

# Interventions for Adolescents: State of the Science and Looking Ahead

Denise Walker, Ph.D.

University of Washington

Research Associate Professor, School of Social Work

Co-Director, Innovative Programs Research Group

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# Overview



- Briefly summarize evidence for outpatient treatment for adolescent marijuana disorders
- Describe the Teen Marijuana Check-Up
- Identify implications

# Marijuana Use and Adolescents

- Marijuana is the most prevalent illicit drug used by adolescents in many of the world's regions
- Users are at risk for delinquency, school failure, and physical and psychological problems
- Early onset of regular use was associated with lower IQ in adulthood
- Marijuana is a drug of abuse
  - Self-reported problems
  - Many meet DSM-IV criteria for abuse and dependence
  - Reliable withdrawal symptoms

# 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-site 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 Butts...**





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- Treatment samples were largely male (80% typically)
  - Abstinence is rare
  - Reductions in days of use are small to moderate
  - Treatment effects wane over time
  - Majority court-involved or “referred”

# Need for Prevention and Intervention

- 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

# 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
- Brief
- Not Treatment
- No pressure, no judgment
- Computerized Assessment
- No Parental Consent

# 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

# Pilot Studies



- 2 Pilot studies were conducted
- Experiment with and develop alternate recruitment methods
- Evaluate acceptability of TMCU
- Examine preliminary evidence of intervention efficacy



# Preliminary Randomized Controlled Trial (TMCU-2)

- Compared MET vs. Delayed Control
- Baseline and 3-month Follow-up
- 2 Counseling Sessions
- Incentive payments for attending sessions
- No parental consent
- Used marijuana on 9 of past 30 days
- Grades 9-12



# Findings

- Attracted voluntary participation from teens low in motivation to change
- Successful in engaging non-treatment seekers
- Overall, reductions in use were reported

# Questions

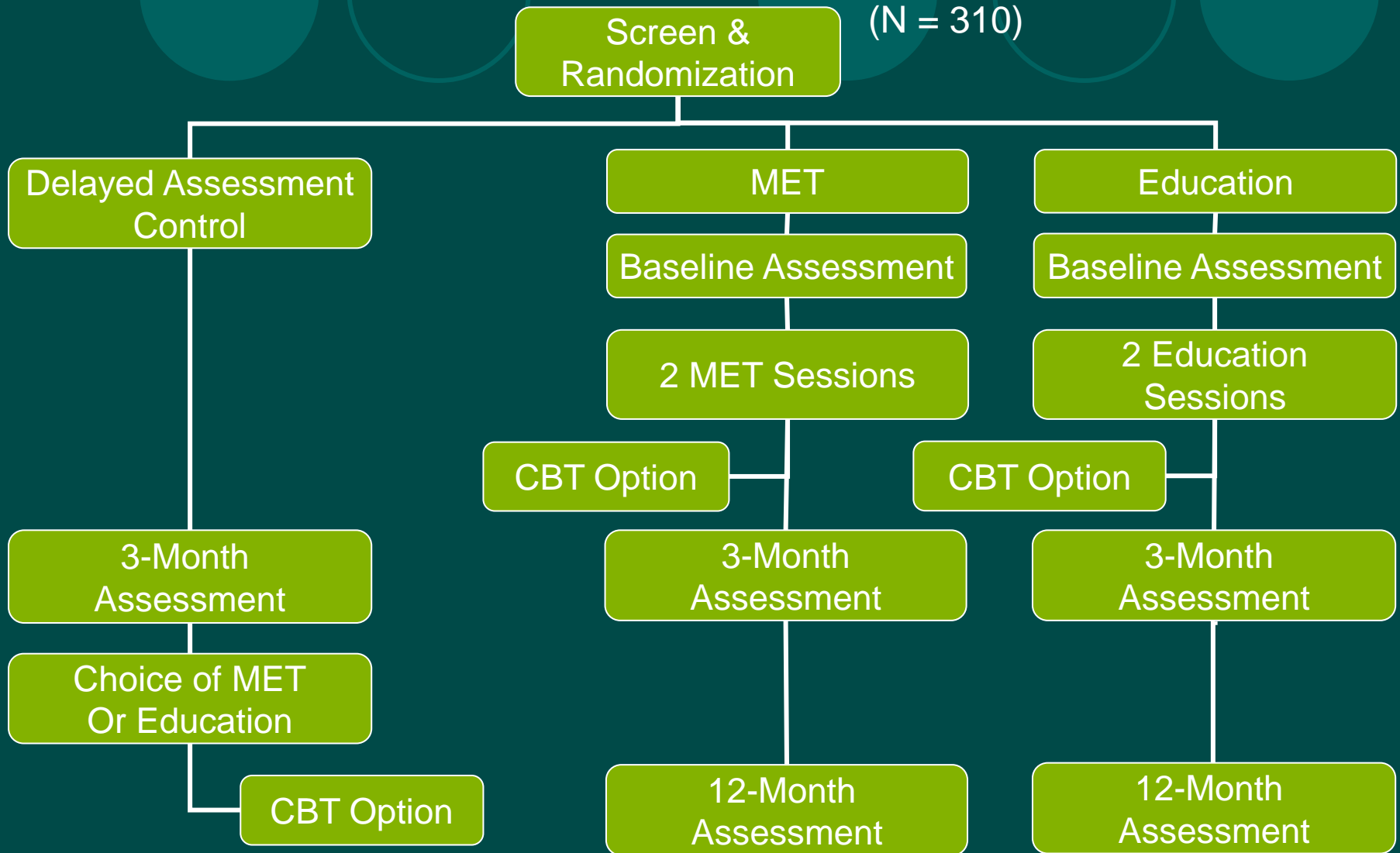
Were reductions in use related to the self-assessment?

