

Cannabis Use Disorder and Intervention

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Overview

- Is Cannabis Addictive?
- Risk Factors for CUD
- Intervention

Is Cannabis Addictive?

Scientific
community

- Cannabis addiction as secondary problem
- Would people seek treatment for cannabis?

Societal
perceptions

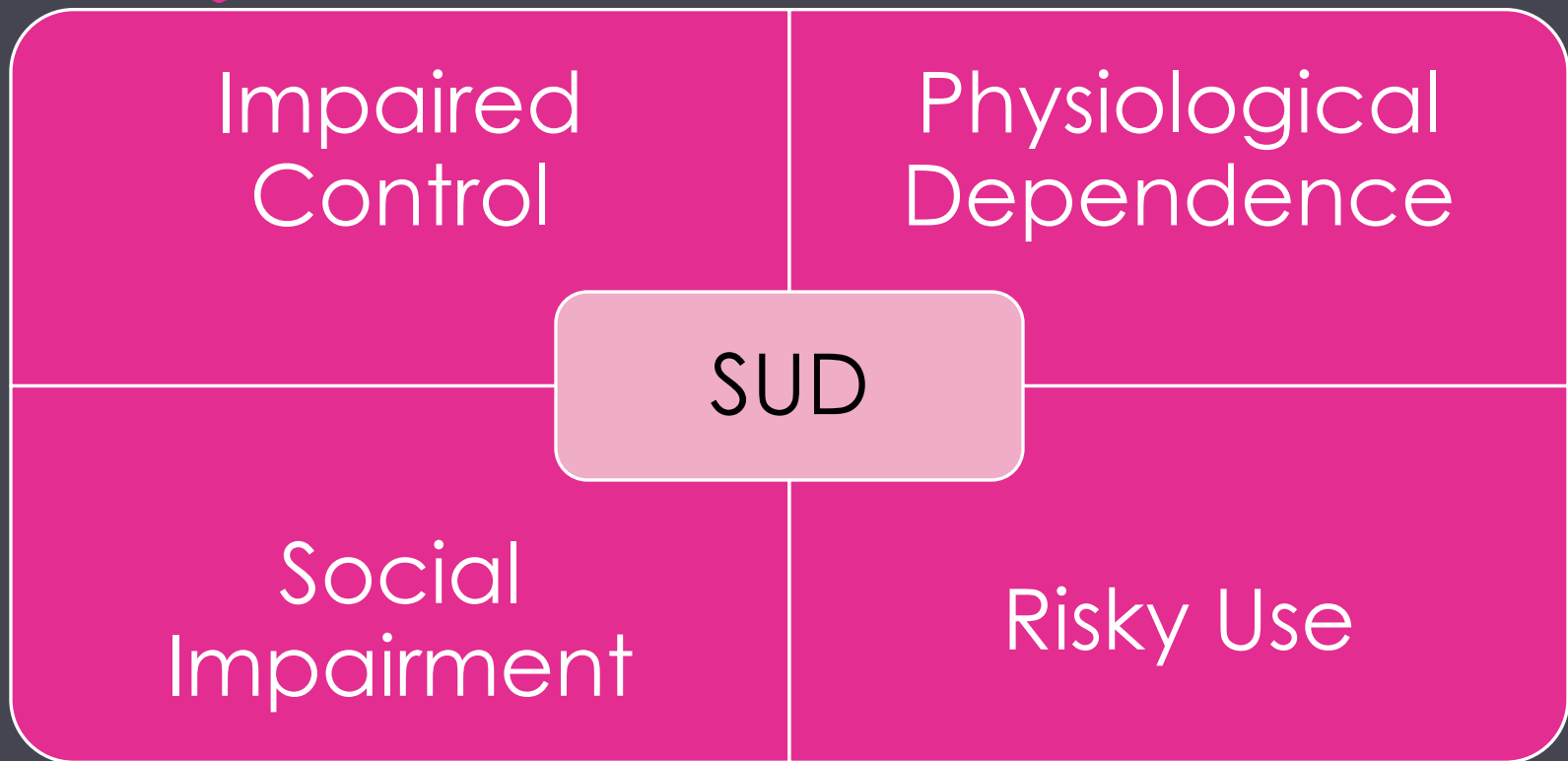
- Cannabis is not addictive
- Does not cause problems

Needs Assessment Study

Roffman &
Barnhart, 1987

- Anonymous telephone survey
- Purpose of the study was to determine:
 - Did a cannabis dependent population exist?
 - Not concurrently abusing alcohol or other drugs?
 - Would they be interested in treatment for cannabis?
- 225 participants interviewed
- 74% had problems only with cannabis
- 92% were interested in treatment

