National Core Curriculum –Three Hour Virtual Overview

Part 3: Stimulants: Effective Treatment Approaches and Recovery Supports

ATTC

addiction Technology Transfer Center Network

Funded by Substance Abuse and Mental Health Services Administration

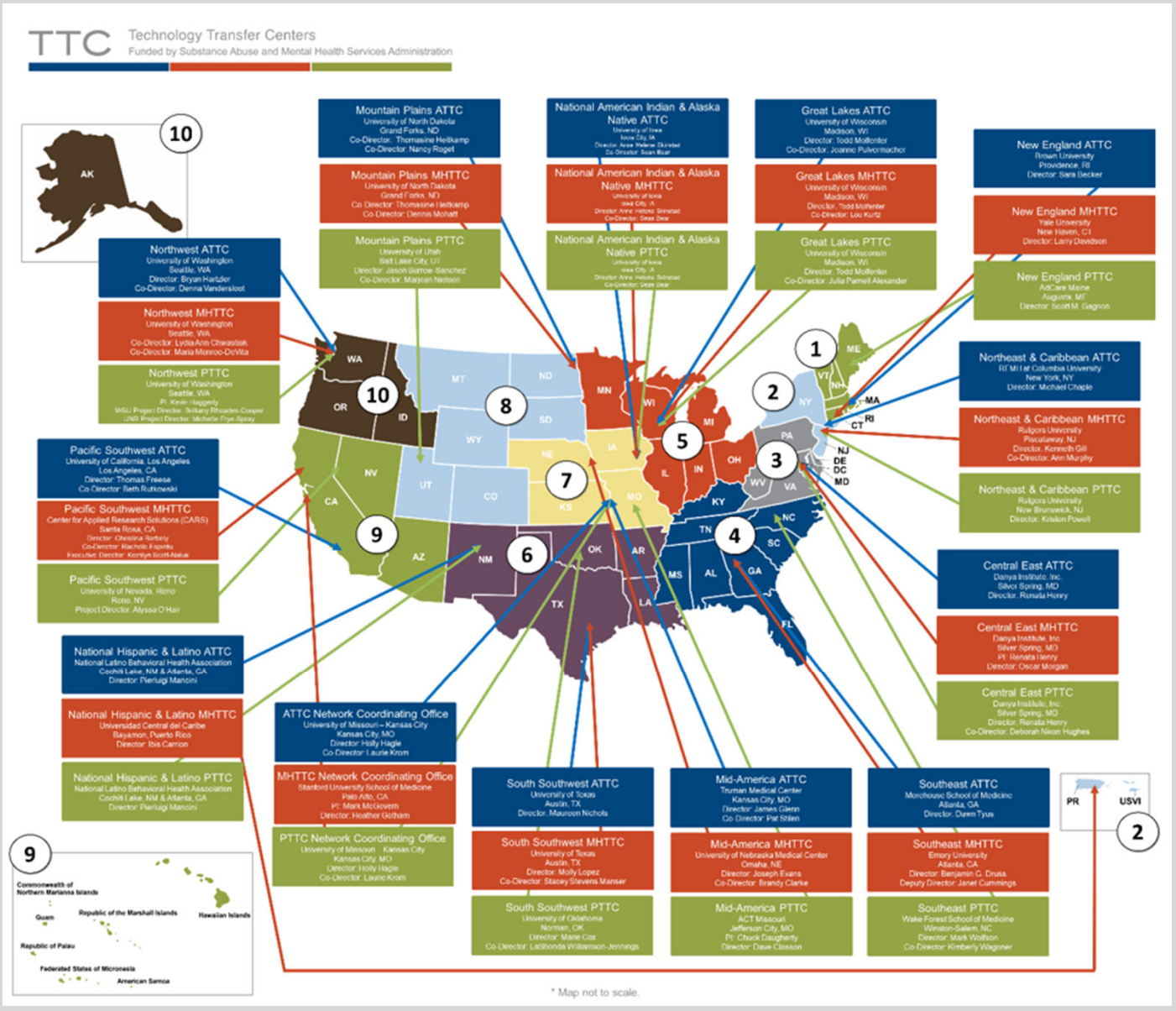
Curriculum Overview and Introductions

SAMHSA
Substance Abuse and Mental Health Services Administration

About the ATTC Network

- **The ATTC Network is an international, multidisciplinary resource for professionals in the addictions treatment and recovery services field.**
- Established in 1993 by the Substance Abuse and Mental Health Services Administration (SAMHSA), the ATTC Network is comprised of 10 U.S.-based Centers, 2 National Focus Area Centers, and a Network Coordinating Office.
- Together the Network serves the 50 U.S. states, the District of Columbia, Puerto Rico, the U.S. Virgin Islands, and the Pacific Islands of Guam, American Samoa, Palau, the Marshall Islands, Micronesia, and the Mariana Islands.