Regression towards the mean?

Could MET be enhanced if treatment was available?



# TMCU-3 Study Design



# Eligibility Criteria



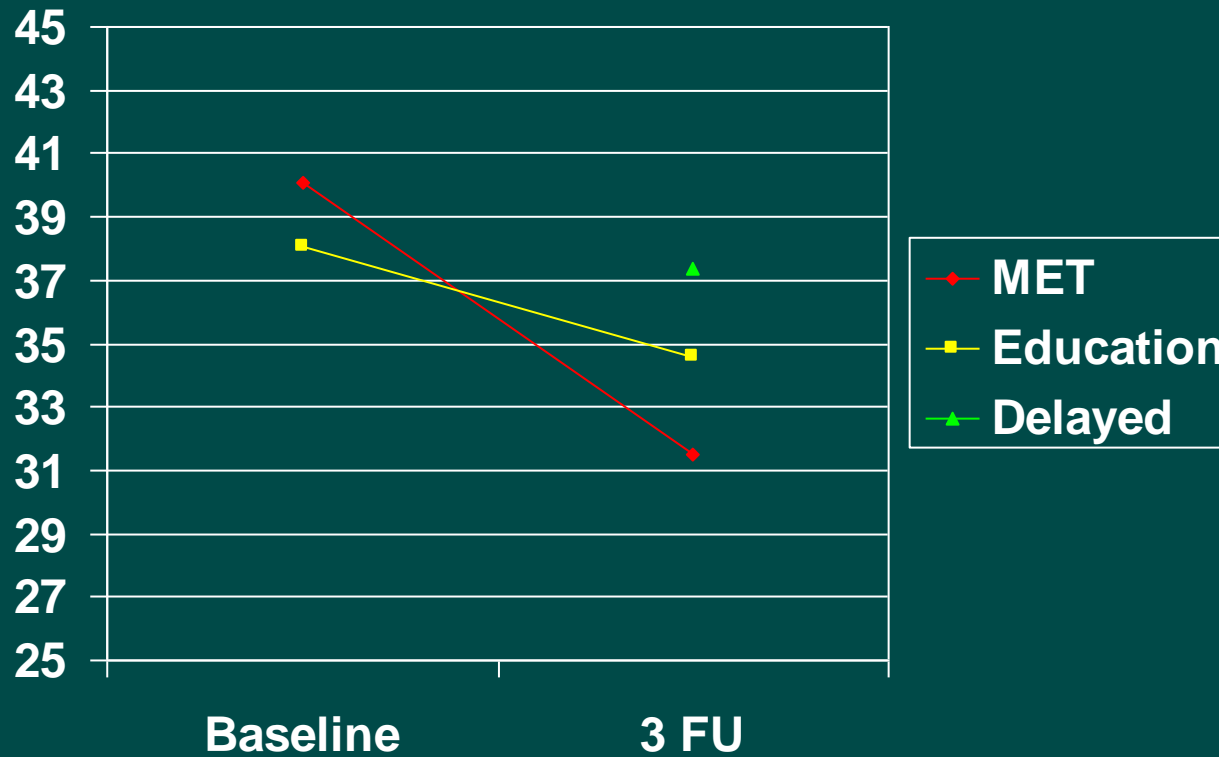
- Ages 14-19
- Used Marijuana on 9 of past 30 days
- In Grades 9-12
- No Evidence of a Thought Disorder
- Fluent in English