Substance Use Disorder



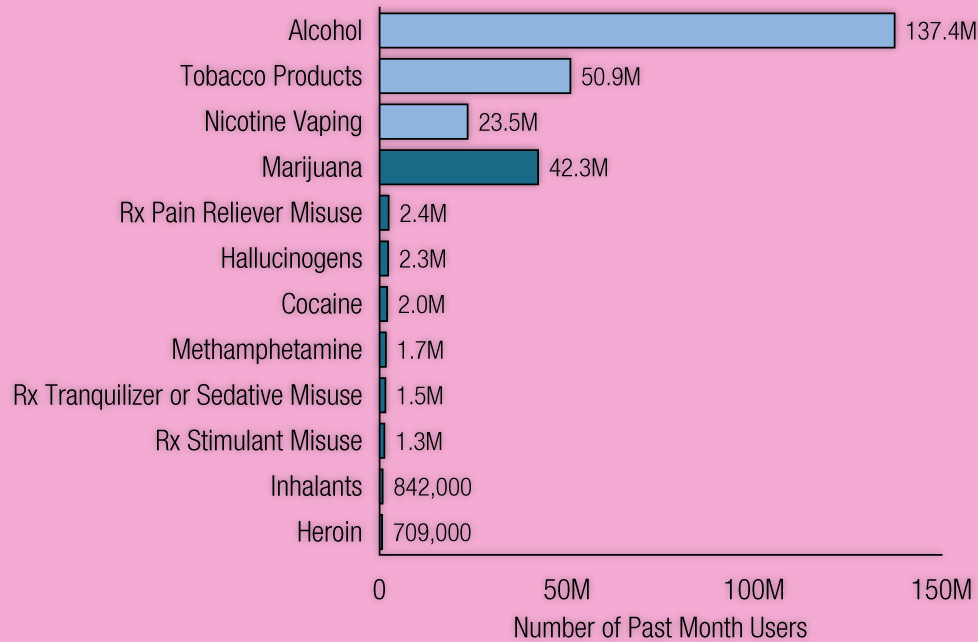
Cannabis Withdrawal

- Cannabis (cannabinoid) withdrawal has been demonstrated in:
 - Non-human studies (primate, rodent, dog)
 - Clinical survey studies
 - Human inpatient/outpatient laboratory studies
 - Reliable and valid time course and syndrome

Cannabis Withdrawal Symptoms

- Irritability, anger, aggression
- Loss of appetite or weight loss
- Difficulty sleeping (insomnia, disturbing dreams)
- Nervousness or anxiety
- Depressed mood
- Restlessness
- Physical symptoms: stomach pains, shakiness, tremors, fever, chills, headache, sweatiness
- Less common sx's: fatigue, yawning, difficulty concentrating

Past Month Substance Use: Among People Aged 12 or Older; 2022



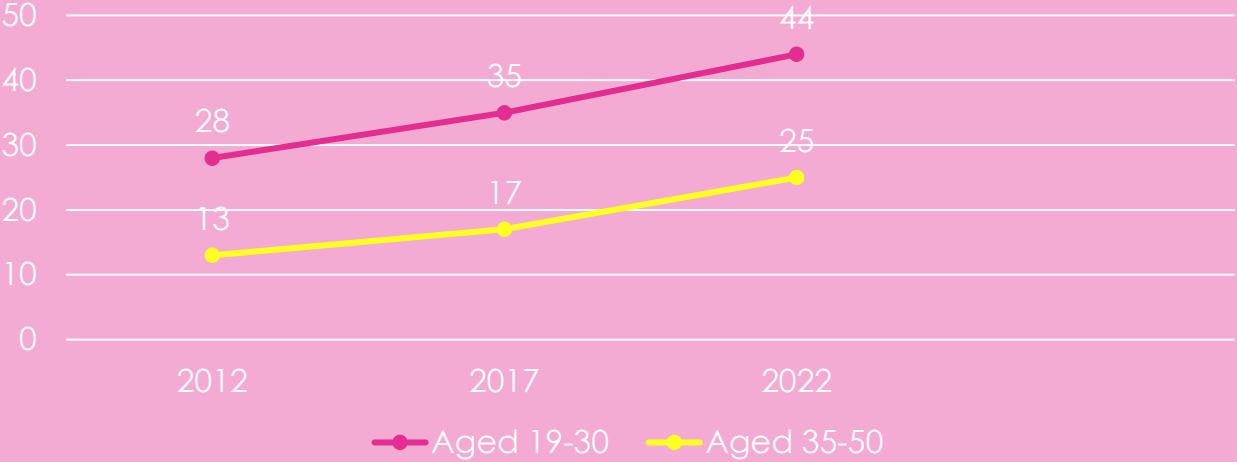
Rx = prescription.

Note: The estimated numbers of current users of different substances are not mutually exclusive because people could have used more than one type of substance in the past month.

Substance Abuse and Mental Health Services Administration. (2023).

Cannabis Use is Increasing (MTF, 2024)

Percent Reporting Cannabis Use in Past Year



Past Year Substance Use Disorder (SUD): Among People Aged 12 or Older; 2022



Rx = prescription.

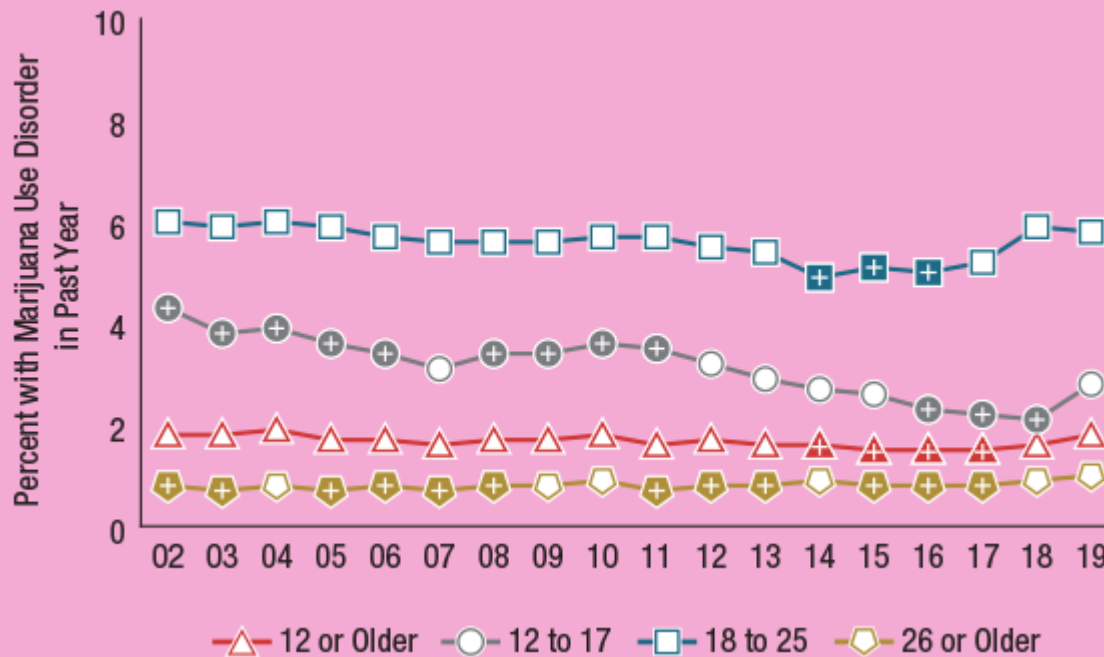
Note: The estimated numbers of people with SUDs are not mutually exclusive because people could have use disorders for more than one substance.

¹ Includes data from all past year users of marijuana, cocaine, heroin, hallucinogens, inhalants, methamphetamine, and prescription psychotherapeutic drugs (i.e., pain relievers, tranquilizers, stimulants, or sedatives).

² Includes data from all past year users of the specific prescription drug.

Substance Abuse and Mental Health Services Administration. (2023).

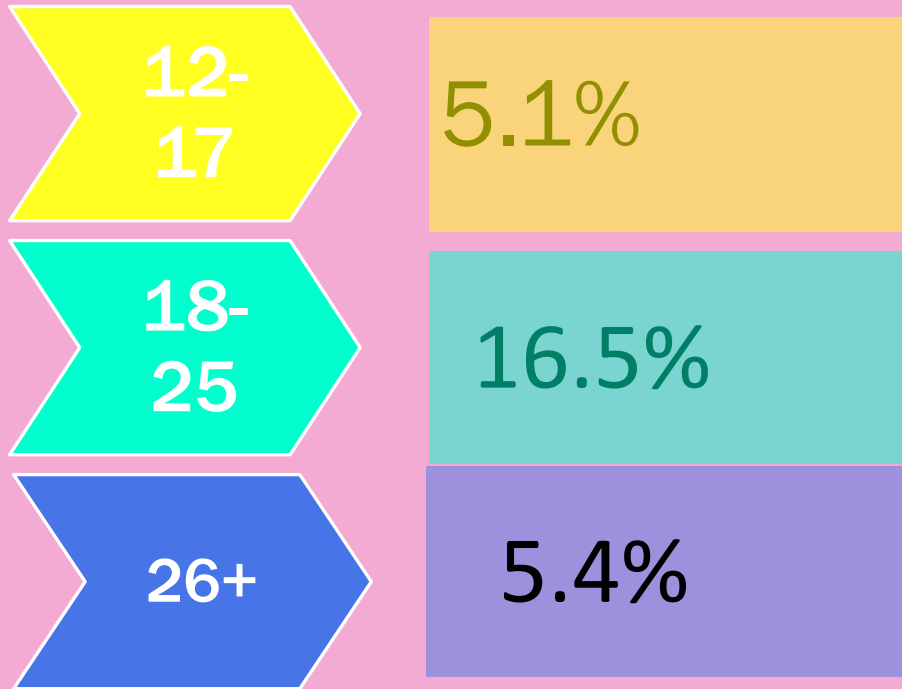
2020 NSDUH Data: Cannabis Use Disorder Rates over Time



Substance Abuse and Mental Health Services Administration. (2020). *Key substance use and mental health indicators in the United States: Results from the 2019 National Survey on Drug Use and Health* (HHS Publication No. PEP20-07-01-001, NSDUH Series H-55). Rockville, MD: Center for Behavioral Health Statistics and Quality, Substance Abuse and Mental Health Services Administration. Retrieved from <https://www.samhsa.gov/data/>

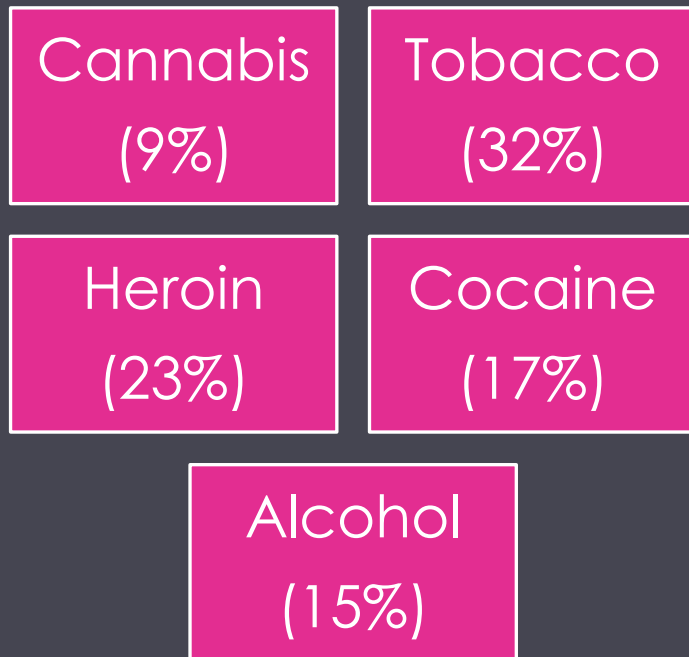
Rates of CUD by Age Group, 2022

NSDUH, SAMHSA, 2023



Lifetime Risk of Dependence

1992 Data



Recent Data

- Cannabis risk of dependence among those with history of daily use (30-40%) (2016)
- Recent nationally representative data suggests 30% of those who use cannabis will develop a CUD (2015)

Cannabis is Addictive



What are Risk Factors for CUD?



