Methamphetamine

Part 2

Effective Treatment Approaches

Michael McCann, M.A.
June 21, 2017

Review: key points with clinical implications

- Powerful reflexive, conditioned cravings.
  - Requires behavior change

- Cognitive impairment.
  - Simple, redundant, information
  - Reminders. Write it down.
  - Non-cognitive interventions can be effective (e.g., incentives or exercise)

Review: key points with clinical implications

- Need to engage and retain.
  - They need to be there as a necessary precondition.
  - Minimal delays for initial appointment and treatment initiation
  - Flexible scheduling and accommodating clinic hours
  - Research has shown that the probability of showing up for initial appointment drops by 50% after 24 hours
  - Respond repeatedly to missed appointments (text, call, email)
  - Nonconfrontational and safe

What are some things that work?

- Evidence-based treatments
  - Proven to be successful through research.
  - Have produced consistently positive results.
  - Results are replicated in different settings and with different populations over time.

What works?

- CBT including the Matrix Model
- Contingency Management
- Motivational Interviewing
- Mindfulness
- Exercise

- Programs or counselors using elements of the above

Cognitive/Behavior Therapy
CBT

Behavior Change is Necessary

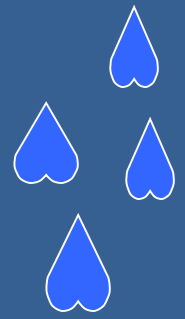
- A Key Premise
  - Classical conditioning and craving
  - The brain and addiction
  - Repeating the same mistakes:

    Denial or Confusion?

Pavlovian Conditioning

Pavlov's Dog

The Conditioned Response



Pavlov's Dog

Conditioning and the Brain: Message to Patients

- Methamphetamine dependence results in powerful conditioned cravings
- Pavlov's dog drooled in response to the bell
- Methamphetamine users' brains "drool" in responses to triggers (people, places, situations)
- "Drool" = changes in the brain = craving

Conditioning and the Brain: Message to Patients

- Will power, good intentions are not enough
- Behavior needs to change
- Insight will not affect cravings

- Deal with cravings: avoid triggers
- Scheduling

Insight is not enough…

“And then it hit me: I’m salivating over a damn bell.”

Elements of CBT

- Present focused
- Early recovery is like walking in a minefield
- Look where you are stepping, not how you got there.
- Treatment focus: defining the areas of risk and strategizing
- Tight structure (detailed schedule) and tethering to treatment (frequent appointments and contacts with calls and texts)

It Takes a While

- Protracted Abstinence: “The Wall”
- Low energy, depression, irritability, craving
- About 45-120 days after last use

The Wall

- Treatment implications
  - Simple communications
  - Redundant messages
  - Frequent visits for an extended period
- Message to patients
  - It takes a while for your brain to heal
  - Don’t make mistakes explaining your feelings (cause may be 90 days ago)
  - Be patient; Don’t give up

CBT Groups

- Focus on the present
- Focus on behavior vs. feelings
- Structured, topics, information, analysis of behavior
- Drug cessation skills and relapse prevention

Sample CBT Group Handout

Be Smart, Not Strong

"I can be around alcohol or other drugs. I am certain I don't want to use, and once I make up my mind, I'm very strong."

• • •

"I have been doing well, and I think it's time to test myself and see if I can be around friends who are using. It's just a matter of willpower."

• • •

"I think I can have a drink and not use drugs. I never had a problem with alcohol anyway."

Staying free of alcohol and other drugs takes more than just strength or will power. People who maintain abstinence do it by being smart. They know the key is to keep far away from relapse situations. The closer you get to substances, the more likely a relapse becomes. If alcohol or other drugs appear unexpectedly and you are close to them and/or to friends who are drinking and using, your chances of using are much greater than if you weren't in that situation. Smart people stay sober by avoiding triggers.

Relying on intentions

Moving towards triggers

DON’T BE STRONG. BE SMART.

How smart are you being? Rate how well you are doing in avoiding relapse:

	POOR	FAIR	GOOD	EXCELLENT
1. Practicing thought stopping	1	2	3	4
2. Scheduling	1	2	3	4
3. Keeping appointments	1	2	3	4
4. Avoiding triggers for substance use	1	2	3	4
5. Not using alcohol	1	2	3	4
6. Not using other drugs	1	2	3	4
7. Avoiding alcohol and other drug users	1	2	3	4
8. Avoiding places with alcohol and other drugs	1	2	3	4
9. Exercising	1	2	3	4
10. Choosing healthy eating habits	1	2	3	4
11. Being truthful	1	2	3	4
12. Going to Twelve Step or other recovery support meetings	1	2	3	4

Total Recovery IQ _____

BE SMART, NOT STRONG *continued*

Is there an area you want to improve?

_____
_____
_____
_____
_____
_____
_____
_____
_____

How do you plan to do that?

