CONTINGENCY MANAGEMENT TREATMENT

Supporting recovery using the best tools available

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Disclosures

The views expressed are those of the presenter and do not represent the views of the University of Connecticut School of Medicine.

The speaker does not have any financial relationships to disclose.

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Objective

- Recognize that stimulant use has been increasing significantly in recent years, along with stimulant-involved overdose deaths. This is the "4th wave" of the opioid crisis.

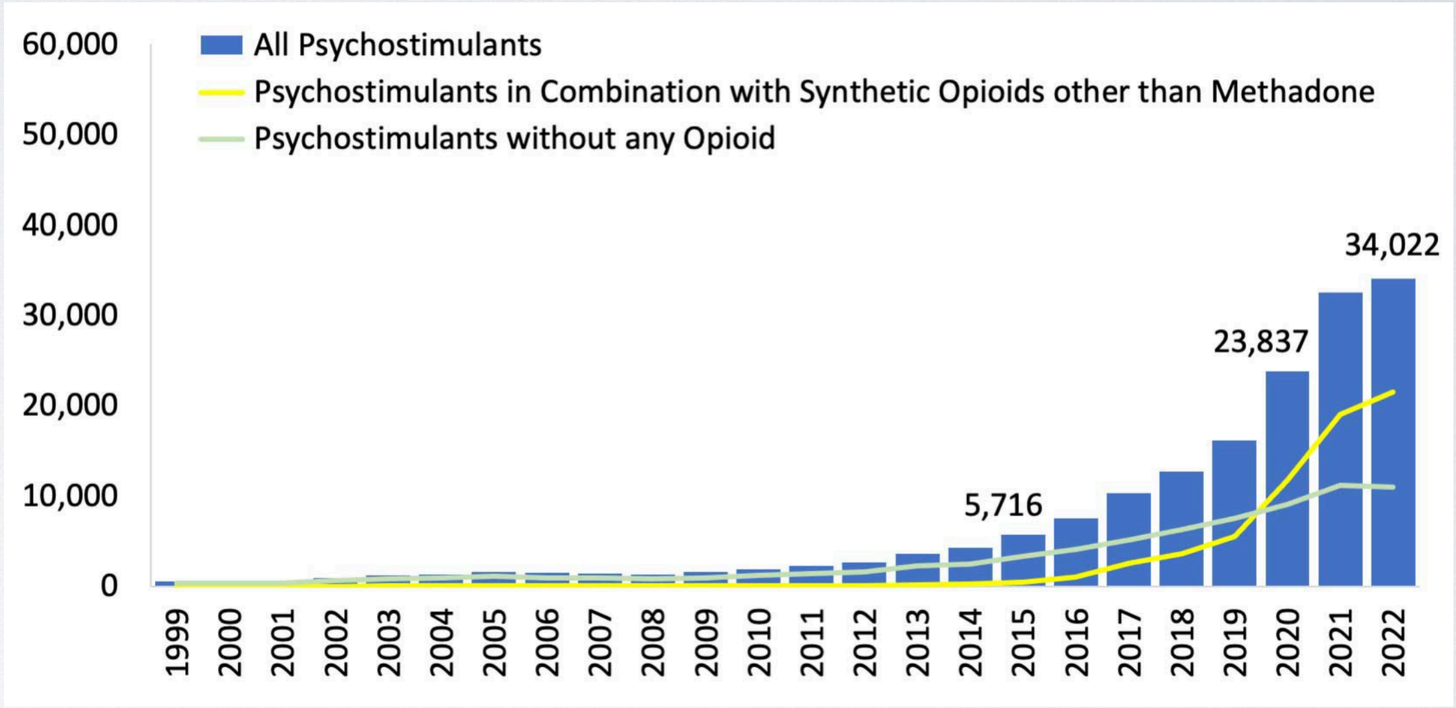
- Understand that Contingency Management is the gold-standard evidence-based treatment for Stimulant Use Disorder.

- Appreciate what Contingency Management is and is not, mechanisms, psychologies and efficacy.