Risk Factors for CUD

Age of Onset

Consumption Patterns

Family History of SUD

Presence of other
Mental Health Disorders

Risk Factors for CUD

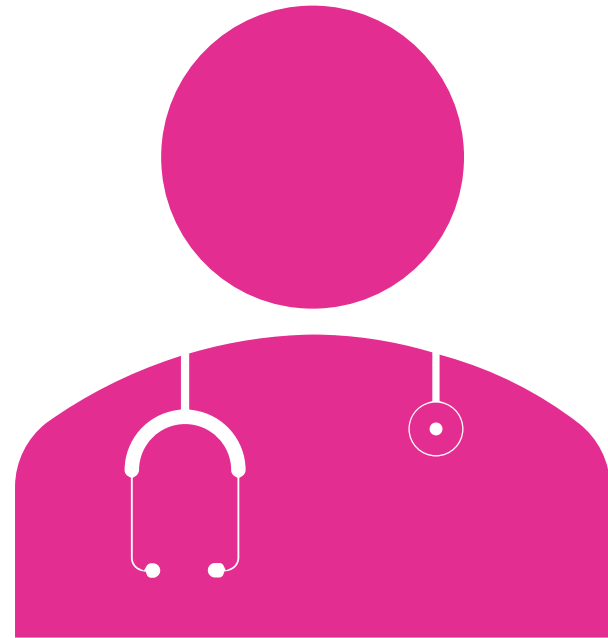
Use Motives -
Coping

Product Selection-
High potency

Negative Life Events

Social Perceptions
of Use

**What about
Treatment?**





- Early Intervention

- Treatment

- Aftercare

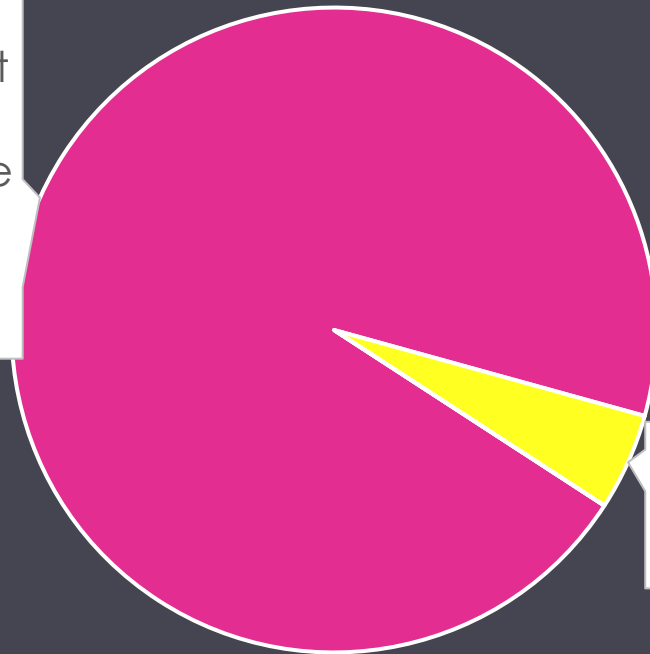




Substance Abuse Treatment Need in U.S.

NSDUH 2023

Did Not
Receive
Treatment
for a
Substance
Use
Problem
85.1%



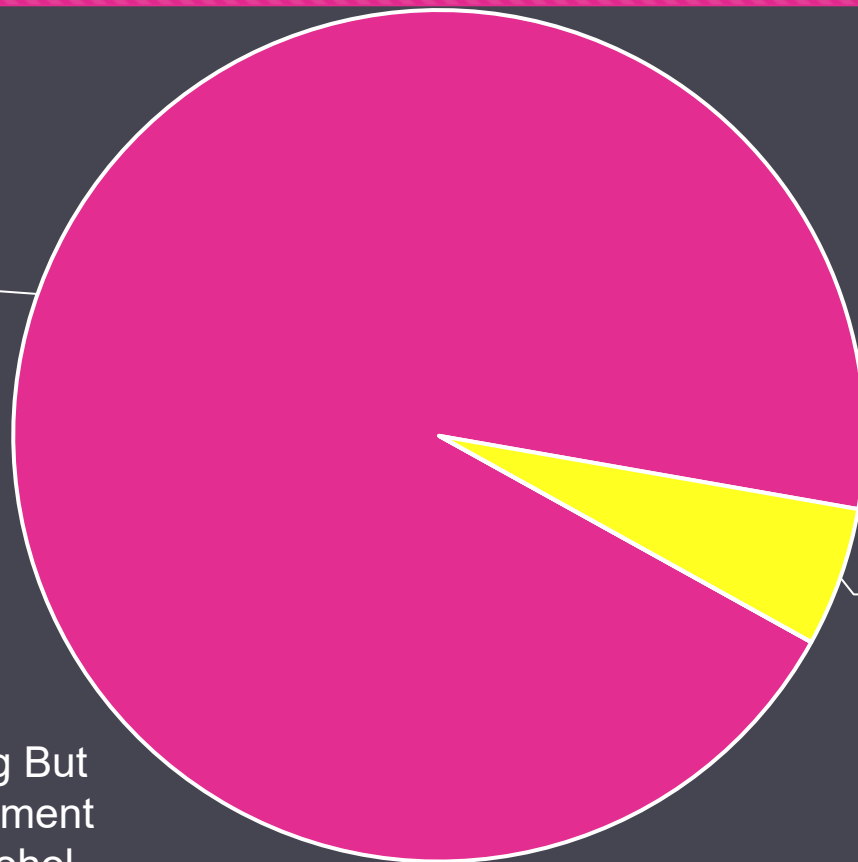
Received
Treatment
14.9%

48.7 million persons
aged 12 or older
needed treatment
for a substance use
problem.
7.3 million persons
received treatment