The U.S.-Based TTC Network



ATTC Stimulant Workgroup Members

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- Thomas E. Freese, Region 9
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- Mary McCarty-Arias, Region 2
- Maureen Nichols, Region 6
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Stimulant 101 National Curriculum

- Core Daylong Curriculum
- Condensed Three-Hour Virtual Overview
- Supplemental Modules
  - Child welfare issues, gender differences, stimulant use in the context of polysubstance use, rural vs. urban differences, stimulants and HIV, and recovery approaches
- Culture Modules
  - African American, American Indian/Alaska Native, and Latinx Populations

Three-Hour Virtual Overview

- Core Curriculum content provided in three 1-hour sessions:
  - Part 1: Stimulants - What are they and who uses them?
  - Part 2: Impact of Stimulant Use on the Brain and Body
  - Part 3: Effective Treatment Approaches and Recovery Supports

Core and Virtual Curriculum Authors

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- **UCLA Integrated Substance Abuse Programs Training Department**

Daylong Curriculum Outline

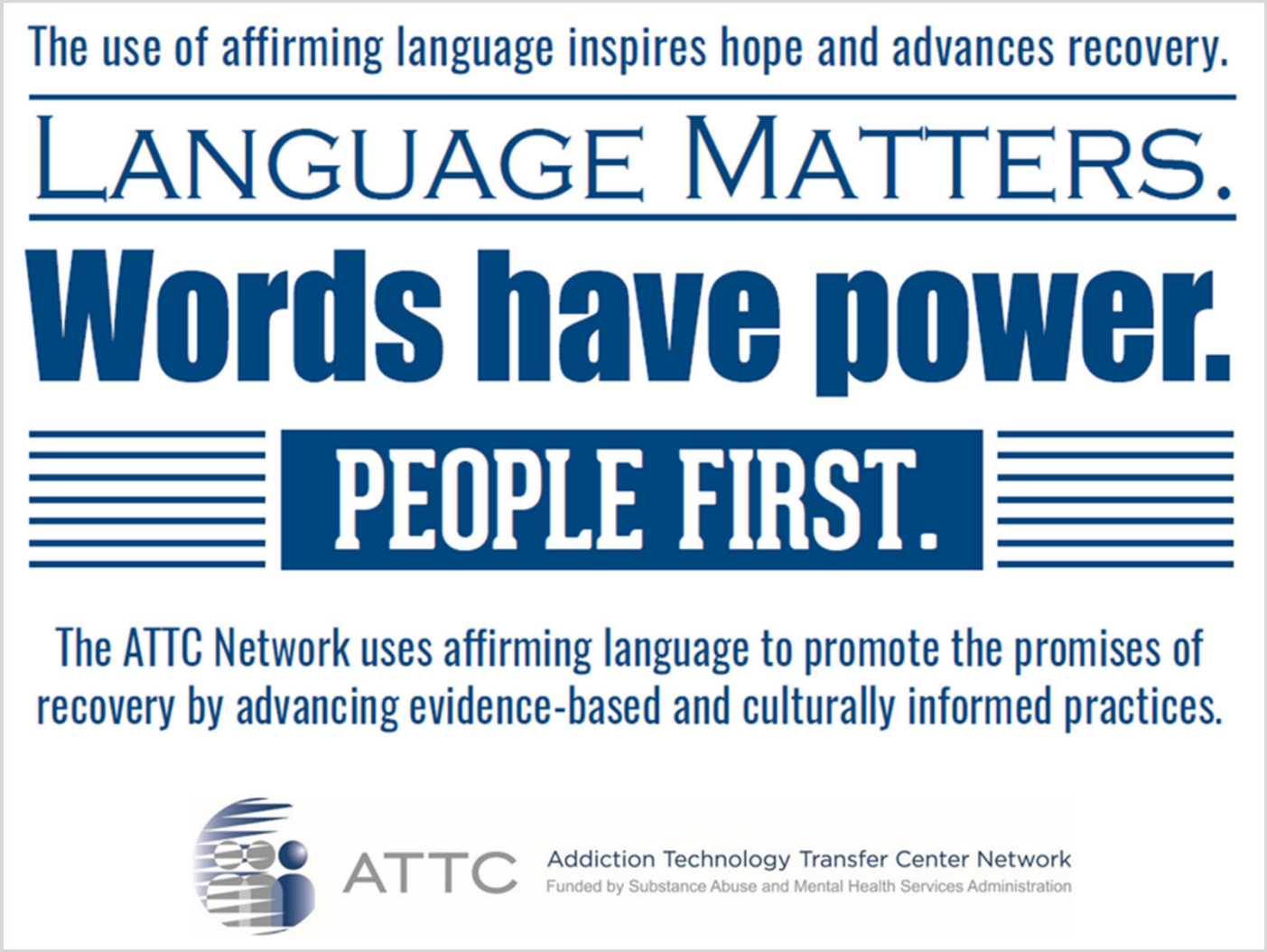
- **Module 1:** Curriculum Overview and Introductions
- **Module 2:** The Scope of Stimulant Use in the United States and Beyond
- **Module 3:** Impact of Stimulant Use on the Brain and Body
- **Module 4:** Stimulant Use among Populations with Unique Concerns
- **Module 5:** Stimulants and HIV
- **Module 6:** Treatment Considerations for People who Use Stimulants
- **Module 7:** Long-Term Recovery Supports

Educational Objectives

At the end of Part 3 of the Stimulant 101 virtual training, participants will be able to:

1. Apply at least two specific behavioral treatment interventions and two recovery approaches that have been proven effective in treating people with a stimulant use disorder.
2. Specify at least two ways that physical exercise affects stimulant use.
3. Recall two definitions of recovery.

Language Matters



SOURCE: Mid-America ATTC, 2017

Part 3 – Stimulant 101 Virtual Overview

Treatment Considerations for People who Use Stimulants

SAMHSA
Substance Abuse and Mental Health Services Administration

Now Let's Meet Angela

- 32 year-old Caucasian woman living in a small rural town outside of Sacramento, CA
- Single mom of three children ranging in age from three to 12
- Works two part-time jobs (one as a bartender and one as a house cleaner)
- History of alcohol and marijuana use since she was a teenager
- Started using methamphetamine 2 years ago to lose a little weight to feel more attractive while dating

More about Angela

- Angela's methamphetamine use has escalated in the last 6-months after she began dating John, a local drug dealer
- Angela has lost a significant amount of weight and experiences bouts of severe depression and anxiety
- She's estranged from her mom, who in the past was a constant source of support for her and her three children
- Angela was fired from her bartending job, and is having trouble making ends meet with her housekeeping job as the sole source of income

What Can We Do To Help Angela?

- John has begun getting violent with Angela and she fears for the safety of herself and her children
- She's afraid if she doesn't stop using meth, CPS is going to take her kids away
- Angela doesn't know where to turn, since her mom won't return her calls and her close friends are all fed up with her
- What strengths & supports exist in Angela's life/community?
- What are the issues that need to be addressed?
- What specific services can you offer to Angela as part of her care?
- What are the top 3 care coordination strategies?

Good news does exist…

Healing is Possible

SOURCE: Meyers, 2008

Treatments for Stimulant Use Disorders – Medications

Polling Question #1

Are there Medications for the Treatment of Stimulant Use Disorder?

- Yes
- No

Are there Medications for the Treatment of Stimulant Use Disorder?

- The short answer is NO
- A few medicines have had positive results in clinical trials
- To date, these medicines have not demonstrated reproducible results
- Much more research is needed to determine the overall efficacy of these medicines

SOURCE: Skolnick, 2015

What Do the Results from the Latest Methamphetamine Medication Trial Tell Us?

- Multi-site, double-blind, two-stage, placebo controlled trial to evaluate the efficacy and safety of extended-release injectable naltrexone plus oral extended-release bupropion
- 403 participants enrolled in stage 1; 225 participants enrolled in stage 2
  - Stage 1: 18 of 109 participants (16.5%) in the naltrexone-bupropion group and 10 of 294 (3.4%) in the placebo group had a response
  - Stage 2: 13 of 114 (11.4%) in naltrexone-bupropion group and 2 or 111 (1.8%) in the placebo group had a response

SOURCE: Trivedi et al., 2021

Treatments for Stimulant Use Disorders – What Do We Know?