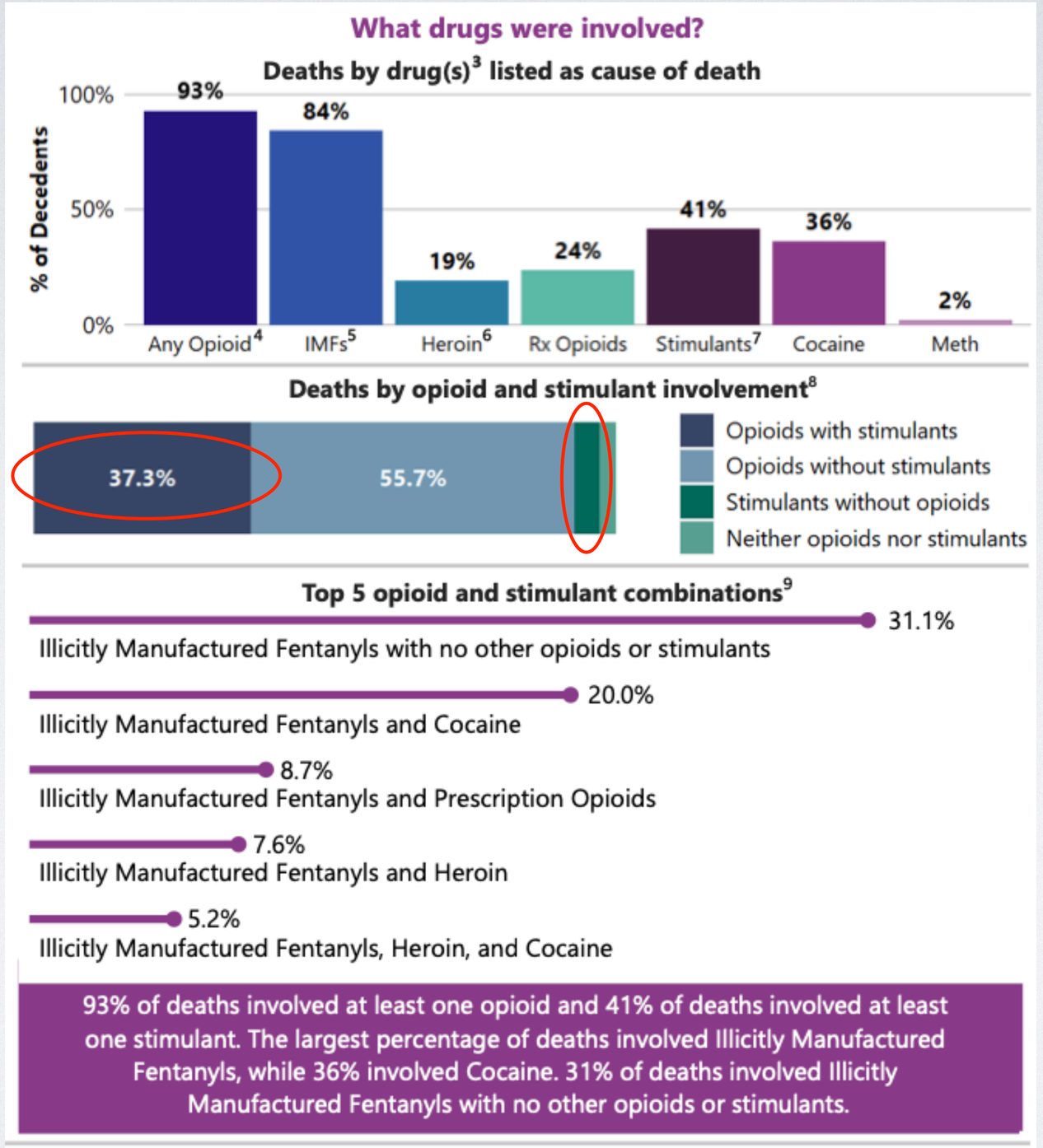
Why the Focus on Stimulants in the Context of the Opioid Crisis Nationally?

- Stimulant-involved deaths **up 595%** from 2015 to 2022 (5,716 to 34,022 deaths) (NIH, 2024).
- An increasing proportion co-involve opioids (up 450%) (Spencer et al., 2023).
- Of non-fatal use, among people who use opioids, 75% had recent stimulant use (Tsui et al., 2023).
- Among people with OUD, rates of past-month stimulant use is up 85% (Ellis et al., 2018; Cicero et al., 2020).
- Among MOUD admissions, 35.8% used stimulants (SAMHSA, 2019).
- Among those in MOUD, ongoing stimulant use increases the odds of ongoing opioid use (Foot et al., 2024), which jeopardizes outcomes including lower odds of treatment retention (Tsui et al., 2023).

U.S. Overdose Deaths Involving Psychostimulants with Abuse Potential, by Opioid Involvement, 1999-2022.