Perceived Need for Treatment

NSDUH, 2023

Did Not Feel
They
Needed
Treatment
95%



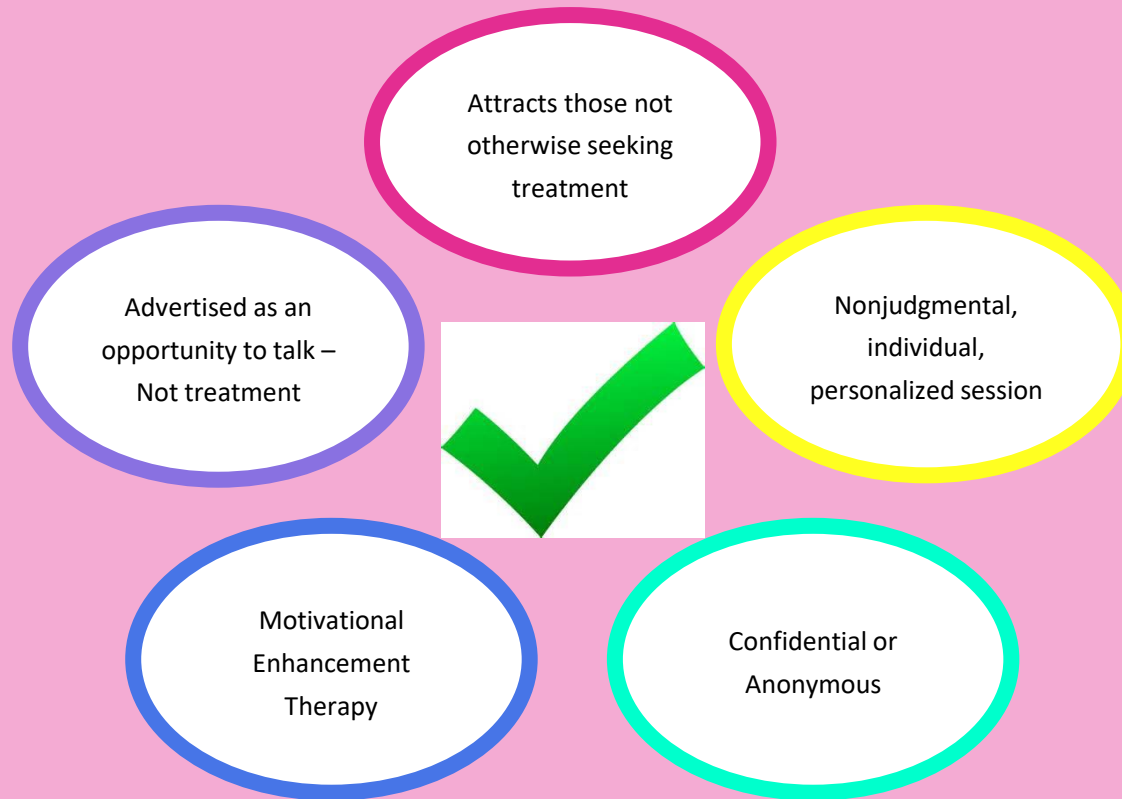
39.7 Million Needing But
Not Receiving Treatment
for Illicit Drug or Alcohol
Use

Sought TX
or Thought
They
Should
5%

The Challenge:

- This suggests the need to develop and market interventions that:
 - Reach more people
 - Increase motivation for change
 - Encourage treatment entry when appropriate

The Check-Up Model



Motivational Enhancement Therapy (MET)

Length

1 to 4 Sessions

Delivery

In-Person, Phone, or Computer

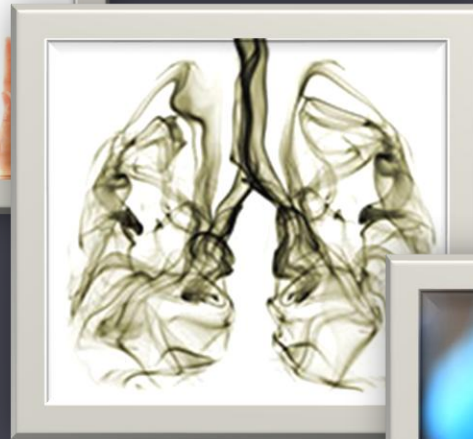
Style

Motivational Interviewing

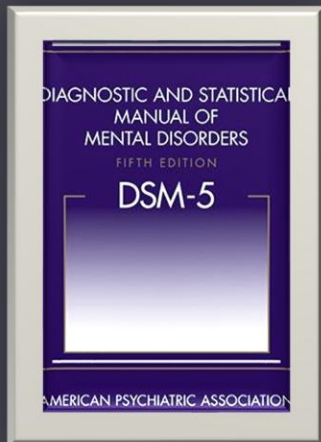
What we know: Teen Marijuana Check-Up...



Attracts teens with no treatment history.



Attracts heavy users.



High cannabis-use disorders.



Decreases use.



Check-Up Models Work to Engage Non- Treatment Seekers

Adult Treatment Outcome Literature

- Randomized Controlled Studies
 - Stephens, Roffman et al. (1994)
 - Stephens, Roffman et al. (2000)
 - Budney et al. (2000)
 - Copeland et al. (2001)
 - Marijuana Treatment Project (2004)
 - Budney et al. (2006)
 - Carroll et al. (2006)
 - Kadden et al. (2007)
 - Budney et al., (2011)
 - Walker, et al., (2015)
 - Budney, et al (2015)

Types of Treatment Adult Treatment Outcome Literature

- Social Support Group
- Cognitive Behavior Therapy (CBT)
 - Group
 - Individual
- Motivational Enhancement Therapy (MET)
- Contingency Management (CM)
- Computerized MET/CBT

Outpatient Treatment Adolescents

Behavioral Interventions

- Cognitive Behavioral Therapy (CBT)
- Motivational Enhancement Therapy/CBT
- Adolescent Community Reinforcement Approach
- MET/CBT with Contingency Management

Family Therapy

- Multidimensional Family Therapy
- Functional Family Therapy
- Multi-Systemic Therapy
- Combinations of Family and Behavioral Interventions

Psychosocial Treatments Work

Gold Standard: MET + CBT + Contingency Management

What about Medications?



Agonist-like medications

- Reduce withdrawal
- Substitute for cannabis



Antagonist – blocking the effect



Medications targeting specific withdrawal sx's

- Meds that target craving
- Meds that block opioid receptors

Pharmacotherapies Don't

Technology-Assisted Treatments are Comparable to In- person Delivered Interventions

Literature is small

Questions Remain

- How can treatment effects be enhanced?
- How do we engage the 90% of those who misuse cannabis in intervention?
- What are the best methods for implementing empirically supported treatments into community practice?
- What effects will the recreational market have on disorder rates and attitudes toward treatment?

**How can I use
“safely” or reduce my
risk of CUD?**

How can I reduce risk?

- Abstinence is the only way to eliminate risk
- Age of Initiation
 - Delay age of use
- Choice of cannabis products
 - Choose products low in THC (Below 10%)
 - Stay away from synthetic cannabinoids
- Cannabis Use Methods
 - Avoid smoking burnt cannabis, use edibles, vaping (jury out on vaping)
 - If inhale smoke, don't inhale deeply
- Frequency & Intensity of Use
 - Use infrequently or occasionally- less than 1 day a week
 - Less intense use

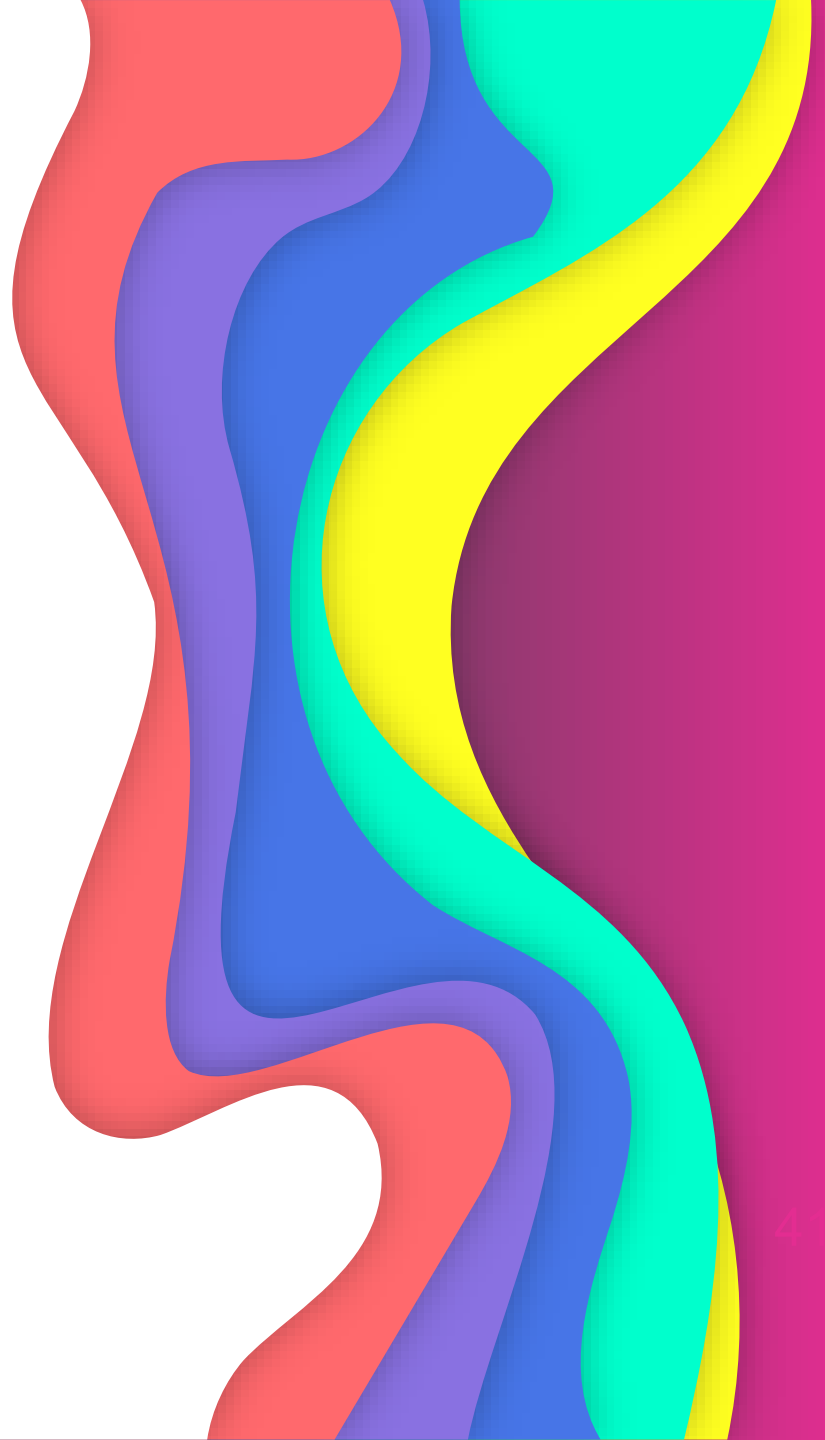
Who Should Not Use?