_____
_____
_____
_____
_____
_____

Relapse Analysis

- An exercise done when relapse occurs after a period of sobriety
- Identify the causes of relapse and develop a prevention plan for the future
- Relapse should be framed as learning experience for client

Contingency Management

Contingency Management (CM)

- CM: application of reinforcement contingencies to urine results or behaviors (attendance in treatment; completion of agreed upon activities).

Contingency Management

- Where does it fit in to our usual notions of “treatment”?

Elements of Treatment:
Information, Persuasion, and Medication

- Information
  - Matrix Model
  - CBT
  - 12-Step
- Persuasion
  - Motivational Interviewing
  - Confrontation
  - Contingency Management
- Medication (none yet)

Engagement and Retention

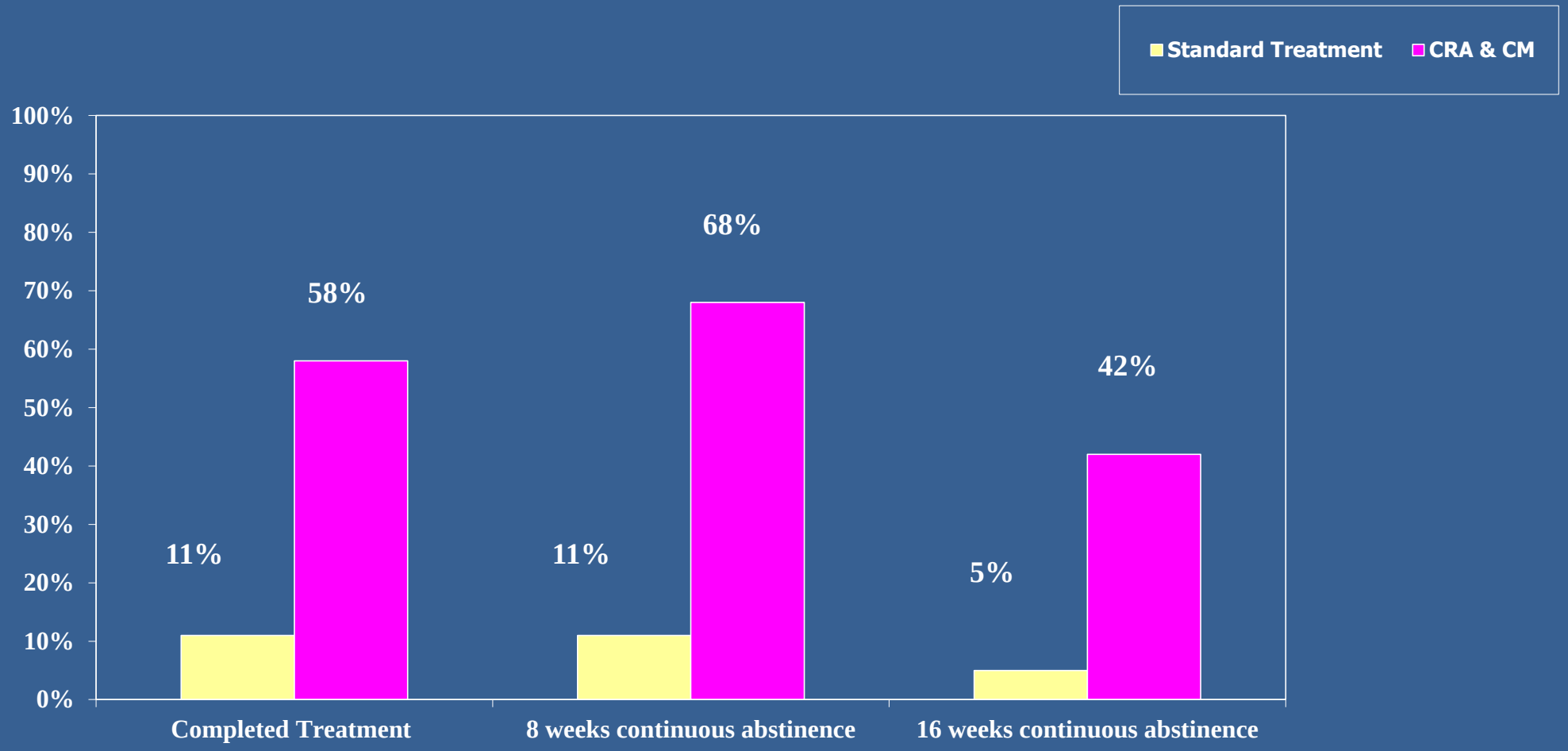
- Strategies for engaging and retaining
  - Warmth and empathy
  - Flexibility
  - A safe environment
  - Motivational interviewing approach
  - Contingency management