SOURCES: Luchansky et al., 2007; Roll et al., 2006; Copeland & Sorensen, 2001; Huber et al., 1997

Contingency Management

(also known as Motivational Incentives)

Contingency Management (1)

- Based on pioneering work of Steven Higgins & colleagues at the University of Vermont
- Very powerful approach for achieving initial abstinence from numerous drugs of abuse
- Patients adhering to targeted behavior (i.e. drug abstinence, attendance, attending job training, etc) are positively reinforced

SOURCES: Davis et al., 2016; Higgins & Petry, 1999

Contingency Management (2)

A technique employing the systematic delivery of positive reinforcement for desired behaviors. In the treatment of methamphetamine dependence, vouchers or prizes can be “earned” for submission of methamphetamine-free urine samples.

SOURCE: NIDA, 2020

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)

SOURCE: NIDA, 2020

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

SOURCE: NIDA, 2020

Contingency Management Apps

- **DynamiCare** Health is a platform for families and individuals that reinforces a person's recovery from addiction and rewards healthy behavior. DynamiCare's easy-to-use technology includes random breath and saliva tests submitted through the app, verified treatment attendance check-ins, a supportive Recovery Coach, rewards for healthy progress, and a dashboard for supporters. www.dynamicarehealth.com.
- **reSET** is a 90-day Prescription Digital Therapeutic (PDT) for Substance Use Disorder (SUD) intended to provide cognitive behavioral therapy (CBT), as an adjunct to a contingency management system, for patients 18 years of age and older who are currently enrolled in outpatient treatment. FDA approved. https://www.resetforrecovery.com.

SOURCES: DynamiCare Health, 2020;
Pear Therapeutics, 2020

Why Contingency Management?

The Research

SOURCE: De Crescenzo et al., 2018

Psychosocial Interventions for Cocaine and Psychostimulant Amphetamine-Related Disorders

- Twenty-seven randomized controlled studies (3,663 participants) fulfilled inclusion criteria and had data that could be used for at least one of the main comparisons.
- Compared different behavioral interventions for retention in treatment and reducing stimulant use.
- Results showed using some form of **contingency management showed better results** both for reducing dropouts and lowering stimulant use.

SOURCES: Haidich, 2010; Knapp, et al., 2007

Psychosocial Interventions for Individuals with Cocaine and Amphetamine Use Disorder

- Meta-analysis of 50 clinical studies (6,943 participants) on 12 different psychosocial interventions for cocaine and/or amphetamine addiction.
- The **combination of contingency management and community reinforcement approach**, was the most efficacious and most acceptable treatment both in the short and long term.

SOURCE: De Crescenzo et al., 2018

Responding to Global Stimulant Use: Challenges and Opportunities

- Psychosocial interventions **other than contingency management** have weak and non-specific effects on stimulant problems
- No effective pharmacotherapies have been approved
- Substantial research investment is needed to develop more effective, innovative, and impactful prevention and treatment

SOURCE: Farrell et al., 2019

Community Reinforcement Approach (CRA)

SOURCE: De Crescenzo et al., 2018

Community Reinforcement Approach

- Community Reinforcement Approach (CRA) is a combination of behavioral strategies to
  - Identify the role of environmental contingencies in encouraging or discouraging substance use
  - Rearrangement of these contingencies so that a non-substance using life is more rewarding than a using one.

SOURCES: Meyers et.al., 2011; Budney & Higgins, 1998

Components of CRA

- CRA Components include:
  - behavioral skills training
  - social and recreational counseling
  - marital therapy
  - motivational enhancement
  - job counseling
  - relapse prevention

- For application to the treatment of cocaine dependence, a voucher based reinforcement program is added.