# Baseline Drug Use

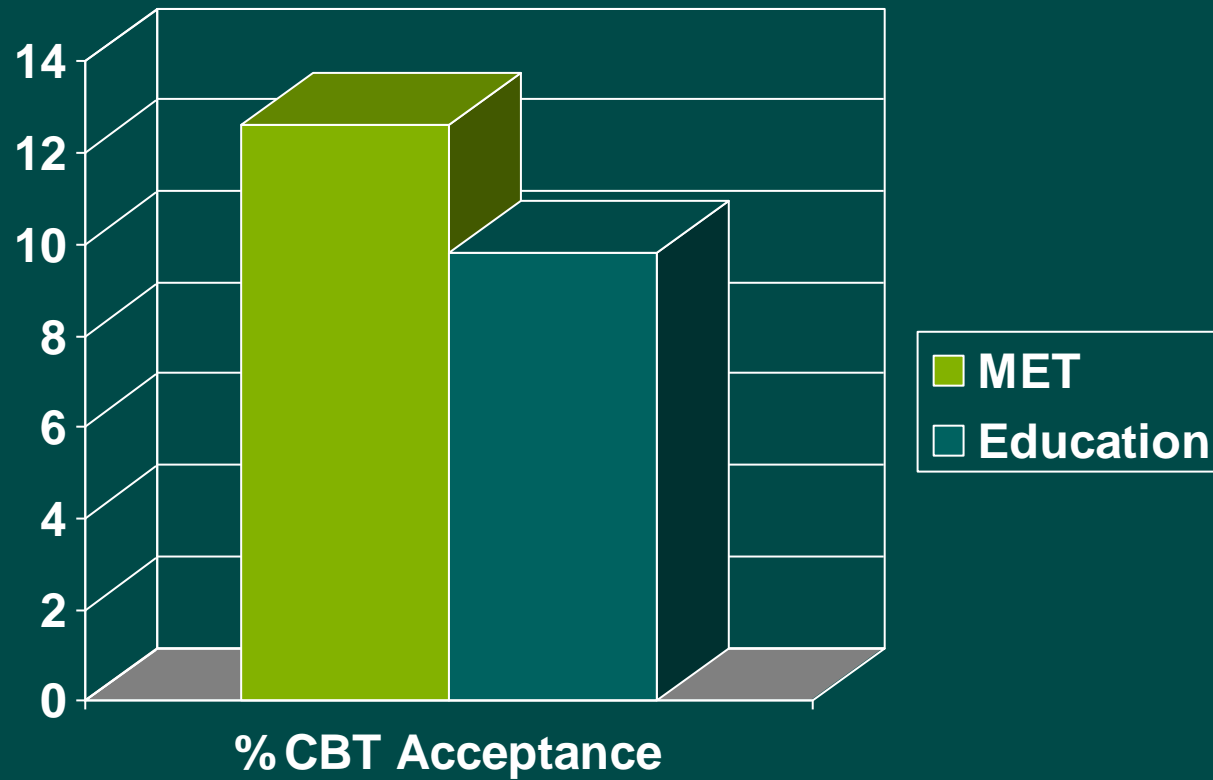
(TMCU-3 Immediate Groups: N=205)