Contingency Management: One example

Steve Higgins, Ph.D., 1993

- Community Reinforcement Approach (CRA)
  - Marital therapy, vocational assistance, skills training
  - New social and recreational activities
  - Antabuse
- Vouchers
  - Start at $2.50 and increase $1.25 with $10 bonus for 3 drug-free urines per week
  - Max possible = $977

Contingency Management:
Higgins et al., 1993



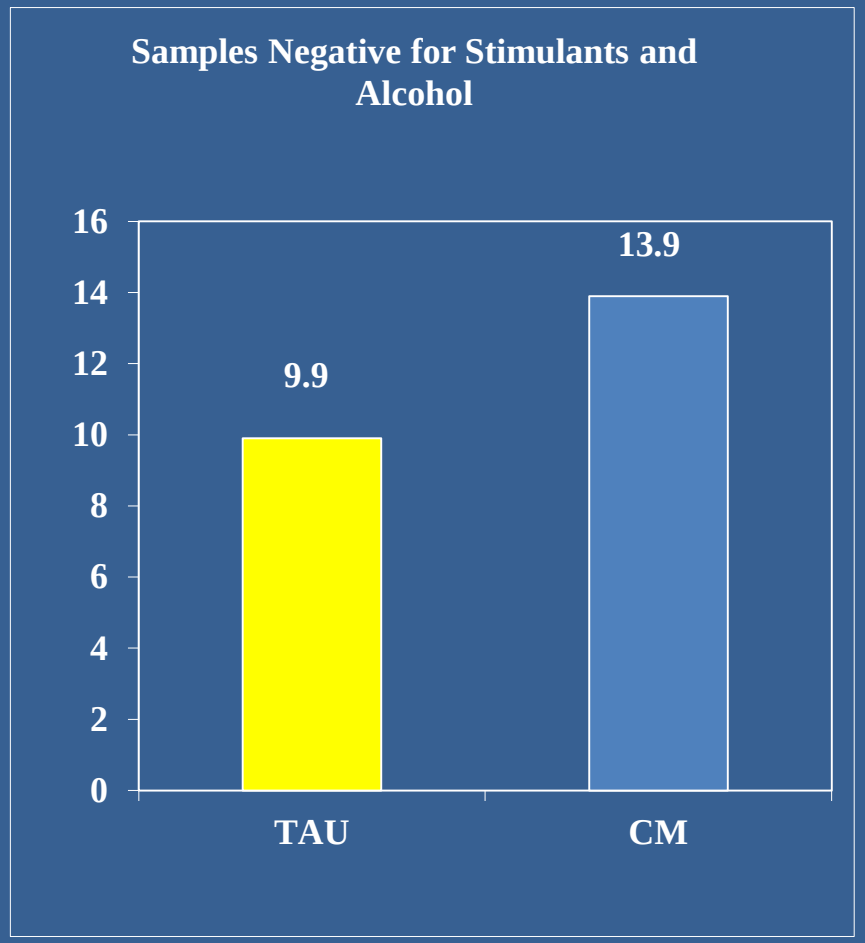
CM with Methamphetamine Users

Roll et al, 2006

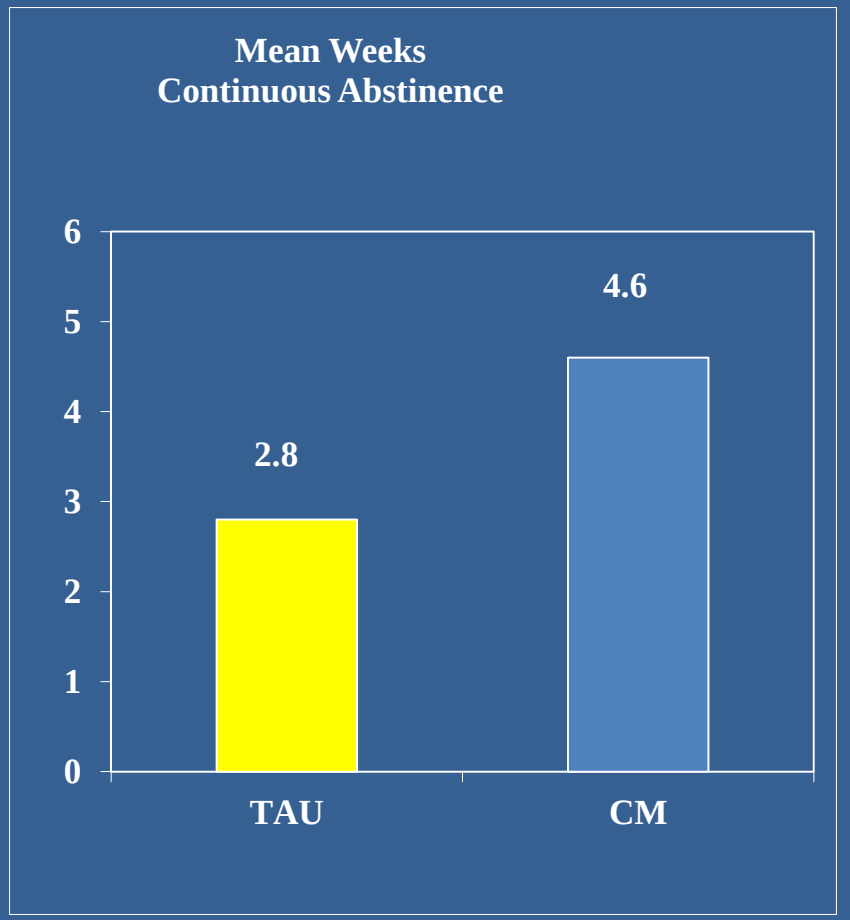
- NIDA Clinical Trials Network
- 113 methamphetamine users
- TAU, or TAU plus CM
- 12 week; 2 urine samples per week
- Fishbowl drawings (50% “good job”; 42% worth $1-$5; 8% worth $20; 1 worth $80-$100)
- Max possible about $400

CM with Methamphetamine Users

Roll et al, 2006



t=2.55 p=.01



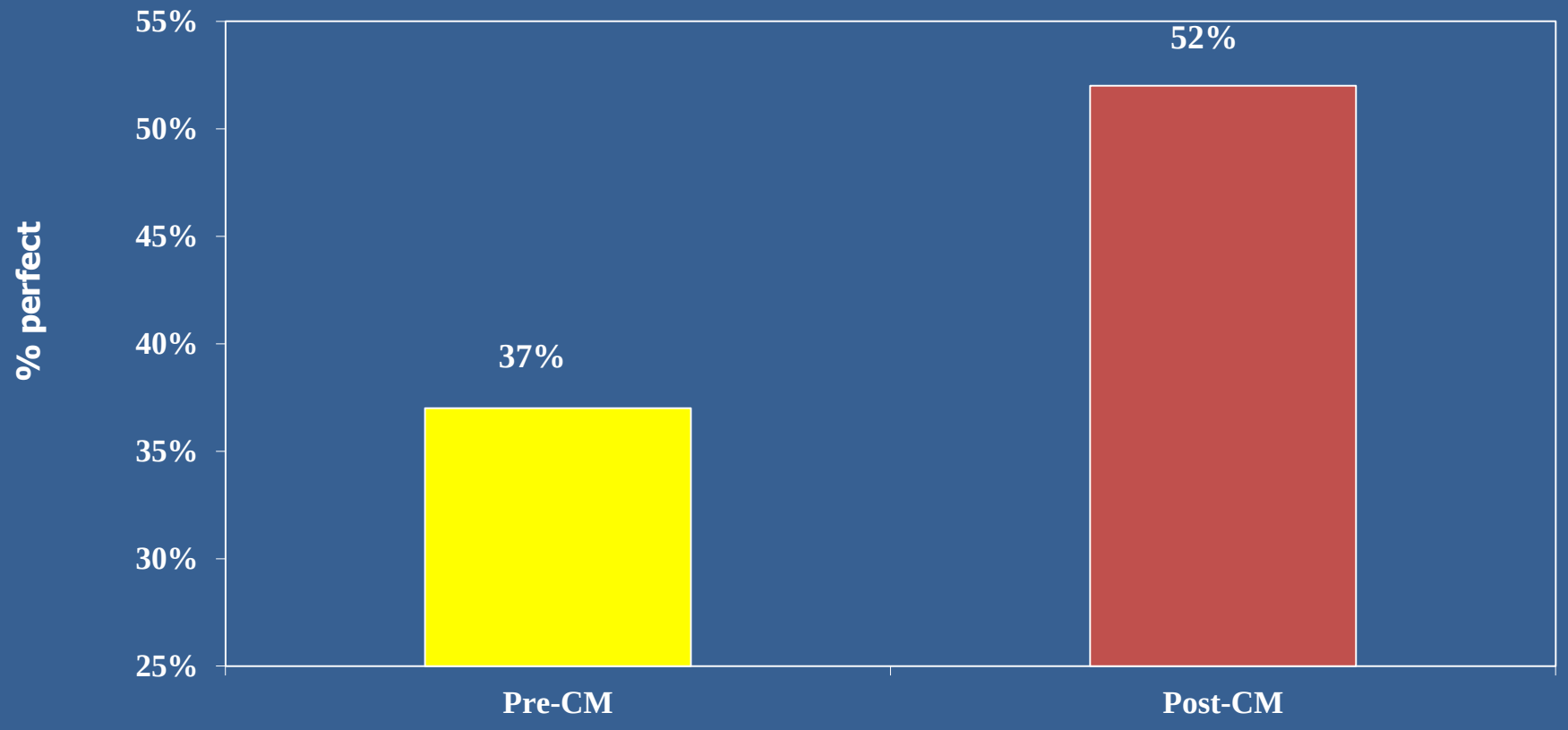
t=2. 38 p=.02

CM in Practice in an OTP: Low Cost & Simple

- $5 gift card per month for perfect group attendance
- $5 gift card per month for perfect medication attendance
- Easy to track
- Less expensive than CM in research

Perfect medication attendance

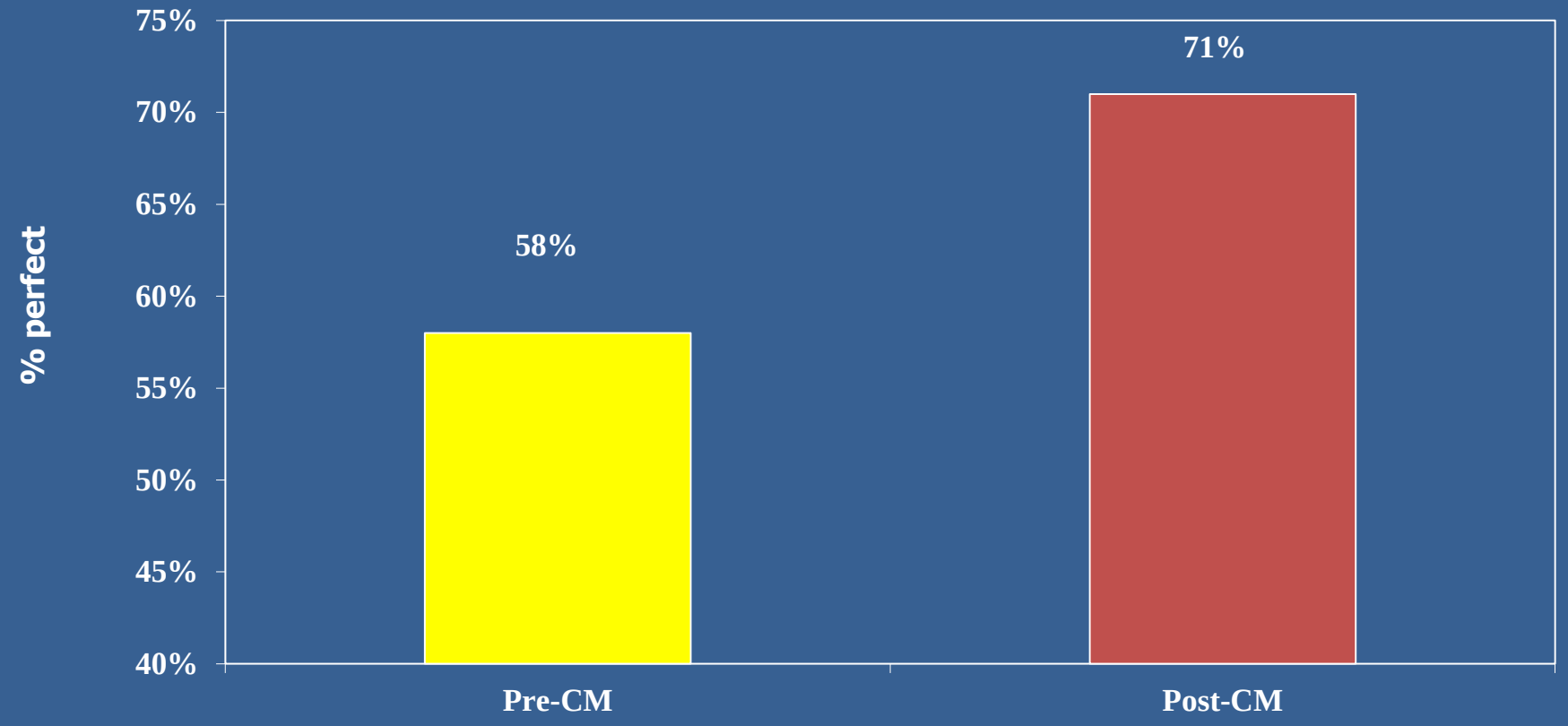
n=49



P<.05

Perfect group attendance

n=49



P<.01

Other CM Examples

- Donuts, cookies, pizza for attendance or urine results
- Start of group goodies for on time people
- Preferred parking
- Chips
- Certificates or plaques for accomplishments
- Local businesses may donate

CM in Practice: Challenges

- Must be simple
  - Easy to track target behaviors
  - Little burden on the counselor or administrative staff (can't reward patients and punish staff)

CM in Practice: Challenges

- Must be inexpensive
  - A less expensive method may be a bit less effective, but an expensive method will never be used.
  - Caution: reward magnitude may have a lower limit
  - A little reward goes a long way especially combined with praise and recognition

CM in Practice: More Challenges

- Addressing staff resistance
  - Patients should not have to be “paid” or “bribed”; recovery is the reward
  - Motivation needs to come from within
- Reframe CM as an engagement and retention technique along with traditional interventions and approaches

Motivational Interviewing

Motivational Interviewing: Definition

- A directive, client centered counseling style for eliciting behavior change by helping clients explore and resolve ambivalence.

