

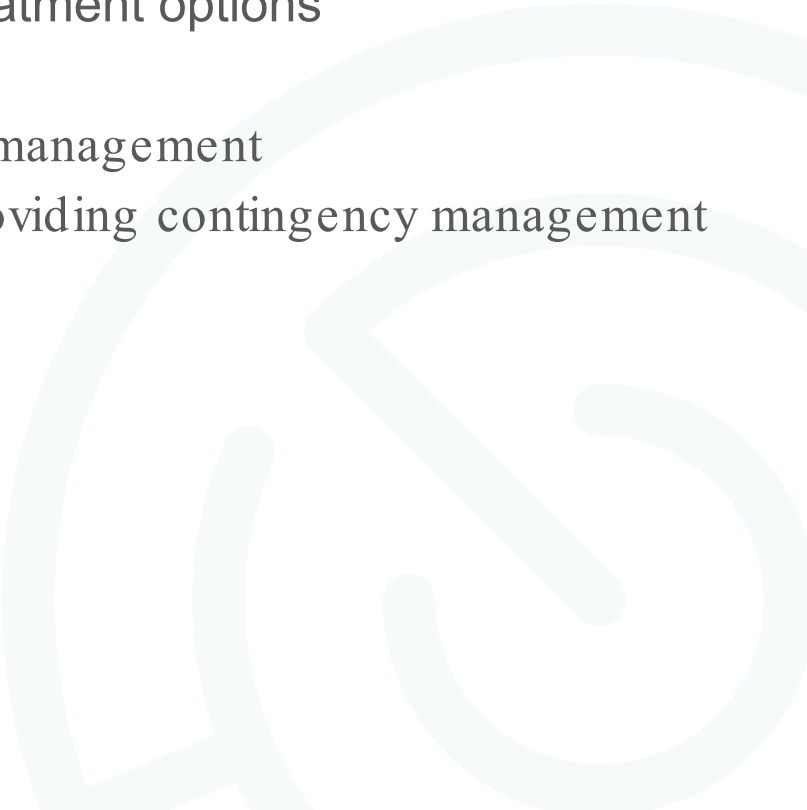
# Contingency Management: Using Rewards to Drive Recovery

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# