether it be for medicinal purposes or recreational use, we must begin to look at how these changes in the law could affect adolescents and young adults from a public health perspective.

The changing landscape concerning the legal and regulatory status of cannabis increases the need for research about innovative strategies to address cannabis misuse. In particular, different tactics and messaging strategies may be needed for a substance that is increasingly seen as not risky and that is widely described as being useful for its perceived medicinal purposes.

At present, limitations in the research make it difficult to approach these crucial choices in an evidence-based manner.

Fundamentally, the tactics and curricula that proved effective in the past, when cannabis was uniformly illegal and more stigmatized, may no longer work, and new approaches may need to be tested and developed.

Prevention Efforts

Prevention science regarding risk and protective factors will need to be refined to account for changes in cannabis laws. That is, new research is needed on prevention approaches to complement community strategies that speak to both local conditions and broader population health considerations.
NIDA recommends that prevention researchers and developers design the most effective prevention strategies, messages, and materials suitable for cannabis in this new context for all audiences.

Efforts should:
Be cognizant of cannabis products/methods of consumption with differing levels of potency and components, effects on tolerance, risks of misuse and use disorders, and other health and safety consequences.

Recognize what we still do not know about cannabis and its harms.
Prevention Efforts cont’d.

Efforts should:

Develop effective strategies that limit the impact of cannabis advertising on use, particularly among children and other vulnerable populations:

Improve the efficacy of cessation efforts that occur outside of the formal treatment system to curtail the progression of drugs from light use to problem drug use.

Focus public education component on the potential effects of cannabis use and abuse.

Design education materials for not only adolescents and young adults, but for parents and caregivers as well.

Ensure educational materials are accurate and combined with other evidence-based health education that includes information on what addiction looks like. Make materials widely available and promote access to treatment.

Culture of Cannabis Quiz

1. What are the two primary active compounds in marijuana?

2. How many northeastern states have now legalized recreational cannabis?

3. What % of users vaporize vs. smoke cannabis?

4. What is the slang term for the person who helps you purchase cannabis at a dispensary? (hint: like a bartender)

5. What the average % THC in cannabis today? What was it 10 years ago?

6. What are some of the reasons why it is so hard for people to quit using even when they want to?
History of Cannabis

• Since 5000 BC – 1930’s: Cannabis viewed as a medicinal, spiritual and recreational substance.

• 1930’s to mid-1990’s: most Americans viewed marijuana use as harmful.

• 1970’s: Cannabis made illegal.
  ✓ DEA Categorizes as a Schedule 1 Drug

• 1996: Medical Marijuana legalized.
  ✓ 84% of Americans Now Believe Cannabis has Medical Value

• 2012: Recreational Marijuana 1\textsuperscript{st} legalized.
  ✓ 60% vs. 30% think marijuana use is ok

(Booth, 2003)

Our society does not yet clearly understand the true implications of this shift in use and the science of the “New Marijuana”.
Culture and Cannabis

A cultural shift is taking place based on changing opinions, increasing information, but with limited long-term (unbiased) scientific understanding.

• We are only just beginning to understand the short and long-term benefits and consequences of using the “new” more potent marijuana.

• We are just beginning to understand the subtle but important differences in types of marijuana, THC:CBD ratios, dosage, method of use and the individualized responses.
Summary

• **Cannabis** originated in Central Asia in approximately 12,000 BCE.

• For most of recorded human history, **cannabis** has been viewed as a medicinal, spiritual, and recreational substance.

• Early on, cultures recognized both the benefits of **cannabis** use and the risks of overuse.

• **Cannabis** co-evolved with human society, and cannabis use has been affected by changes in attitude and policy.

• **Cannabis** was recognized and used by Western medicine from the 1860s until the 1930s, when public perception changed and it was deemed harmful.

• In the U.S., laws on **cannabis** and public attitudes toward its use have evolved; the current trend is toward legalization for medical and recreational purposes.  
  (Warf 2014)
Science and Cannabis

- Genomic mapping has determined 91 different strains of cannabis, each with differing expressions of THC, CBD, terpenes and other cannabinoids.

- **THC** is primarily associated with intoxicating effect and pain relief, can have certain bi-phasic effects.

- **CBD** is primarily associated with anti-inflammatory, neuroprotective, mediates effects of THC and possible anti-carcinogenic factors.

- Terpenes help to create the overall cannabis effect and possess preventive effects, antimicrobial, antifungal, antiviral, anti-hyperglycemic, anti-inflammatory, and antiparasitic activities.

(Medicinal Genomics, 2016)
What is in cannabis?

Creating the cannabis entourage

delta-9-tetrahydrocannabinol (THC)

cannabidiol (CBD)

terpines

Myrcene and other cannabinoids

483 different identifiable chemical constituents known to exist in cannabis with 80 cannabinoids (known), that only exist in the cannabis plant (Medicinal Genomics, 2016).
Entourage effect

- The whole plant effect of marijuana is referred to as the entourage effect referring to the interplay of cannabinoids (THC, CBD and others), terpenes and other plant based content.

- Research has demonstrated that whole plant cannabis preparations have greater therapeutic effect than isolating or synthesizing THC or CBD alone.
Science and Cannabis Use

• The average THC potency of cannabis has been increasing over the last 30 years. Why?
  ➢ Domestic production means fresher product due to breeding, growing, and curing technical expertise.
  ➢ People now use mostly sinsemilla (unfertilized flower) instead of the branches and leaves = stronger potency.

• 18% average THC in cannabis for those individuals who smoke ¼ gram per bowl/joint
  ➢ For every gram of cannabis you have roughly 180 mg of THC.
  ➢ At least 60 percent loss due to burning, you can expect a full bowl to deliver 18 mg of THC. Split it with a friend, and you each get almost 10 mg.

• 10mg = estimated equivalent dose. (Lankenau et al. 2017)
Methods of Cannabis Use

Methods of Use

1. **Smoking (90 plus%)** joints more efficient than bowls

2. **Edibles (15%)** (food infused with cannabis) Dosing harder to predict (Average dose = 10mg. of THC)(medicinal CBD oil 15-30mg.).

3. **Vaporizers (20%)** (flower and extract) more efficient than joints up to 70% THC dependent on device.

4. **Dabbing** (a concentrated form of cannabis that is heated quickly on a very hot surface, vaporized, and then inhaled through a special apparatus, sometimes called a “dab rig” or an “oil rig.”) (less than 4%) (up to 40-60% THC) loss due to burn method.
Top Reasons for Use – Youth

- Enjoyment, Celebration = 62%
- Experimentation, Novelty, Risky = 41%
- Social Enhancement, Conformity = 42%
- Boredom = 25%
- Relaxation = 24%
- Coping 13%* (only potential negative?)
- Altered Perception = 10%

(Lee et al. 2007)
Reasons for Cannabis Use

Why do you choose to use marijuana?...responses culled from social media.

• I smoke weed for the same reason anyone has a beer. Sometimes you just want to kick back and relax.

• I smoke weed and meditate. It gives me a unique perspective.

• Some days marijuana just helps me relax. Some days it inspires my creativity while I draw, do crafts, or just clean the house. Over time it has eliminated what used to be nearly constant migraines. But today I want to give you a glimpse of the real reason I smoke every day.... To quiet the demons in my head. My childhood and teens were full of abuse and pain.

(Reddit.com)
The “Why” Question asked...

Why do you choose to use marijuana?...responses culled from social media.

• Weed works best for my medical issues.

• I'm using weed to treat my anxiety and depression.

• I love weed! I like the way it feels to have a buzz on.

• It does more than just help me relax after a long hard day. At least for me, weed allowed me to look deep within myself and realize how badly I treat some people without even knowing it. I'm a better person today.

• Since starting on medical cannabis, I have been able to stop all prescription pain killers.

(Reddit.com)
Medicinal Use of Cannabis

Physiological and psychological effects more commonly sought by medical marijuana users include using cannabis to:

- Mitigate pain
- Improve sleep
- Reduce side effects of certain medications
- Decrease anxiety
- Decrease muscle spasms

Source: (National Academy of Science)
http://dx.doi.org/10.1080/07352689.2016.1265360
Recorded medicinal use of cannabis dates back over 5000 years

- It was a mainstay in Chinese medicine recommended for more than 100 conditions.
- Hebrew, Egyptian and Indian Cultures used cannabis for a variety of conditions.
- Greece used cannabis for pain and inflammation.
- Commonly used throughout Europe 1500s and Brought to US in 1621.
- Registered in 1850 as part of the US Pharmacopeia.
- A common medicinal throughout much of the 19th and early 20th century in US.
- Used in support of opium withdrawal/detox.
- In recent times, received first medicinal recognition in US in 1976.

(Booth, 2003)
Medical Cannabis Research

Beginning in the 1950s, Dr. Raphael Mechoulam, Professor of Medicinal Chemistry at the Hebrew University of Jerusalem brought rigorous scientific method to the study of cannabis and its potential medical benefits. The US government has funded his research since the 1950s.

Important to Note: Because of the barriers and prohibitions placed on medicinal cannabis research in the US, most research for decades takes place outside the US. (Taylor, 2009)
Research Evidence of Medical Benefits of Medicinal Use of Cannabis

140 randomized control trials studying the medicinal use of cannabis have now been completed or are in process. (National Academy of Science 2017)

http://dx.doi.org/10.1080/07352689.2016.1265360

<table>
<thead>
<tr>
<th>Benefit</th>
<th>THC (delta-9-tetrahydro-cannabinol)</th>
<th>CBD (cannabidiol)</th>
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<tbody>
<tr>
<td>Glaucoma</td>
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<tr>
<td>Anti-emetic</td>
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<tr>
<td>Appetite stimulant</td>
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<td>Analgesic</td>
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<tr>
<td>Anti-inflammatory</td>
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<tr>
<td>Anti-seizure</td>
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<td>Anti-spasmodic</td>
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<tr>
<td>Neuroprotective</td>
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<tr>
<td>Cancer*</td>
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<td>√</td>
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<tr>
<td>Sleep</td>
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<td>√</td>
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</table>
Research Needs

- Research is needed to understand the continuum of new and evolving cannabis products and the public health impact of these newly emerging products. NIDA recommends a research agenda which includes (at a minimum):
  - Establishing standardized measures of cannabis use frequency, amount, product form, administration method, and dose to gain a more complete understanding of use and its outcomes.
  - Gaining a better understanding of impairment to protect public health and safety.
  - Creating better epidemiological tools to detect use and consequences; and
  - Expanding information sources about use, impairment, and its consequences.

Summary

• Cannabis is the most commonly used illicit substance in the U.S.

• Most people (approximately 90 percent) consume cannabis by smoking; however, increasing numbers of people are also using alternative methods.

• People are motivated to use cannabis for a variety of desired recreational, medicinal, or psychosocial effects.

• Studies on the medicinal value of cannabis are limited, but evidence exists for its utility with some medical conditions.

• Correlations between cannabis use and psychiatric disorders have been identified but are not yet understood.
Impacts on Behavioral Health

- Cannabis Use Disorder
  - Approximately 20% of cannabis users have some degree of a use disorder.
- Neurocognitive effects
- Risky behaviors
- Biphasic Reaction

Effects on Mental Health: Cognition

- Short-term effects on neurocognitive performance are well known:
  - Learning & Memory
  - Processing speed
  - Executive Functioning (attention, planning)
  - Sustained abstinence appears to return users level of cognitive functioning.

All of these impacts can negatively affect school, work and social performance and may adversely impact life trajectories for youth and adults.

Source: Volkow, N. D. et al., 2014
Impacts of Use on Physical Health

- Lung Health
- Sleep
- Hyperemesis Syndrome (cyclical vomiting)
- Severe Cannabis Intoxication often with biphasic reaction (ED admissions)

**Source:** California Society of Addiction Medicine
Cannabis has a robust and dose-dependent (high doses of THC) association with psychotic symptoms.

However, psychotic disorders (i.e. schizophrenia, bipolar) are highly heritable accounted for by genetic factors.

In the short-term, high doses of THC can cause anxiety and panic symptoms.

Little evidence exists that cannabis causes anxiety disorders.

(Buckner et al., 2012)
Motivators for Change

- Peer disapproval of use
- Lack of motivation
- Social skills
- Intensify both positive and negative mood
- Self Esteem
- Work and school performance

Negative social consequences are consistently the greatest motivator for change.

Source: National Research Council 2006
Risk and Protective Factors

Many factors influence the likelihood that an individual will develop a substance use or related behavioral health problem. Effective prevention focuses on reducing the factors that put people at risk of substance abuse and strengthening those factors that protect people from the problem.

Risk factors are certain biological, psychological, family, community or cultural characteristics that *precede* and are associated with a higher likelihood of behavioral health problems.

Protective factors are characteristics at the individual, family, or community level that are associated with a lower likelihood of problem outcomes.
### Risk and Protective Factors in Multiple Contexts

<table>
<thead>
<tr>
<th>CONTEXT</th>
<th>RISK FACTORS*</th>
<th>PROTECTIVE FACTORS*</th>
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<tbody>
<tr>
<td><strong>INDIVIDUALS</strong></td>
<td>Genetic predisposition</td>
<td>Positive self-image</td>
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<td>Exposure to alcohol prenatally</td>
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<td>Poor grades and achievement</td>
<td>Self-control</td>
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<td>Social competence</td>
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<tr>
<td><strong>FAMILIES</strong></td>
<td>Child abuse and maltreatment</td>
<td>Parental involvement</td>
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<td></td>
<td>Family history of substance use disorders</td>
<td>Parental support and bonding</td>
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<td></td>
<td>Inadequate supervision</td>
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<td><strong>COMMUNITIES</strong></td>
<td>Neighborhood poverty</td>
<td>Participation in social activities</td>
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<td>Community violence</td>
<td>Afterschool programs</td>
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<td></td>
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<td>Faith-based resources</td>
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<tr>
<td><strong>SOCIETY</strong></td>
<td>Norms and laws favorable to substance use</td>
<td>Policies limiting availability of substances</td>
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<td>Lack of economic opportunity</td>
<td>Laws protecting marginalized populations</td>
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<td>Discrimination</td>
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*Sample of primary factors identified in research; not all inclusive list.


SAMHSA’s Center for the Application of Prevention Technologies Substance Abuse Prevention Skills Training Reference #277-08-0218
Individual Risk Factors

• Impulsivity
• Aggressive/violent behavior
• Disregard for others
• Sensation seeking
• Language problems
• Poor interpersonal boundaries
• Affiliates with anti-social youth
• Disconnected from school
• Hopelessness
Individual Risk Factors

- Negative self-concept/Low self-esteem
- Prenatal exposure to drugs/alcohol
- Poor/irregular attachment
- Unsatisfactory relationships
- Biological risk factors (head injury, infection, nutrition, exposure to toxins)
- Acute health condition Hx
Individual Risk Factors

- Low intelligence
- Attention deficits
- Apathy or emotional blunting
- Emotional immaturity
- Poor scholastic work skills
- Delinquency
- Stressful life events
Family Risk Factors

- Family history of mental illness
- Parental crime/incarceration
- Familial abuse/neglect
- Familial substance abuse
- Lack of parental support
- Family isolation
- Parental Separation and loss
- Physical/mental illness of a loved one
Youth Protective Factors

• Family Support
• Neighbors support
• Feeling Safe
• Adult Positive Models
• Feel Valued
• Family has Standards
• Parents feel that the school is important
• Positive peer Relations
• Want to do well
• Read for Pleasure
• Stand up for Beliefs
• Accept Responsibility
• Resist Peer Pressure
• Optimistic
• Life has Purpose
Adolescents with a Substance Use Disorder

• Are largely undiagnosed
• Are distributed across socioeconomic status, diverse health & social service systems
• Often have histories of adverse childhood experiences
• Have high co-morbidity with psychiatric conditions

Source: Institute for Research, Education, and Training in Addictions, 2010
Cannabis: DUI Risk

• National Institute on Drug Abuse (NIDA) advises that there is significant evidence demonstrating marijuana use impairs motor coordination, reaction time and judgment.

• There is a direct relationship between THC blood concentration and driving ability.


Youth Marijuana Use
Prevalence or Rates

• 38% of all U.S. high school seniors have used marijuana in the last 12 months.

• 89% say marijuana is “fairly easy” or “very easy” to get and often easier than alcohol. Marijuana is now easier to obtain, cheaper to buy and stronger in potency.

Source: National Institute on Drug Abuse
Marijuana Use Prevalence Rates for Florida Youth

Newly available national data from 2017 Monitoring the Future report showed slight increases from 2016 to 2017 at each grade level for lifetime marijuana/hashish use and increases in 30 day use for all youth, excluding 8th graders.

In contrast, multiple years of Florida data from the FYSAS and YRBS surveys identified a rise in adolescent marijuana use around 2009 and 2010 with a relatively stable use or even a slight decline in reported use since that time period.

The same surveys show that marijuana use among Florida middle school students peaked in 2010 and decreased in 2017 to the lowest level measured in FYSAS surveys. It will be important to scrutinize these trends when 2018 FYSAS results become available.

Perception of Harm

According to the 2017 FYSAS, 23.5% of high school students and 52.6% of middle school students report that the regular use of marijuana presents a “great risk of harm”. These percentages changed little since 2016. However, both are down markedly from FYSAS data reported a decade ago, probably reflecting broader societal attitude changes. Students responding that it was “wrong” or “very wrong” for someone their age to smoke marijuana once or twice a week totaled 61.2% among high school students and 89.3% of middle schoolers.

Source: Patterns and Trends of Substance Use Within and Across the Regions of Florida May 2018
Risks of Cannabis Use

- Marijuana use does not have the same health risks of other substances but has its own set of risks.
- The most common marijuana risks are in domains of: social, emotional, learning, and risky behavior while under the influence.
Summary Part 2

- Cannabinoids and terpenes are the active chemicals in cannabis that work synergistically to create a complex “entourage effect.”

- Cannabis is the most commonly used illicit substance in the U.S.

- People are motivated to use cannabis for a variety of desired recreational, medicinal, or psychosocial effects.

- Cannabis appears to be gaining in potency, but it is not known how higher concentrations of THC affect prevalence of use and risk for CUD.

- Most people (approximately 90 percent) consume cannabis by smoking; however, increasing numbers of people are also using alternative methods (vaping, consuming edibles, applying salves, or dabbing).

- Cannabis use can lead to dependence, withdrawal, and addiction.

- Correlations between cannabis use and psychiatric symptoms have been identified but are not fully understood.

- There are multiple risk factors that influence the development of adolescent SUD.

- Protective factors help to inoculate against developing SUD.
Prevention and Brief Intervention Strategies for Cannabis Risk. Part 3

Responding to a need for more potent interventions, the two questions we asked ourselves:

• Are we asking the right questions?

• Are we using the best approach to evoke individual motivation for change?
Introducing the Cannabis Intervention Screener (CIS)

Our interventionists asked us to help them to have more meaningful conversations with marijuana users.

In response, our team collaborated to develop and validate the CIS tool. Its goals are:

- To better identify cannabis use risk within a public health framework
- To stratify cannabis use risk aligned with DSM5
- To build a more potent intervention strategy
Cannabis Intervention Screener

The Cannabis Intervention Screener © (CIS) was developed (2015-2017) by the Center for Behavioral Health Integration LLC (C4BHI) and allows clinicians to screen and better engage individuals regarding their cannabis use; targeted motivational intervention strategies provide practitioners with proven tools to motivate individuals with risky and problematic use to make change.
Summary of CIS Validation Study

- Engaged national subject matter psychometric expert to guide validation protocol and tool design
- Reviewed literature including 6 lengthy validated marijuana assessment tools
- Reviewed literature to identify why someone chooses to stop use
- Created CIS to elicit frequency of use, methods of use, reasons for use and impacts of use
- Validation conducted in states of Vermont, Iowa and Washington healthcare settings, administered the CIS (and the DAST 10 as a control) with 600+ individuals
- Data were analyzed in Summer and Fall 2017
Findings

• CIS significantly increased # of endorsed negative impact responses compared to DAST providing better sensitivity

• A frequency of use prescreen is successful at triaging out those with little to no negative impact

• **Weekly Use** as a cut off is a good predictor for # of impacts

• Using multiple times daily (**Binge Use**) = highest CIS Impacts

• Use for mental health reasons associated with increased # impact

• Trying to “control use” is a significant indicator of “Binge Use”

• Impact scores align with DSM5 for risk stratification
Three domains in the CIS Tool

- Frequency and methods of use
- Reasons for use
- A ten question survey of negative impacts due to cannabis use
### CIS Triage Questions

<table>
<thead>
<tr>
<th></th>
<th>Never</th>
<th>Monthly or Less</th>
<th>Several Days per Month</th>
<th>Weekly</th>
<th>Several Days per Week</th>
<th>Daily</th>
</tr>
</thead>
<tbody>
<tr>
<td><em><em>1. How often have you used marijuana <em>in the past year</em>?</em> (including smoking, vaping, dabbing, or edibles)</em>*</td>
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If you chose “Never” please **STOP HERE**. Otherwise, go to the next question.

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<th></th>
<th>One</th>
<th>Two</th>
<th>Three</th>
<th>Four or More</th>
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<tbody>
<tr>
<td><strong>2. When you use marijuana, how many <em>times per day</em> do you typically use?</strong></td>
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<table>
<thead>
<tr>
<th></th>
<th>Smoke (joints, bong, pipe)</th>
<th>Vape</th>
<th>Dab</th>
<th>Edibles</th>
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<tbody>
<tr>
<td><strong>3. How do you use marijuana? (check all that apply)</strong></td>
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</table>
## CIS Secondary Screening Questions

<table>
<thead>
<tr>
<th>Part 1</th>
<th>Yes</th>
<th>No</th>
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</thead>
<tbody>
<tr>
<td>A. Have you used marijuana for personal enjoyment and/or recreational reasons?</td>
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<tr>
<td>B. Have you used marijuana for medical or physical health reasons such as pain, cancer, or epilepsy?</td>
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<tr>
<td>C. Have you used marijuana for mental health reasons such as trouble focusing, worries or anxiety, stress, negative or sad emotions?</td>
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<td>D. Do you have a medical marijuana card?</td>
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</table>
## CIS Part 2

Different things happen to people when they are using marijuana, or as a result of their marijuana use. Read each statement below carefully and check ‘Yes’ if it happened to you in the last year, even if it was only once. Check ‘No’ if it never happened to you in the last year.

<table>
<thead>
<tr>
<th>In relation to your marijuana use in the past year…</th>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Have you tried to control your marijuana use by smoking only at certain times of the day or certain places?</td>
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<td>2. Have you worried about the amount of money you've been spending on marijuana?</td>
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<td>3. Have you gone to work or school high or stoned?</td>
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<tr>
<td>4. Has your family, friends, or a health provider expressed concern about your marijuana use?</td>
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<td>5. Have you, on more than several occasions, driven a car or other vehicle, including a bicycle, after using marijuana?</td>
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<td>6. Have you noticed that your memory is not as good as it used to be?</td>
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<td>7. Have you continued to smoke marijuana when you promised yourself you would not?</td>
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<tr>
<td>8. When you have stopped using marijuana for a period of time (even several days), have you experienced any of the following: irritability, restlessness, anxiety, depression, loss of appetite, sleep problems, pain, shivering, sweating or elevated body temperature?</td>
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<tr>
<td>9. Have you used larger amounts of marijuana over time, or used marijuana more frequently over time?</td>
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<tr>
<td>10. Have you ever seen a counselor or other professional as a result of your own concerns, or concerns that someone else had, about your marijuana use?</td>
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</tbody>
</table>

**Scoring Guide indicated responses:**
- **Lower Risk (0-1) – Brief Intervetion**
- **Moderate Risk (2-3) – Brief Intervention**
- **Severe Risk (6+) – Brief Intervention and Treatment**

**Total:**
Summary of the CIS

- The CIS is a useful tool for cannabis screening and intervention.
- Social, emotional/psychological, financial, education and occupational impacts are most frequently associated with increased motivation to change behavior.
- Long-term health and legal risks is less motivating of change.
- Using a single prescreen question about frequency of use to triage respondents.
- Individuals who used daily or multiple times a day endorsed the most negative impacts; using multiple times daily was associated with the highest CIS impact scores.
- Individuals who endorse use for mental health reasons or mental health/physical health may benefit from screening for co-occurring conditions.
- CIS endorsements of *reasons* for cannabis use can best focus motivational interventions with individuals.
- Individuals with CIS scores of 4 and higher, indicating moderate to severe CUD, should be referred for further assessment and treatment.
Cannabis Brief Negotiated Interview (BNI) Algorithm

• Motivational Interviewing (MI) is well supported in clinical research as one of the most effective approaches for activating individuals internal motivation for change

• Engage, Focus, Motivate, and Plan. The cannabis-specific brief intervention is best delivered when framed by these four phases, with special emphasis on topics specifically related to cannabis use

• The most widely utilized (SBIRT) brief intervention, the Brief Negotiated Interview (BNI), adopts these strategies and emphasizes several MI techniques to better develop discrepancies and elicit change talk

(D’Onofrio et al., 1996; D’Onofrio et al., 2005)
Engage Phase

“Good morning ___________. I am _________. We are meeting today to discuss results of the wellness survey you completed. But before we get started, I would like to take just a few minutes to get to know each other. How does that sound to you?

✓ Asking permission is both respectful and disarming
✓ Provides an opportunity to build rapport and collaboration
✓ Does not need to be a lengthy conversation
✓ Genuine interest and curiosity
Focus Phase

• (Ask Permission) Is it OK if we discuss the health and wellness questionnaire you completed?

• (Pros and Cons of use) Based on your screening responses seems like you smoke nearly everyday and you responded that it helps you copy with negative feelings. Can you tell me what else you like using?

• Can you share with me some of the negatives you’ve noticed about using?

• (Double Sided Reflection) So what I am hearing is on the one hand what you like about marijuana use is________ but on the other hand the down side is________.

• The Focus phase hones in on why you are meeting: to review and better understand screening results (i.e., benefits, consequences, and possible coping areas).
Motivating Phase

The goal is for the person to find his or her own personal and compelling reasons for change

- Summarize the pros and cons
- The Motivate Phase leverages individuals-identified negative consequences, norms, and other information about marijuana use, such as social and health impacts and provider concerns.
- The individuals’s immediate concerns (sleep, money, memory issues, being high at work/school, concerns with friend and family, driving risks) are prime points for discussion.
- The readiness ruler strategy is used to enhance internal and external motivation to change marijuana use behavior for risk reduction.
Motivation Phase- Readiness Ruler

The readiness ruler strategy is used to enhance internal and external motivation to change marijuana use behavior for risk reduction or to support treatment engagement.

Instructions: Show your patient a ruler and say “On a scale of 1 to 10, how ready are you to make a change your cannabis use? With one being not at all and 10 I am ready to start now.

<table>
<thead>
<tr>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
<th>9</th>
<th>10</th>
</tr>
</thead>
<tbody>
<tr>
<td>Not at all ready</td>
<td></td>
<td></td>
<td></td>
<td>Somewhat ready</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Extremely ready</td>
</tr>
</tbody>
</table>

The strategy of the readiness ruler may seem counterintuitive. If the patient says, “I am at a 5,” rather than asking why not a higher number, you should respond with affirmation; for example, “Great, it sounds like you’re 50 percent of the way there.”
Planning Phase

• Plan phase the practitioner briefly summarizes risks and consequences (real and potential), describes readiness to make a change, and elicits a commitment to reduce risks and consequences through a number of actions.

• Individuals will often back pedal in planning phase. Stay with the process and revisit pros and cons and readiness.

• Actions in the Plan phase typically are based on known successful risk reduction and recovery strategies, such as monitoring use, avoiding certain places and situations, taking holidays from using (i.e., an agreed-upon period of abstinence), reducing use to below harmful levels, adopting new coping and replacement activities, and increasing connections to non-using family/peers.

• Write down the plan and schedule a follow-up.
When further assessment and treatment is indicated

The vast majority of persons with CUD are usually treated as an outpatient unless there are other risk factors.
A Strong Referral to Appropriate Treatment Provider Is Key

When the individual you are working with is ready—

- Make a plan with the individual.
- You or your staff should actively participate in the referral process. The warmer the referral handoff, the better the outcome.
- Decide how you will interact/communicate with the provider.
- Confirm your follow-up plan with the individuals.
- Decide on the ongoing follow-up support strategies you will use.
What Is a Warm-Handoff Referral?

The “warm-handoff referral” is the action by which the practitioner directly introduces the individual to the treatment provider. The reasons behind the warm-handoff referral are to establish an initial direct contact between the individual and the treatment counselor and to confer the trust and rapport. Evidence strongly indicates that warm handoffs are dramatically more successful than passive referrals.
Summary

- Frequency of cannabis use is a critical factor in negative impacts of cannabis and cannabis use disorder.

- When conducting a brief intervention, the clinician must first build rapport and then seek to understand the individual’s perceived benefits of use.

- The clinician can use potential concerns elicited in the screening process to help engage in nonjudgmental reflective conversations.

- Concerns most often endorsed by individuals included money spent, using at work/school, memory issues, or driving risk. However, any individual concern is worth exploring and reflecting.

- Clinicians use double-sided reflections to emphasize the struggles of cannabis use for its perceived benefit and the negative impacts of using.

- Match action plans for reducing cannabis use to individuals’ readiness for change and use known strategies that work.

- An integrated MET/CBT model has the best efficacy for CUD treatment.
Thank You~

The Cannabis Intervention Screener is available for use at no charge. However, C4BHI does seek to collect ongoing data on its clinical utility.

For more information about the Cannabis Intervention Screener, cannabis intervention and treatment contact:

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References


References


Institute for Research, Education and Training in Addictions (IRETA), 2010 Adolescent Co-occurring PowerPoint slides
https://www.google.com/search?q=Adolescents+with+a+Substance+Use+Disorder+are+largely+undiagnosed&oq=Adolescents+with+a+Substance+Use+Disorder+are+largely+undiagnosed&aqs=chrome..69i57.10438j0j7&sourceid=chrome&ie=UTF-8


References


References


Patterns and Trends of Substance Use Within and Across the Regions of Florida May 2018. Marijuana Use Prevalence Rates for Florida Youth.


SAMHSA’s Center for the Application of Prevention Technologies Substance Abuse Prevention Skills Training Reference #277-08-0218. Risk and Protective Factors
References