- Designed to produce rapid, internally motivated change.

Motivational Interviewing and Ambivalence

Assumptions:

- Ambivalence is normal.
- Ambivalence may be resolved by tailoring your intervention to the individual.
- Your relationship with the patient is collaborative in nature.
- Confrontation can present a barrier to eliciting behavior change.
- Work with the client, not on the client.

Five Principles of Motivational Interviewing

1. Express empathy through reflective listening.
2. Develop discrepancy between patients' goals or values and their current behaviors.
3. Avoid argument and direct confrontation.
4. Adjust to client resistance.
5. Support self-efficacy and optimism.

Express Empathy

- Acceptance facilitates change
  - Not the same as agreement or approval
  - Does not prohibit the counselor from differing with the client's views and expressing that divergence
- Reflective listening is fundamental

Develop Discrepancy

- Change is motivated by a perceived discrepancy between present behavior and goals.
- People are more persuaded by what the hear themselves say than by what other people tell them.
- The client rather than the counselor should present arguments for change
- “You mentioned that your motivation to quit using is a 10 and your confidence is a 9. Yet, you haven’t quit yet. What do you make of this?”

Roll With Resistance

- Avoid arguing for change
- Don’t push against resistance (people tend to stiffen, or push back).
- New perspectives are not imposed.
- The client is the person finding answers and solutions.
- Resistance is a signal to respond differently.

Support Self-efficacy

- A person's belief in the possibility of change is an important motivator.
- The client, not the counselor is responsible for choosing and carrying out the change.
- The counselor's belief if the person's ability to change becomes a self-fulfilling prophecy.

By contrast…

- “Why are you still using”?
- “Are you serious about this program”?
- “Why aren’t you working harder at recovery”
- “I don’t think you’re ready for treatment”
- The “my way or the highway” approach

An opinion

- I think in many instances counselors are coaches and teachers
- Never confrontational, but sometimes we need to be speaking and directing a bit more than is typical with MI
- An MI approach is an important and essential tactic when dealing with many clinical situations, particularly resistance.

- *With the threat of powerful, explosive cravings and relapse, we don't always have time to wait for the client to find the answers.*

Mindfulness

Mindfulness

- An approach to life based on Zen traditions
- A particular way of paying attention to the present moment
- Moment-to-moment, non-judgmental awareness

‘‘awareness that emerges through paying attention, on purpose, in the present moment, and non-judgmentally to the unfolding of experience moment by moment’’ (Kabat-Zinn, 2003, p. 145).

Mindfulness-Based Stress Reduction (MBSR)

- Developed by Jon Kabat-Zinn at University of Massachusetts Medical Center, initially for chronic pain
- Eight-week program
- Now used as an adjunct to treatment for a wide range of illnesses

MBSR Studies with many disorders

- Chronic pain (Kabat-Zinn)
- Depression (Segal)
- Fibromyalgia (Kaplan)
- Anxiety (Kabat-Zinn)
- Binge eating (Kristeller)
- Substance use disorders (Marlatt, Marcus)
- Change in Brain & Immune Function (Davidson)

Why Target Stress in Substance Users?