Variable	Mean (SD)
Age at First Use	13.06(1.66)
Ever had tx or counseling for drugs or alcohol?	13%
Days of marijuana use in past 60	38.97(15.2)
Marijuana abuse dx in past 60	75%
Marijuana dependence dx in past 60	62%

# Outcomes: Days of Marijuana Use



# CBT Acceptance

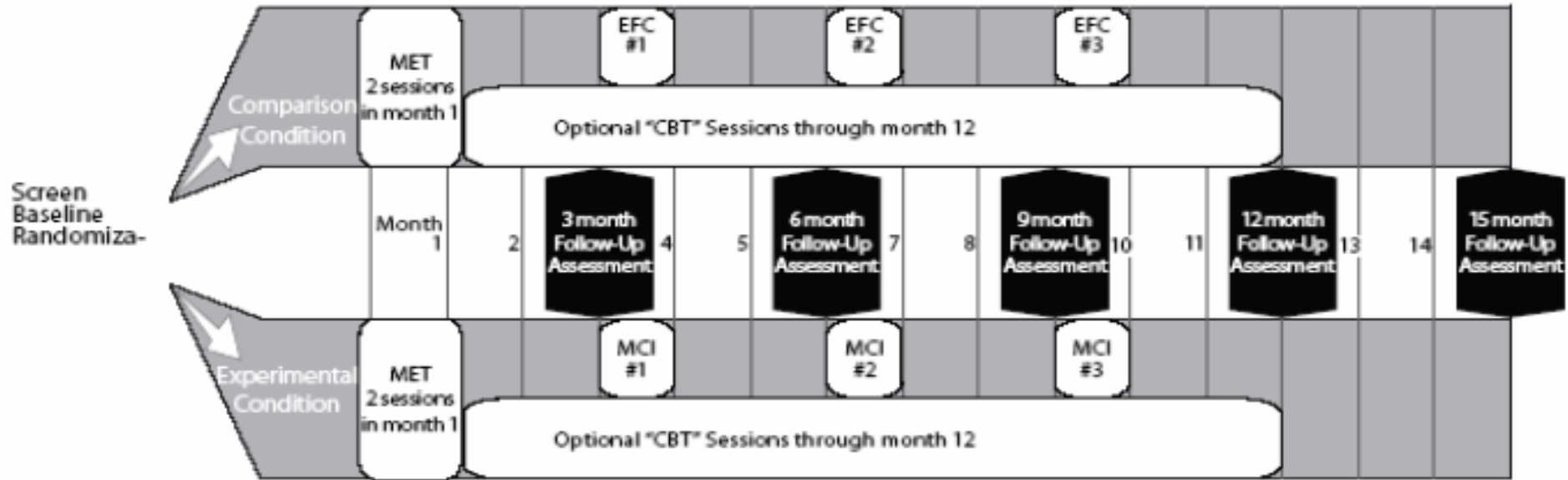




# Conclusions

- Adolescents will volunteer to participate in a marijuana intervention
- Can attract a heavy using sample
- High levels of:
  - Marijuana abuse and dependence
- Unclear how incentives impact attendance rate
- MET reduces marijuana use more than Education or a Delayed control condition
- Unclear how assessment may impact outcomes

# TMCU-4 – Study In Progress



# 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

# Acknowledgements

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NIDA

Contact: Denise Walker, Ph.D.