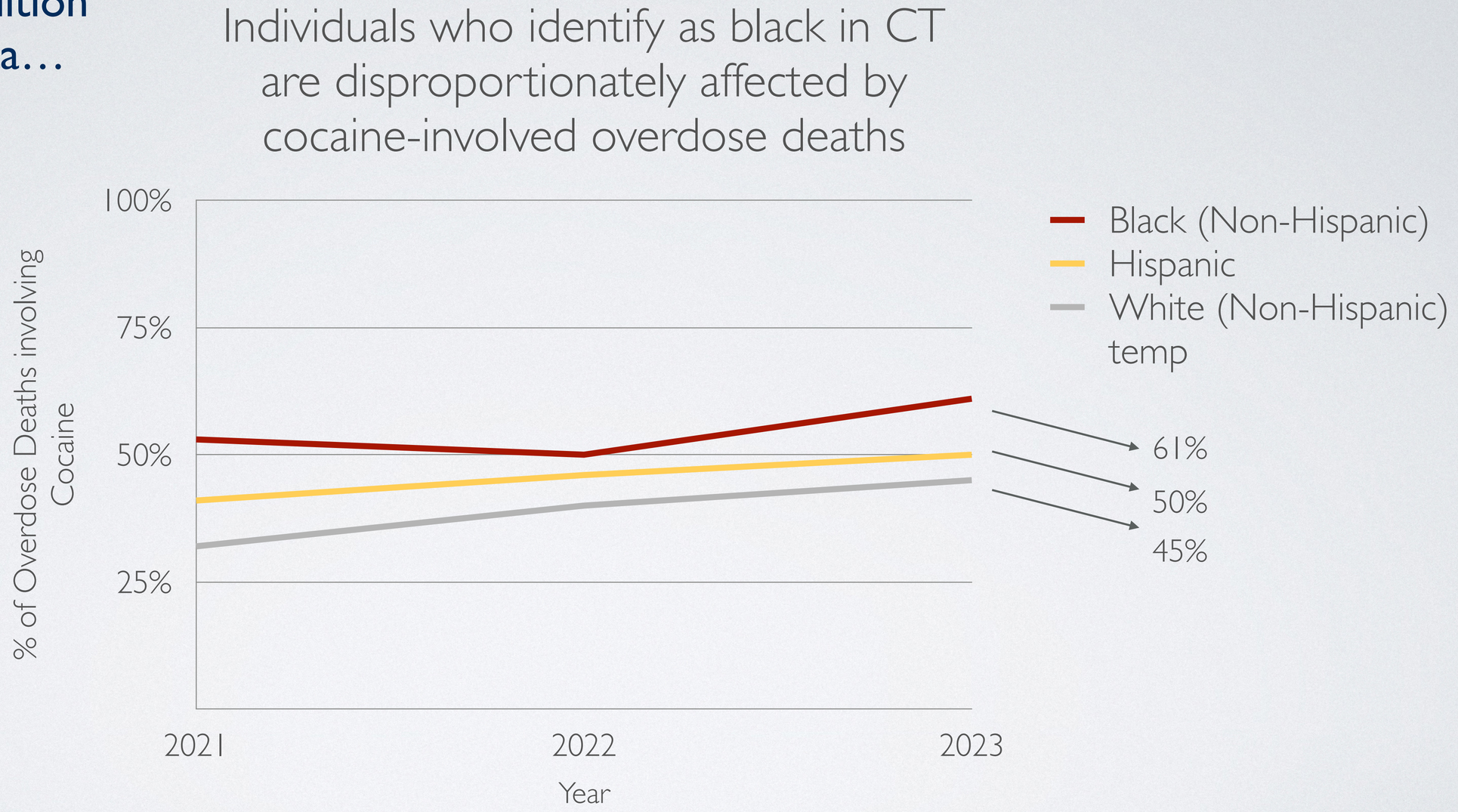


Why the Focus on Stimulants in the Context of Opioids Nationally?



Source: ct.gov, SUDORS

Why the Focus on Stimulants in Connecticut? In addition to the national data…



Source: CDC, SUDORS

The Stimulant Use Treatment Situation

- No FDA-approved medications exist.

So, Behavioral Lens

- How do we influence deciding to not use now (i.e., choose dealing with withdrawal, craving, distress, social consequences etc.) when the benefits of not using so are far out in the future?