SOURCES: Meyers et.al., 2011; Budney & Higgins, 1998

Evidence for Community Reinforcement Approach

- Comparing CRA to standard drug treatment:
  - Increased rates of treatment completion
  - Greater rates of abstinence during treatment
- CRA in combination with CM:
  - Were more likely to complete treatment
  - Had longer continuous abstinence during treatment
  - Had more improved measures of drug/psych problems
- CRA in combination with CM:
  - Reduced use of cocaine during treatment
  - Improved psychological and employment functioning during treatment and at 6-month follow up

SOURCES: De Crescenzo et al., 2018; Higgins et al., 2003; Copeland & Sorenson, 2001; Higgins et al., 1994; Higgins et al., 1993

Cognitive Behavioral Therapy and Relapse Prevention

Cognitive Behavioral Therapy (CBT)

- Underlying assumption = learning processes play an important role in the development and continuation of a stimulant use disorder
- CBT attempts to help patients recognize the situations in which they are most likely to use stimulants, avoid these situations when appropriate, and cope more effectively with a range of problems and problematic behaviors associated with substance use.
- CBT is compatible with a range of other treatments patients may receive, such as pharmacotherapy.
- Also known as Relapse Prevention

SOURCE: NIDA, 2016; Carroll, 1998

What CBT Skills can Clinicians Use when Working with People Who Use Stimulants?

- Functional analysis and patterns of use
- Coping with craving
- Addressing and resolving ambivalence
- Refusal skills
- Seemingly irrelevant decisions
- Planning for emergencies
- Problem solving skills
- HIV/HCV risk reduction

SOURCES: McHugh et al., 2010; Carroll, 1998; Carroll et al., 1994

Relapse Prevention
Risk Situations

- In analysis of >300 initial relapses to cigarettes, alcohol, heroin use, gambling, or overeating, over 70% related to:
  - **Negative emotional states** (intrapersonal) such as anger, boredom, anxiety, frustration, depression accounted for 35% of relapses.
  - **Social pressure** (direct or indirect verbal pressure) accounted for 20%.
  - **Interpersonal conflict** (ongoing conflictual relationships or recent conflict) accounted for 16%.

SOURCE: Donovan, 1999

Relapse Prevention
Setting Treatment Goals

- Patient chooses whether to pursue goal of abstinence or moderation (may not have this choice in controlled settings).
- Therapist offers guidance but does not make the decision for the patient.
- Harm reduction perspective postulates that reducing from high levels of use to moderate use is a step in the right direction and should be reinforced by therapist.

SOURCE: Carroll & Rawson, 2005

Motivational Interviewing

Motivational Interviewing (MI)

- "…a directive, client-centered method for enhancing intrinsic motivation for change by exploring and resolving ambivalence (Miller & Rollnick, 2002).
- "…a way of being with a client, not just a set of techniques for doing counseling" (Miller and Rollnick, 1991).
- Studies demonstrated reduction in stimulant use with motivational interviewing

SOURCES: Polcin, et al., 2014; Miller, & Rollnick, 2012; Stein et al., 2009

MI: Basic Principles and Micro-Skills

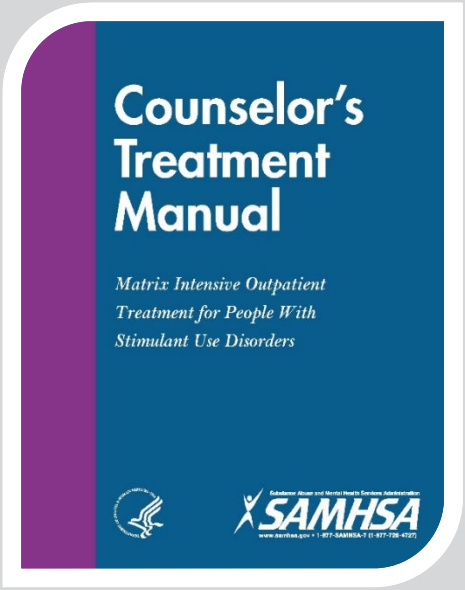
- Motivational Interviewing Principles:
  - Express empathy
  - Develop discrepancy
  - Address sustain talk and discord
  - Support self-efficacy
- Motivational Interviewing Micro-Skills (OARS):
  - **O**pen-Ended Questioning
  - **A**ffirming
  - **R**eflective Listening
  - **S**ummarizing

SOURCE: Miller & Rollnick, 2012

The Matrix Model

Behavioral Approach: Matrix Model

- 16-week intensive outpatient treatment was modestly better treatment as usual to improve retention and reduce methamphetamine use
- Therapist functions as teacher and coach
- Incorporates a variety of approaches
  - CBT
  - CM
  - MI
  - 12-Step Facilitation
  - Family Involvement
  - Person-centered therapy



SOURCES: CSAT, 2006; Rawson, et al., 2004

Physical Exercise

Exercise for Methamphetamine Dependence Study Design

Research has demonstrated benefit of aerobic exercise for improving depression, anxiety, cognitive deficits, and substance use outcomes.