[ddwalker@uw.edu](mailto:ddwalker@uw.edu)

# *Personal Feedback Report*



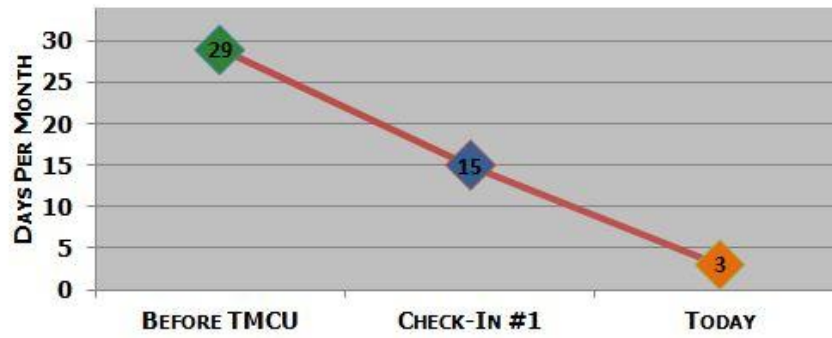
## **Your 2<sup>nd</sup> Check-In Feedback Report**

4/2/2012

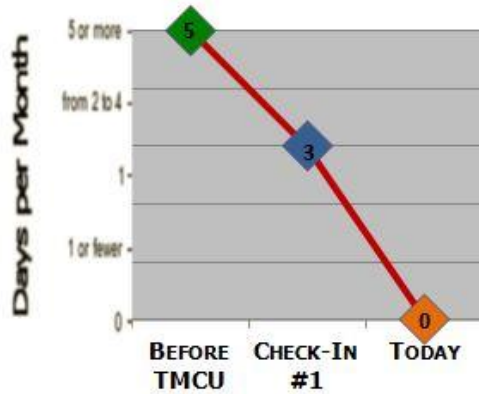
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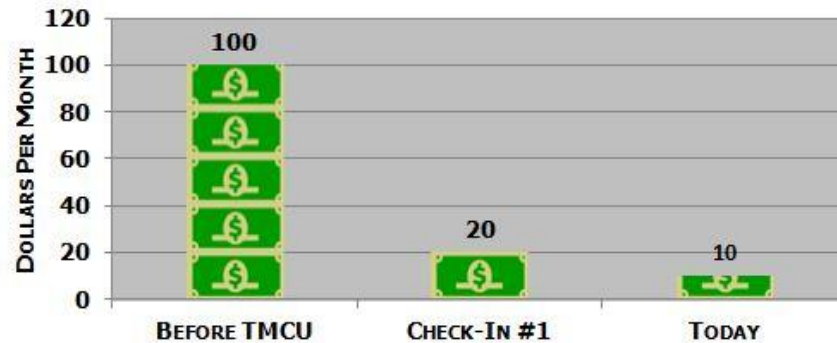
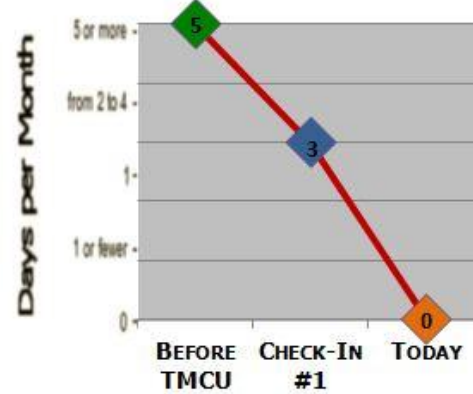
# Marijuana Use