A Behavioral Solution

- Contingency Management: A behavioral therapy, based on operant conditioning principles, that provides tangible reinforcers (cash-equivalent incentives like gift cards) for evidence of behavior change (typically abstinence). It can be understood as a combination of psychological insights and economic principles.

The Current Substance Use Disorder Treatment System

Psychosocial treatment, with medication if available and indicated, is effective.

But,

- Engagement waxes and wanes (in SUD treatment as in all endeavors).
- Many drop out, especially during the initial days and weeks of treatment.
- An estimated 40% to 60% (likely higher) of individuals experience cycles of quitting, lapse, and relapse (Kabila et al., 2021; Dubovsky et al., 2014).

Importantly, Contingency Management can address each point.

Contingency Management for Substance Use

Rewards for Recovery Behaviors Now

- Substance use is heavily influenced by social, environmental and biological factors. In many ways, substance use is rewarding.

- Recovery requires choosing to move away from substance use. The new situation often involves strained relationships, poor financial situations, and mental and physical health problems from the substance use. Not rewarding.

- Contingency Management programs give people new to recovery the chance to experience something rewarding sooner than typically happens, which can be motivating and reduce ambivalence.

- Contingency Management incentives/rewards for achieving steps towards recovery should outweigh the perceived reward of instead using substances.

Contingency management
a.k.a. behavioral incentives, motivational incentives

Endorsed:

- ☑ NIH, Surgeon General, ASAM, Depart of Veteran's Affairs etc.

Verified:

- ☑ Hundreds of controlled trials & ~20 meta-analyses showing efficacy and superiority over other options
- ☑ Stimulant use specifically: > 200 studies & 6 meta-analyses

States are leading the charge:

- ☑ California (19 counties, 81 provider sites, 1941 unique beneficiaries and counting)
- ☑ Delaware
- ☑ Montana,
- ☑ Washington
- ☑ Arkansas
- ☑ Arizona
- ☑ Alaska
- ☑ Hawaii
- ☑ Illinois
- ☑ Maine
- ☑ Michigan
- ☑ New York
- ☑ Rhode Island
- ☑ Vermont
- ☑ West Virginia

Central Tenets of Contingency Management

1. Choose target behavior (e.g., attending treatment, medication adherence, abstinence). Meaningful (clinically, personally). Measurable. Clearly defined.

2. "Frequent" and objective monitoring for the target behavior (i.e., attendance logs, urine/blood chemistries).

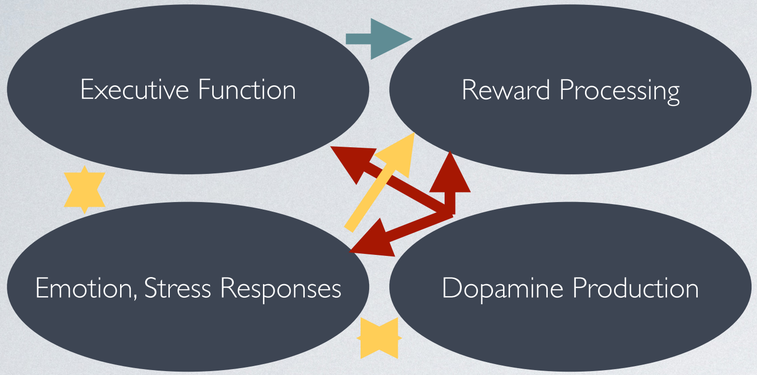
3. Achieving the target behavior: Objective evidence of coming to treatment/ medication adherence/abstinence results in meaningful incentives.

4. The absence of the behavior results in clinical support.

5. Rinse and repeat to encourage new, healthier habit

~All surrounded by encouragement & support~

This might appear deceptively simple…



Mechanisms

CM, Alternative Rewards

Substance Use → Increased Dopamine (Nucleus Accumbens) → Reinforcement of Drug-Seeking Behavior

Reinforcement of Alternative Behavior

Over time, CM Supports…

Chronic Use → Neuroplastic Changes → Impaired Decision-Making and Stress Responses (Prefrontal Cortex, Amygdala)

New, Healthy Behaviors

Cognitive Control Stress Reduction

Mechanisms

Contingency Management leads to:

- ➡ Rewiring of reward pathways
- ➡ Strengthening of non-drug related rewards
- ➡ Improved executive function and decision-making
- ➡ Reduced stress-induced cravings and relapse

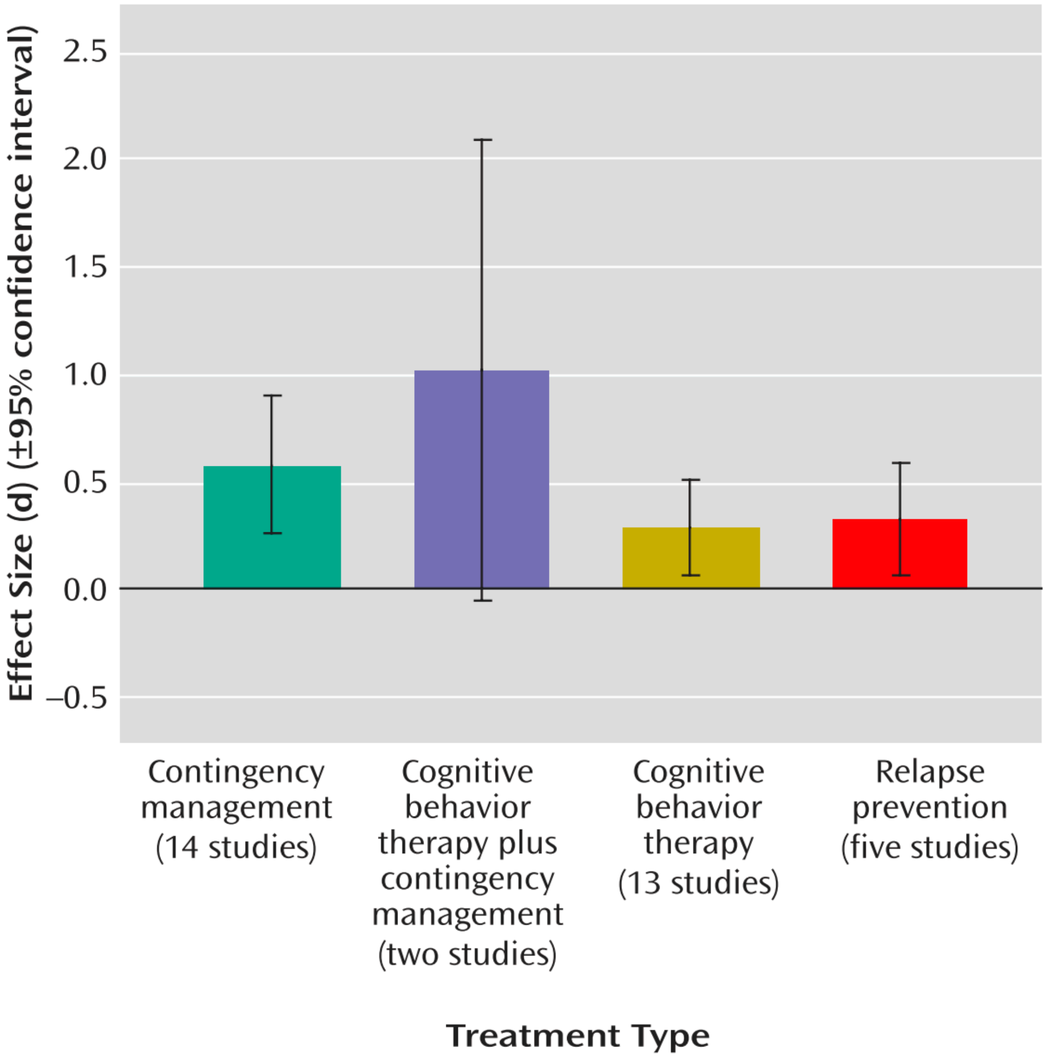
Psychologies

	What is that?	CM Intersection
Immediate Gratification Bias (Present Bias)	Preference for gains now over later	Leverage: Immediate tangible rewards for drug-free behavior now, to shift decisions away from use now
Confirmation Bias	Seeking out/interpreting/remembering what confirms our position, often despite contrary evidence	Tangible rewards = clear evidence of positive behavior change; harder to justify other behavior (use) based on biased beliefs/behaviors (I can't do it)
Optimism Bias	Downplaying risks (I'm immune)	Through regular monitoring (drug test), negative consequences of other behavior are more readily apparent (loss of rewards if not drug-free)
Loss Aversion	Losses are more painful than equivalent gains are rewarding	Strong incentive to maintain strings of behavior to avoid losing rewards
Habituation and Sunk Cost Fallacy	Persistence because of time/money/effort invested even when benefits disappear	Consistent rewarding of new behavior helps create new habits that replace old, maladaptive ones
Framing Effect	We choose between options differently depending on how information is presented e.g., losses versus gains	Behavior (drug-free test) is rewarded, shifting focus from negative aspects (withdrawal) to positive outcomes