Methods:

- All 135 study participants received treatment as usual for MUD in a residential treatment program
- They were randomly assigned to either:
  - an 8-week, 3x/week structured aerobic and resistance exercise intervention
  - an 8-week health education condition.
- Outcome measure collected through study enrollment and for 12 weeks follow-up.

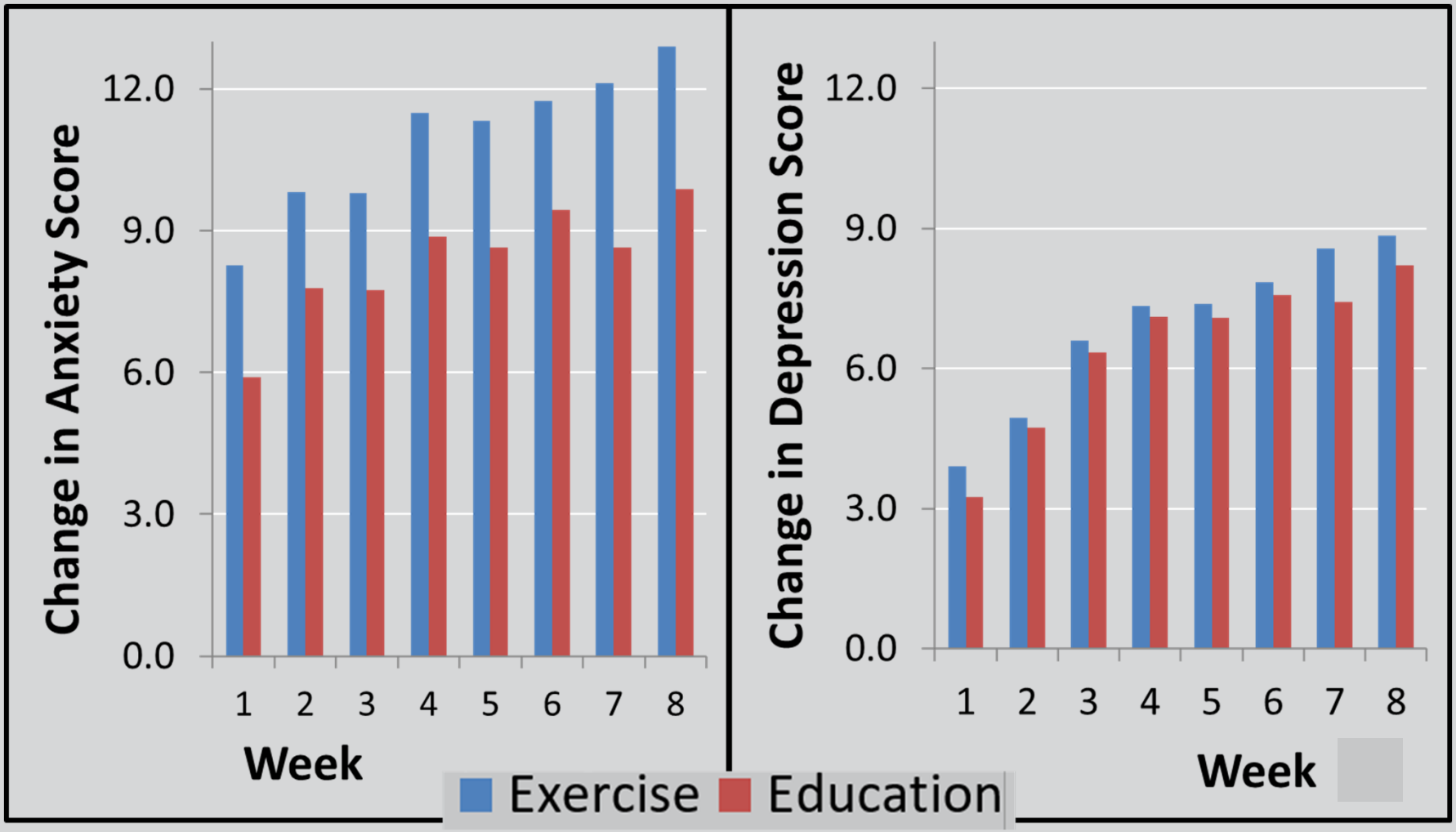
SOURCES: Rawson et al., 2015; Mooney et al., 2014

Does Exercise Improve Outcomes Post-Treatment?