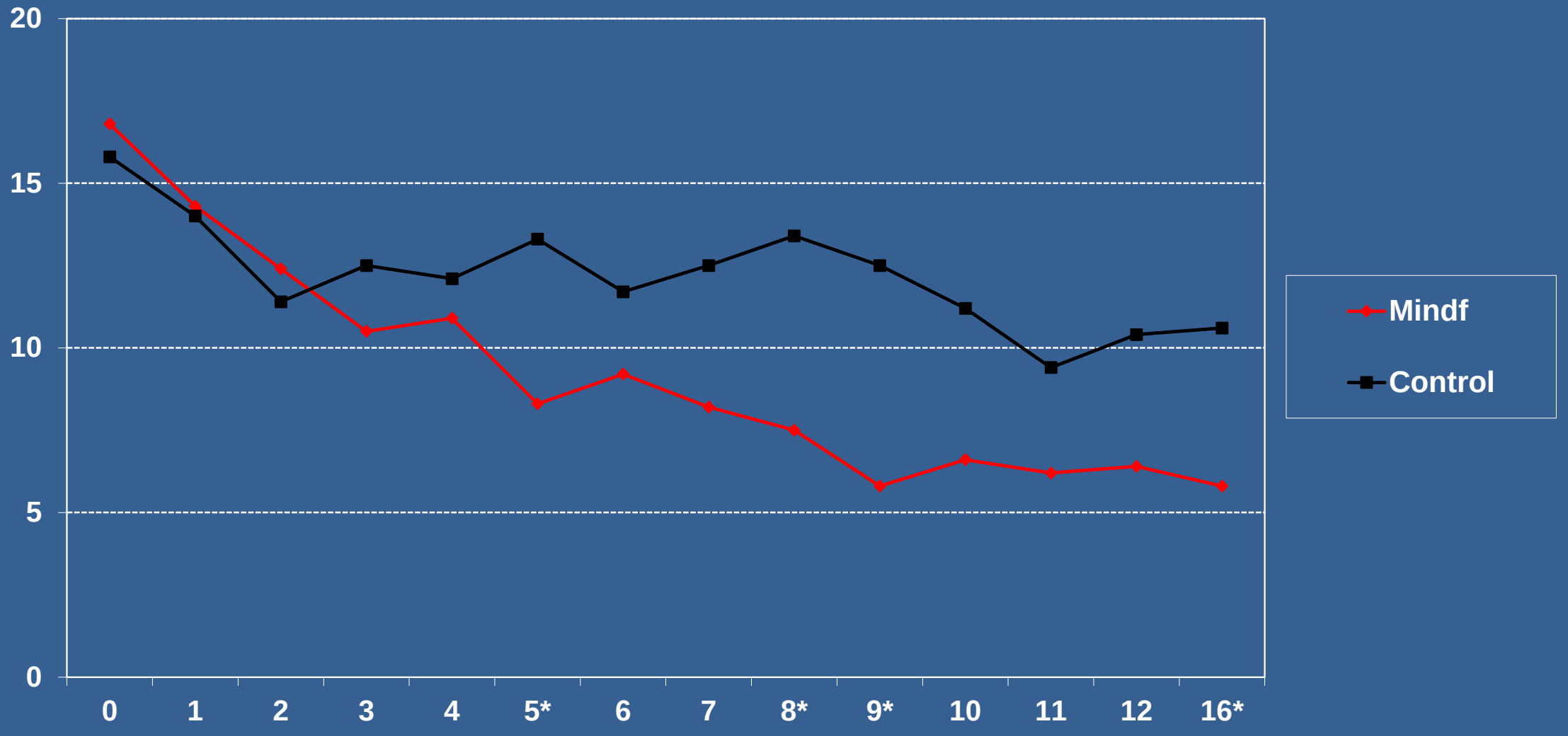
- Exposure to emotional stress contributes to drug relapse (Sinha, 2006; 2007, Back et al., 2010)
- Substance users have deficits in their ability to process and regulate stress; brain changes make it harder to access healthy coping strategies (Sinha, 2008)
- Targeting stress reactivity and stress-induced craving could improve outcomes for substance users