Efficacy

Meta-Analysis of Psychosocial Interventions for Substance Use Disorder

FIGURE 2. Mean Effect Sizes Across Treatment Types



Dutra et al., 2008

Efficacy

Nationwide randomized controlled trial:

Table 4. Samples Submitted That Tested Negative for Drug

Drug	Incentive Group (n = 198)*	Usual Care Group (n = 190)*	OR (95% CI)†
Primary target			
Stimulants only	54.4	38.7	1.89 (1.35-2.63)
Alcohol only	99.1	98.7	1.43 (0.58-3.45)
Secondary			
Opioids	71.4	62.4	1.49 (1.09-2.08)
Marijuana	91.8	90.0	1.25 (0.73-2.17)

Abbreviations: See Table 3.
*Data are given as percentage of each group.
†A generalized estimating equation was used to obtain ORs; the reference is the usual care group.

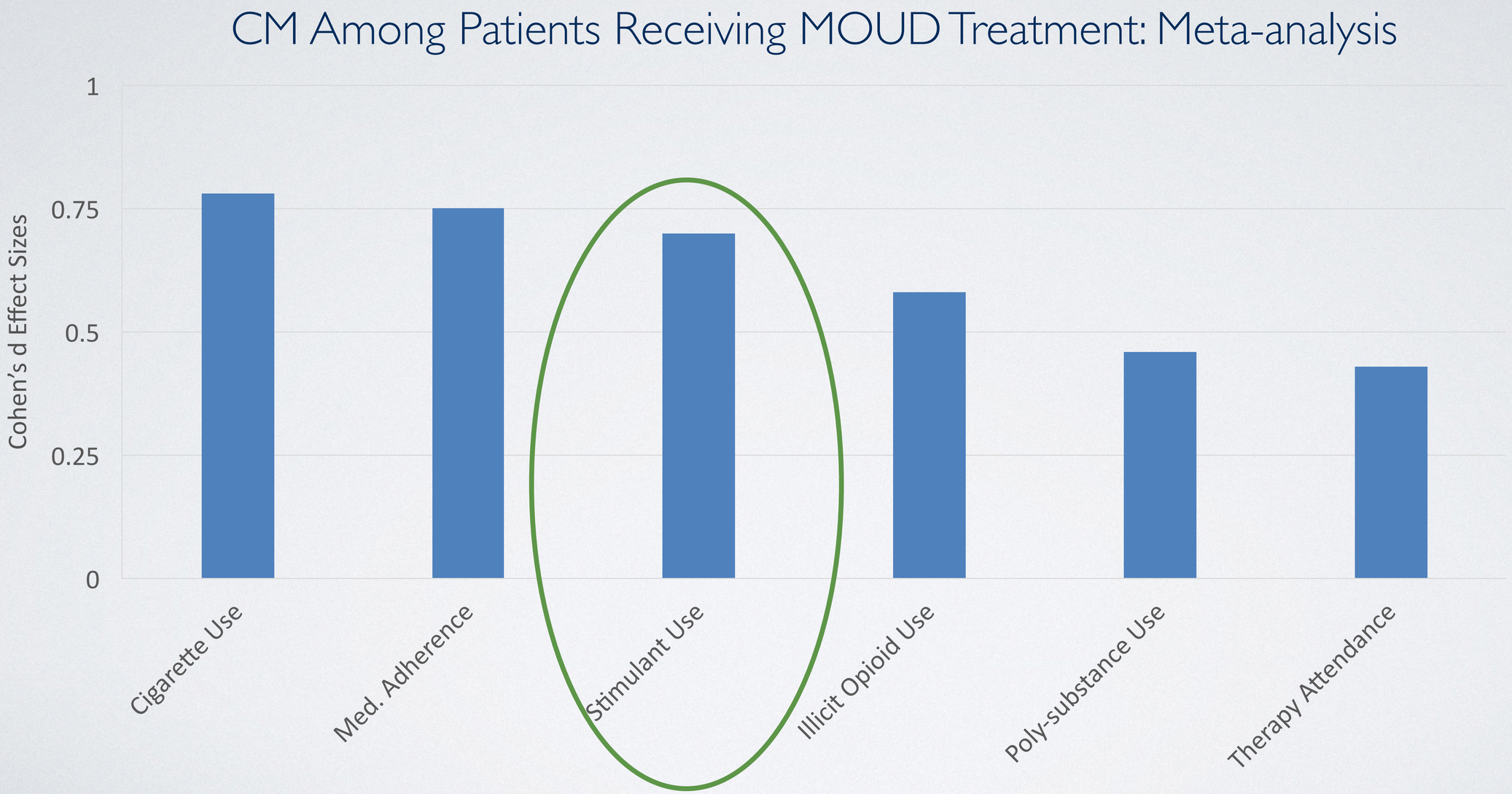
Table 5. Participants With Specified Weeks of Continuous Stimulant- and Alcohol-Negative Samples