- Driving
 - Avoid driving for 6 hours after use
 - Avoid using multiple substances and driving
- Special-Risk Populations
 - Family history of psychosis
 - Family history of substance use disorder
 - Pregnancy

Questions?

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Cannabis and Psychosis



Prevalence

- × 3.7 million Americans have a schizophrenia spectrum disorder
- × 70% experience first episode of psychosis before age 25
- × 35-45% of young adults experiencing psychosis (YA-P) use cannabis

Prevalence

- × YA-P and those at risk for psychosis report a greater “high” from cannabis
- × 1 in 4 YA-P meet criteria for a cannabis use disorder
 - Rates of CUD in general population of young adults (18-25) is 16.5%

Development of Psychosis

- × Use of cannabis increases risk of psychosis
- × Longitudinal and cross-sectional studies
- × U.S. and international studies have shown increase in psychotic disorders with higher THC cannabis availability

Development of Psychosis

- ✗ Cannabis use lowers the age of onset of psychosis

Large, Sharma, Compton, Slade, & Nielssen, 2011; Di Forti, Sallis, Allegri, Trotta, Ferrar, et al. 2014

Development of Psychosis

- × Daily high potency cannabis use increases risk of development of psychosis by 5 times
 - Frequent use
 - “High” potency THC

Cannabis & Psychosis Treatment

- ✘ Persistent cannabis use negatively impacts treatment outcomes for those experiencing psychosis

