Interventions for Adolescent Cannabis Misuse: Implications for Legalization

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Overview

- Review Risks of Adolescent Use
- Summarize Evidence for Outpatient Treatment for Adolescent Marijuana Disorders
- Describe the Teen Marijuana Check-Up
- Identify Implications
Risks of Adolescent Cannabis Use – Short Term

COGNITIVE: while high, a person has a shorter attention span, trouble learning new things, and impairments remembering things. These effects can last up to a month after marijuana use stops.

MENTAL HEALTH: while high a person can experience panic, increase in anxiety, or psychosis, especially with high levels of THC.

ACADEMIC: On average, students who use regularly tend to get lower grades

JUDGMENT: Associated with impaired judgment and risky behaviors like unprotected sex or drugged driving.

- About 1 in 8 (12.4%) reported that within the past 2 weeks they had driven after using marijuana, whereas 1 in 11 (8.7%) had driven after drinking alcohol. (MTF 2013)
- Twice as likely to have gotten in an accident or gotten a driving citation in the past year.
Risks of Adolescent Cannabis Use – Long Term

MARIJUANA DEPENDENCE: Doubles your chance of becoming dependent on marijuana if you start in your teens. (9% for those who initiate use as an adult, 17% chance for teens).

MENTAL HEALTH: Elevated risk for a suicide attempt. Increased risk of psychotic episode.

COGNITIVE: Average decrease of 8 IQ points from age 13 to 38 among regular users.
Need for Prevention and Intervention

- Majority of adults with marijuana disorder symptoms report they began smoking before age 18

- Treatment admissions for marijuana disorders increased from 7% (1993) to 18% (2012)

- 42% of admissions are youth under age 20 (TEDS, 2014)
Outpatient Treatment

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
Cannabis Youth Treatment Trial (2004)

- Largest marijuana treatment study to date (N = 600)
- Multi-state trial – CT, IL, FL, PA
- 2 randomized controlled trials
- Evaluated 5 Treatments
- Varying in dose and format
- MET/CBT5, MET/CBT12, MDFT, ACRA, MET/CBT12 + Family Support
CYT Findings

- No differences in days of abstinence across conditions at the 12-month follow-up

- Cost effectiveness analyses showed MET/CBT5 and MET/CBT12 more cost-effective than FSN

- ACRA and MET/CBT5 less expensive than MDFT
Effective Treatments

- Multiple treatments have been identified to reduce marijuana use
- Interventions such as MDFT and MET/CBT have been evaluated domestically and internationally
- All manualized treatments, many manuals are available free
- Behavioral interventions are less expensive to deliver, with similar benefit
And there are some BIG Buts...
Caveats to the Treatment Literature

- Treatment samples were largely male (80% typically)
- Abstinence was rare
- Reductions in days of use were small to moderate
- Treatment effects wane over time
- Majority are court-involved or “referred”
20.7 million persons aged 12 or older needed treatment for a substance use problem. 2.5 million persons received treatment.
9 out of 10 adolescents reporting substance disorder symptoms in the U.S. in the past year had never received treatment.

Self-referral to treatment is rare.

Majority are referred by:
- Legal system
- Parents
- Schools
The Challenge:

- This suggests the need to develop and market interventions that:
  - Reach more adolescents
  - Increase motivation for change
  - Encourage treatment entry when appropriate
Would Adolescents Volunteer for a Marijuana Check-Up?
What is the Teen Marijuana Check-Up?

- Brief intervention designed to attract users who would not seek treatment.
- Advertised as an opportunity to receive objective feedback about marijuana use; not offered as treatment.
- Involves one session of assessment and two sessions of MET (Motivational Interviewing + Personalized Feedback)
Erase Barriers

- In-School MET Intervention
- Individual Sessions
- Computerized Assessment
- No Pressure, No Judgment
- Not Treatment
- Brief
- No Parental Consent Required
Recruitment Approaches

- Classroom presentations
- Information tables
- Referrals from school staff
- Self-referral - posters and flyers on campus
- Friends and Family
MET Intervention

- Two individual sessions (30-60 minutes)
- Motivational Interviewing
- Review of Personal Feedback Report
- Personal Feedback Report included:
  - Normative data
  - Summaries of
    - Recent use patterns
    - Abuse and dependence symptoms
    - Goals
    - Social supports
    - Benefits of Quitting
MET Intervention Principles

- To facilitate the teen’s candid exploration of his/her marijuana experiences, including:
  - costs & benefits
  - comparisons with other teens
  - the impact on larger goals and important relationships
2 Pilot studies were conducted
• Experiment with and develop alternate recruitment methods
• Evaluate acceptability of TMCU
• Examine preliminary evidence of intervention efficacy
TMCU-3 Study Design (N = 310)

Screen & Randomization

Delayed Assessment Control

MET
- Baseline Assessment
- 2 MET Sessions
- CBT Option
- 3-Month Assessment
- CBT Option
- 12-Month Assessment

Education
- Baseline Assessment
- 2 Education Sessions
- CBT Option
- 3-Month Assessment
- CBT Option
- 12-Month Assessment

Choice of MET Or Education

3-Month Assessment

Walker, Stephens, Roffman, Towe, DeMarce, Lozano, & Berg (2011)
Eligibility Criteria

- Ages 14-19
- Used Marijuana on 9 of past 30 days
- In Grades 9-12
- No Evidence of a Thought Disorder
- Fluent in English
## Baseline Drug Use

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<tr>
<th>Variable</th>
<th>Mean (SD)</th>
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<tr>
<td>Age at first use</td>
<td>13 (1.66)</td>
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<td>Ever had treatment or counseling for drugs or alcohol?</td>
<td>13%</td>
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<td>Days of marijuana use in past 60.</td>
<td>39 (15.2)</td>
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<td>Marijuana abuse diagnosis in past 60 days.</td>
<td>75%</td>
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<td>Marijuana dependence diagnosis in past 60 days.</td>
<td>62%</td>
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(TMCU-3 Immediate Groups: N=205)
Outcome: Days of Marijuana Use

- MET
- Education
- Delayed
Outcomes: CBT Acceptance

- **MET**: 12.6%
- **Education**: 9.8%
## TMC U4 Study Design

Walker, Stephens, Blevins, Banes, Matthews, & Roffman, 2016

### Study Design

#### Randomized Conditions

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<th>Month</th>
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- **Comparison Condition**
  - EFC #1
  - EFC #2
  - EFC #3

- **Experimental Condition**
  - MCI #1
  - MCI #2
  - MCI #3

#### Optional CBT Sessions

- 2 MET sessions
- 6-Month F/U
- 9-Month F/U
- 12-Month F/U
- 15-Month F/U

#### Baseline Assessment

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

- Attracts teens with no treatment history.
- Attracts heavy users.
- Decreases use.
- High cannabis-use disorders.
Conclusions/Policy Implications

- Efficacious Treatment options should be made available
- Additional research needed to identify ways to improve outcomes
- Treatment only captures a small minority of adolescents who are using heavily and problematically
- Alternatives need to be available to promote self-referral to interventions
- Teen Marijuana Check-Up shows promise in attracting heavy users and promoting reductions
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