Time, wk	Incentive Group (n = 198)*	Usual Care Group (n = 190)*	OR (95% CI)†
≥4	23.7	9.0	3.1 (1.7-5.7)
≥8	16.7	2.1	9.3 (3.2-26.7)
12	5.6	0.5	11.1 (11.4-86.5)

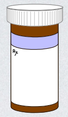
Abbreviations: See Table 3.
*Data are given as percentage of each group.
†Each analysis was conducted separately; the reference is the usual care group.

Peirce et al., 2006

Efficacy



Bolivar et al. 2021; JAMA Psychiatry



Increases abstinence:

- Cocaine
- Opioid
- Marijuana
- Benzodiazepines
- Alcohol
- Nicotine

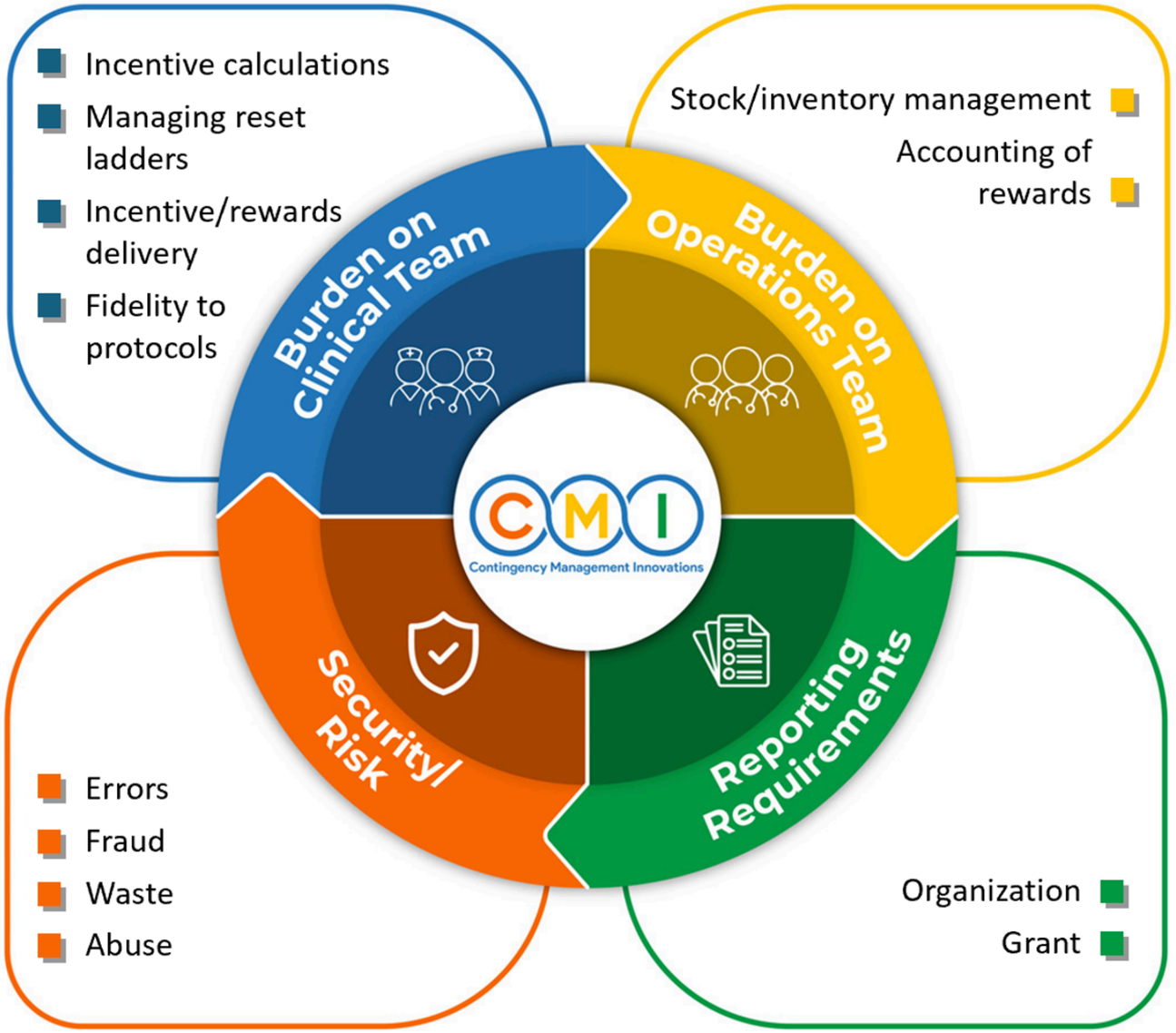
Other behaviors, settings:

- Clinic/counseling attendance
- Health, other treatment goals
- Medication adherence
- Exercise, weight loss
- Glucose testing
- IOP/OP, residential, criminal
- legal system, free-range humans

People:

- Unhoused
- Serious Mental Illness
- PTSD
- HIV
- Legal system involved
- Veterans
- Receiving SUD medications
- Across ages, races, sexes, incomes
- Pregnant
- LGBT community

When implementing Contingency Management (CM), there are certainly many considerations. The following highlights just a few that are important:



Explaining Why CM to Ourselves

Efficacy, economics, engagement, accountability

I'm skeptical…	But…
Economics: Too expensive (incentives, implementation).	Compared to what? Costs of ongoing use? Pharma?
Philosophical: Undermines internal motivation and is akin to "bribery". People should want to change on their own.	• Pre-CM, beneficiaries are already in/entering treatment. • Ambivalence is common, motivation elusive. Treatment needs to happen to work. • And, what of the incentives "we" benefit from? Health insurance discounts for preventive care? Tax breaks for donations? Employer incentives programs e.g., exercising, quitting smoking? • Also, this concern is overly simplistic and inconsistent with the science.
Motivational: Doesn't get at the root causes of substance use.	Insight alone does not change behavior, in recovery, and life.
Durability: "Just" solves for the short-term.	The initial days and weeks are a time of high vulnerability. Early success is a strong predictor of longer-term success.
Efficacy: It's "Special treatment".	Its effective treatment. Who shouldn't get effective treatment?
Also, there are practical implementation challenges…	…that can be addressed via technology, training and technical assistance.

Explaining Why CM to Ourselves

Efficacy, economics, engagement, accountability

Lingering Question: How do beneficiaries of Contingency Management use their earned, modest incentives?

Answer: Generally, to help fill unmet needs and restore relationships and lives.

- Groceries
- Transportation
- Opening a bank account for the first time
- Shoes for a job interview
- Taking a child/grandchild out for ice cream
- To help pay electricity bill
- To help pay for medication when public health insurance coverage runs out

In some ways, CM is an income-redistribution plan that starts to address disparities.

Explaining Why to Beneficiaries

Brief, hopeful, personal, empowering

- There is effective treatment for people working hard to regain a sober lifestyle (HOPE)
- People with a history of serious problems from using alcohol or drugs, like [tailored example] are more likely to have serious problems in the future (PERSONAL)
- Getting into and staying in treatment allows you to take control of your health. Doing it now makes following through more likely (EMPOWER)

<u>Example language that takes < 1 minute:</u>

"This Recovery Rewards program will reward you for going to treatment visits and drug-free activities, to help you make a habit out of doing that."

"This Recovery Rewards program will help keep you motivated to stay in treatment, which is important to your long-term recovery."

"The goal of this program is to reward your successes in not using [personalized] as you work toward a sober lifestyle."

"This Recovery Rewards program will help you not use [personalized], which may also improve your (health, family relationships, legal difficulties, etc. as appropriate/relevant). If not appropriate or unknown, use generic language like "help you stick with treatment."

UCONN
SCHOOL OF MEDICINE

Take-Home Points

- Contingency Management is the first-line treatment for stimulant use disorder.
- It is endorsed as being responsive to the opioid crisis by NIH, ASAM, SAMHSA and others.
- It is thoroughly researched and being adopted.

Thoughts, considerations, questions?