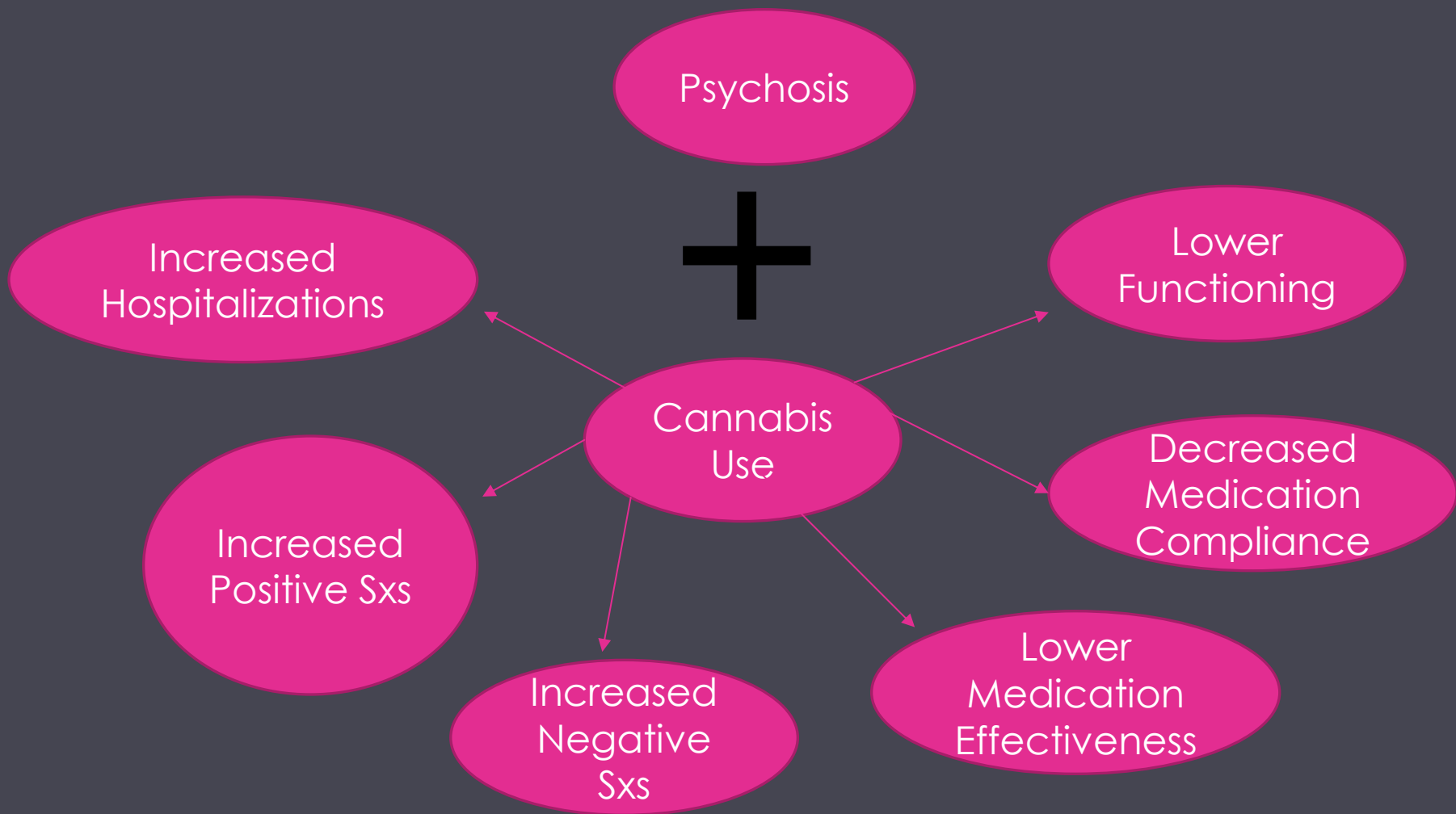
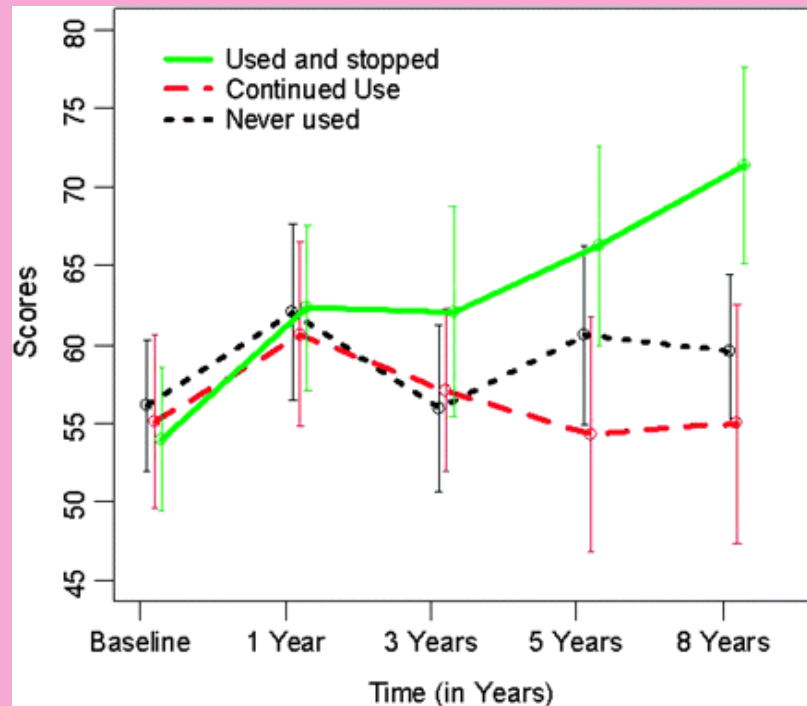
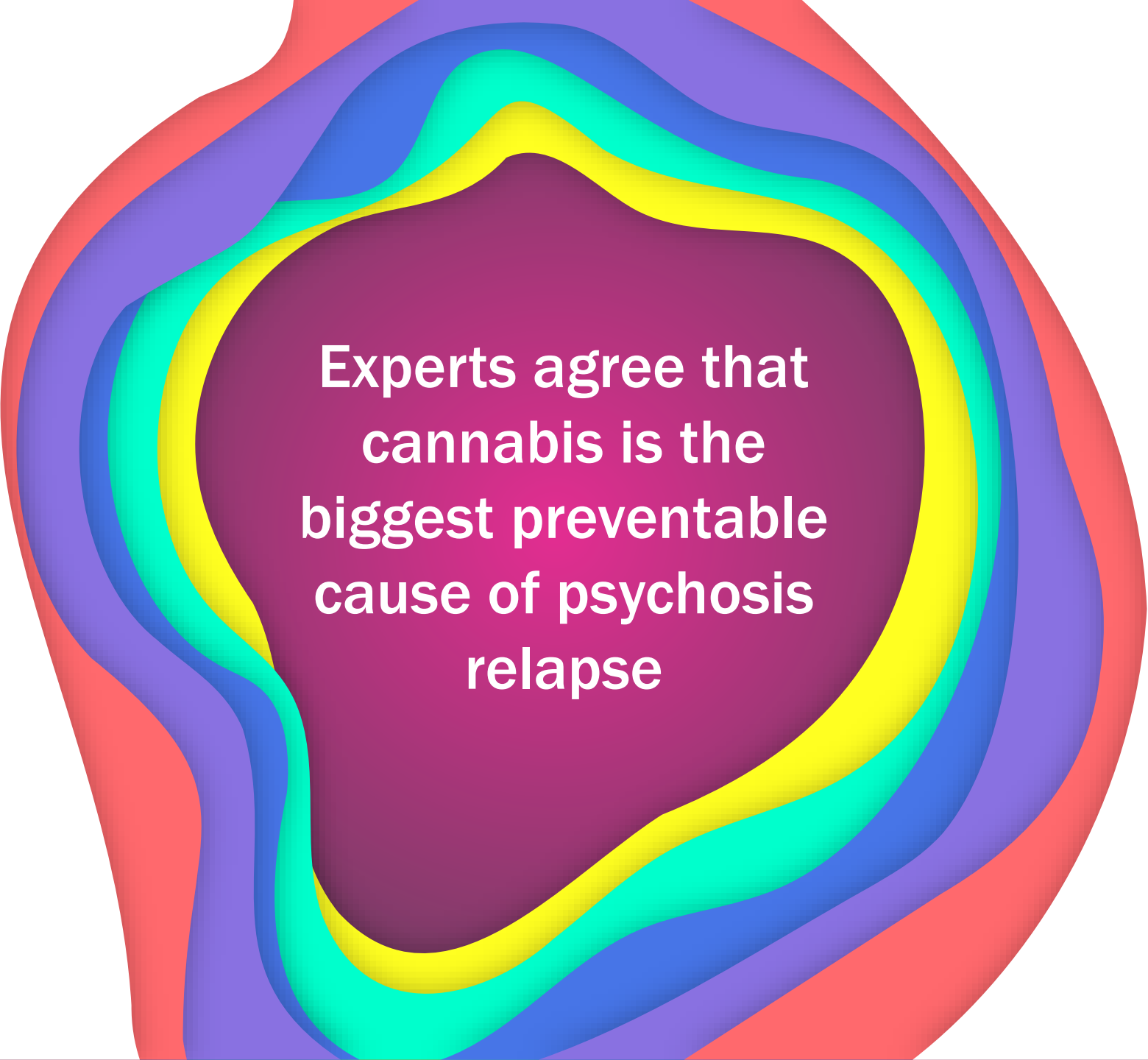


Fig. 1. Global Assessment of Functioning (GAF) Outcome by Cannabis Use Group.



Pinto, Alberich, et al., *Schizophr Bull*, Volume 37, Issue 3, May 2011, Pages 631–639, <https://doi.org/10.1093/schbul/sbp126>

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Experts agree that
cannabis is the
biggest preventable
cause of psychosis
relapse