Research Evaluation of Mindfulness for Stimulant Users

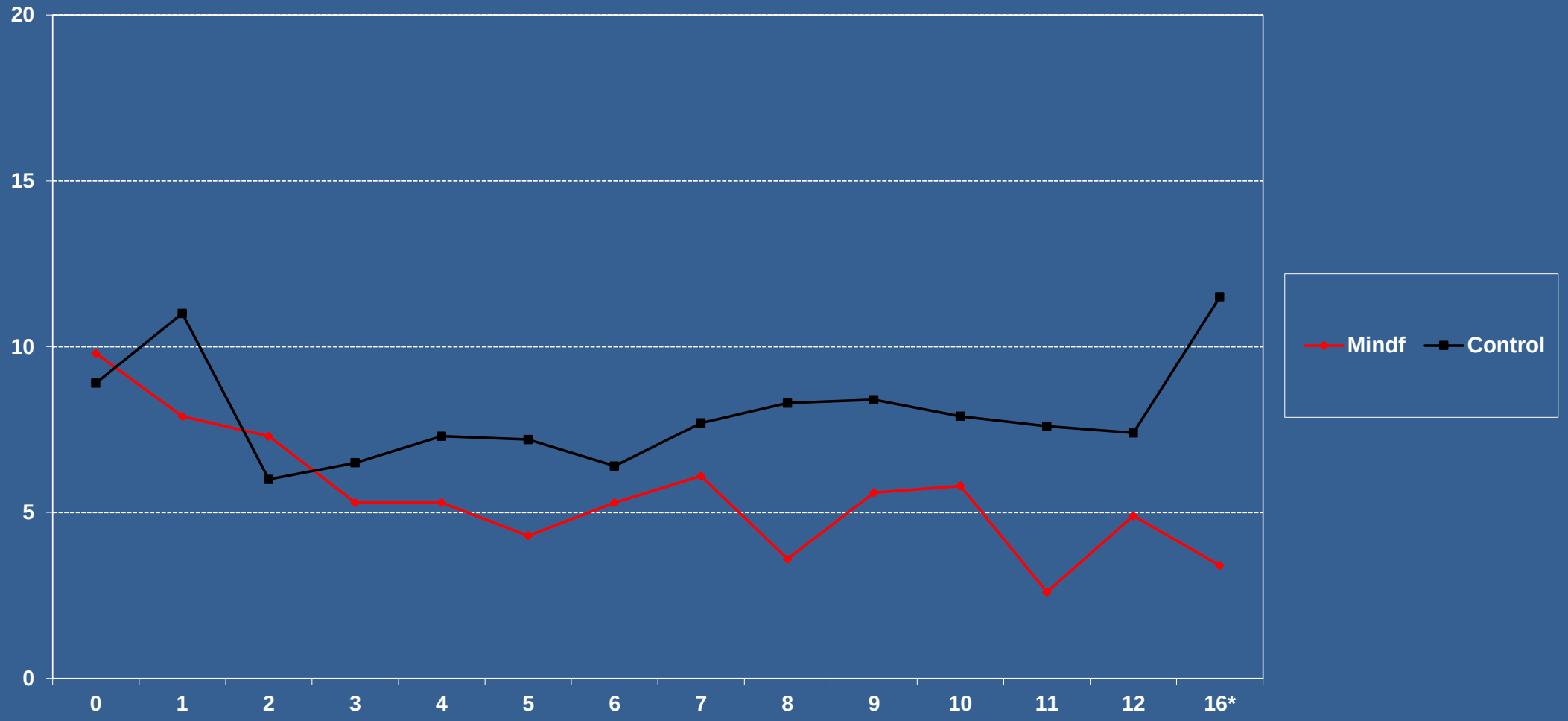
Suzette Glasner-Edwards, PhD, UCLA

- Participants receive treatment plus either 12 weeks of:
  - Mindfulness Group
  - Health Education Group
- Rationale: frequent complaints among stimulant users in early treatment include depressive and anxiety symptoms
- Mindfulness was expected to improve emotional regulation, and reduce stress, thereby reducing relapse susceptibility.

Results: Beck Depression Inventory



Results: Beck Anxiety Inventory



Mindfulness for Anxious and Depressed Stimulant Users

- Mindfulness was particularly helpful for those with major depression and generalized anxiety disorder.

- Those with major depression who received mindfulness provided fewer stimulant-positive urines compared to depressed stimulant users in the Health Education control condition

- Those with GAD who received mindfulness were less likely than those who received Health Education to produce stimulant-positive urines

Conclusions

- Stimulant users with clinical depression and anxiety benefit the most from this approach in terms of its effects on stimulant use.
- Mindfulness reduces negative affect, stress reactivity, psychiatric impairment, and stimulant dependence severity.
- Note: free mindfulness apps are available

Exercise

Physical Exercise

- Rawson, R. A., et al. (2015). "Impact of an exercise intervention on methamphetamine use outcomes post-residential treatment care."

Exercise Reduces Depression

Exercise interventions are useful in the treatment of a wide range of psychiatric conditions, including depression.

- Aerobic exercise interventions have been shown to reduce depressive symptoms (Dunn et al., 2005; Trivedi et al., 2006; Blumenthal et al., 1999).

- Exercise has been found to have benefits when compared to medication, group therapy, and cognitive-behavioral therapy (Greist et al., 1979; Klein et al., 1985; Freemont & Craighead, 1987).

Exercise Reduces Anxiety

- Anxiety has been shown to acutely diminish after episodes of exercise (Raglin & Morgan, 1987).
- Aerobic exercise has been demonstrated to help in the treatment of adults with moderate to severe panic disorder (Broocks et al., 1998) .
- A 2-week exercise intervention significantly reduced anxiety relative to no treatment control (Smits et al., 2008) .

Exercise for Methamphetamine Dependence

- Residential treatment participants randomized to 1 hour, 3 d/wk of exercise training (EX) or health education (ED) over the 8-wk study period
- **EX**: 30 minutes aerobic exercise on treadmill, followed by 15 minutes resistance training of major muscle groups, 5 minute cool-down (light stretching)
- **ED**: equal attention via health and wellness education sessions delivered by counselor.
- Follow up at 1, 3, and 6 months after treatment discharge

Exercise Results

- Lower severity methamphetamine users had significantly fewer positive urine results at the 3 follow-up points

- Exercise group participants had significantly lower scores on a measure of depression compared to the ED group over the 8-week treatment period.

- Exercise group participants had significantly lower scores on a measure of anxiety compared to the ED group over the 8-week treatment period.

Conclusions

- Exercise can be a useful adjunct to treatment.
- May be particularly useful with low severity users.
- May be effective in improving symptoms of anxiety and depression associated with methamphetamine abstinence.

Final Word

- All of the treatments discussed today have some research support for effectiveness.
- No medication has been FDA-approved for methamphetamine dependence
- Clinical training is scheduled for July 26, 2017 in Chippewa Falls with Sam Minsky, MFT


Thank you,
Mickey McCann