- Yes!
- Fewer exercise participants returned to meth use compared to the education participants at 1-, 3-, and 6-months post-discharge (not statistically significant)
- Significant interaction found for self-reported meth use and meth urine drug test results – lower severity users in the exercise group reported using meth significantly fewer days at the three post-discharge time points than lower severity users in the education group
- Lower severity users in the exercise group also had a lower percentage of positive urine results at the three time points than the lower severity users in the education group (relationships not seen in higher severity groups)

SOURCE: Rawson et al., 2015

The Impact of Exercise on Depression and Anxiety Symptoms



SOURCE: Rawson et al., 2015

Recommendations for Outpatient Stimulant Use Disorder Treatment

Recommendations for Outpatient Stimulant Use Disorder Treatment (1)

- Durations over 90 days (with continuing care for another 9 months).
- Techniques and clinic practices that improve treatment retention are critical.
- Treatment should include 3-5 clinic visits per week for at least 90 days.

SOURCES: UNODC, 2019; Rawson et al., 2020; CSAT, 1999

Recommendations for Outpatient Stimulant Use Disorder Treatment (2)

- Employ evidence-based practices
  [i.e., Contingency Management (CM), Community Reinforcement Approach (CRA), Cognitive Behavioral Therapy (CBT), Motivational Interviewing (MI), Matrix Model]
- Family involvement and 12-step programs appear to improve outcome
- Urine testing (at least weekly is recommended)

SOURCES: UNODC, 2019; Rawson, et al., 2020; CSAT, 1999

What It Means to Recover

SAMHSA
Substance Abuse and Mental Health Services Administration

Why Talk about Recovery?

- We should expect recovery for everyone who wants it
- The concept of recovery has its own principles, values, and applications
- Recovery from stimulant use disorders has unique components, including:
  - Long-term use of stimulants affects people's memory and cognitive function, impacting how they approach the beginning of their recovery
  - People use stimulants for weight loss and emotional numbing; recovery may bring these issues to the forefront

A Recovery Story

Glenn Williams – Young People in Recovery

SOURCE: Faces & Voices of Recovery, 2012

Defining Recovery: Example 1

"*Recovery is a process of change through which individuals improve their health and wellness, live self-directed lives, and strive to reach their full potential.*"

- SAMHSA Definition of Recovery (2012)

SOURCE: US DHHS, SAMHSA, 2012

Defining Recovery: Example 2

"*Recovery is a lived experience of improved life quality and a sense of empowerment; that the principles of recovery focus on the central ideas of hope, choice, freedom and aspiration that are experienced rather than diagnosed and occur in real life settings rather than in clinical settings. Recovery is a process rather than an end state, with the goal being an ongoing quest for a better life.*"

- David Best & Alexandre Laudet

SOURCE: Best & Laudet, 2019

Chat Activity

What are some of SAMHSA's 10 Guiding Principles of Recovery?

SAMHSA's Guiding Principles of Recovery

SOURCE: US DHHS, SAMHSA, 2012

Concluding Thoughts

- The availability and use of cocaine and methamphetamine is widespread across the U.S. and beyond
- Central nervous system stimulants effect multiple organ systems, including the brain, heart, lungs, kidneys, liver, and skin
- The brain does have the ability to heal from use of stimulants, it just takes time
- A variety of behavioral interventions have been shown to be effective
- No FDA-approved medications exist (yet)
- Recovery is possible

Resources for Continued Learning

- ATTC Network's Focus on Stimulant Misuse Web Page: https://attcnetwork.org/centers/global-attc/focus-stimulant-misuse
- Evidence-Based Resource Guide Series: Treatment of Stimulant Use Disorders: https://store.samhsa.gov/product/Treatment-of-Stimulant-Use-Disorder/PEP20-06-01-001
- Northwest ATTC's Contingency Management for Healthcare Settings Self-Paced Online Course: https://healtheknowledge.org/course/search.php?search=Contingency+Management

Thank You For Your Time

- For questions, please email Beth (brutkowski@mednet.ucla.edu) or Thomas (tfreese@mednet.ucla.edu)
- You will be notified as components of this curriculum are finalize and posted to the ATTC website at: https://attcnetwork.org/centers/global-attc/focus-stimulant-misuse
- For additional information regarding SUD-related Training/TA, please visit: http://www.attcnetwork.org
- For additional information regarding HIV/AIDS-related Training/TA, please visit: https://aidsetc.org/