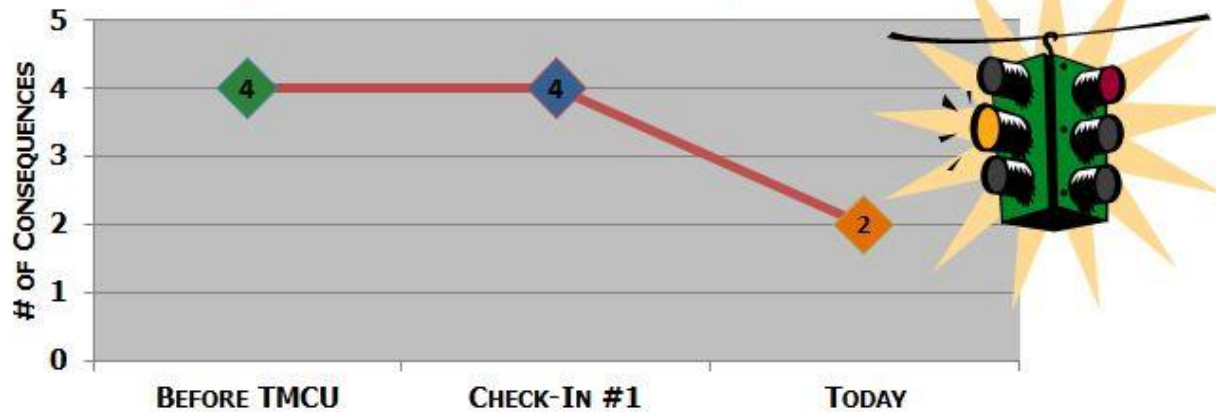
### Before School



### During School

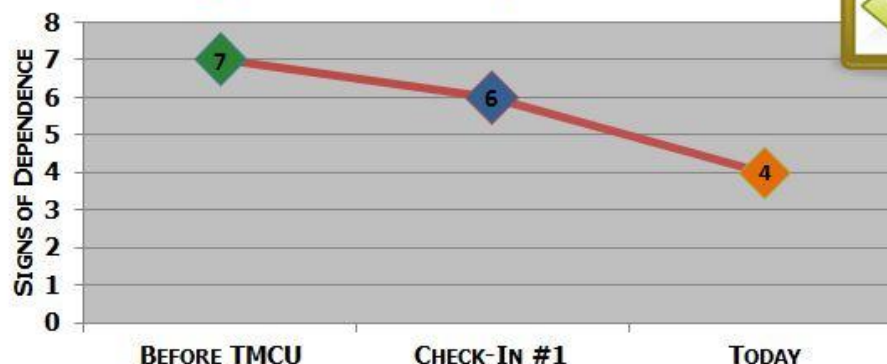


# Marijuana Consequences



	<p>1. You kept using marijuana even though it kept you from meeting your responsibilities at:</p> <ul style="list-style-type: none"> <li>• Home (like doing chores or coming home on time) ⚠️</li> <li>• School (like going to classes, doing homework or studying for tests) ⚠️</li> <li>• Work (like doing a good job or arriving on time)</li> </ul>
	<p>2. You used marijuana where it made the situation unsafe or dangerous for you, like when:</p> <ul style="list-style-type: none"> <li>• You were driving a car or using a machine ⚠️</li> <li>• You were in a situation where you might have been forced into sex or hurt</li> </ul>
	<p>3. You had problems with the law because of your marijuana use.</p>
	<p>4. You kept using even after you knew it was causing problems between you and the people around you.</p>
<p><b>Today, you reported 2 of 4 types of consequences.</b></p>	

# Signs of Dependence



1.	You used marijuana in larger amounts, more often or for a longer time than you meant to.	
2.	You were unable to cut down or stop using marijuana.	
3.	You spent a lot of time either getting marijuana, using marijuana, feeling the effects of marijuana, or waiting for the effects to wear off.	
4.	Your use of marijuana caused you to give up, reduce or have problems at important activities at work, school, home, or social events.	
5.	You kept using marijuana even after you knew it was causing you problems with: <ul style="list-style-type: none"> <li>▪ your health (breathing, coughing)</li> <li>▪ your emotions (feeling less motivated, depressed, or anxious)</li> <li>▪ your memory or concentration</li> </ul>	
6.	You needed more marijuana to get the same high or found that the same amount did not get you as high as it used to.	
7.	You had withdrawal problems from marijuana (like being irritable, anxious, having trouble sitting still or sleeping). You continued to use to avoid or stop withdrawal problems.	
<b>Total</b>		<b>4</b>



**Current risk of marijuana dependence:**

**High**



# Life Goals



<b>Very Negatively 1</b>	<b>Negatively 2</b>	<b>Not Positively or Negatively 3</b>	<b>Positively 4</b>	<b>Very Positively 5</b>
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<b>Your Goals:</b>	<b>Your marijuana use affects this goal:</b>	<b><u>Reducing</u> your marijuana use would affect this goal:</b>
1)		
2)		
3)		
4)		
5)		

# Which Represents You Today?



Stay Tuned.....



Study will be completed in Summer of 2014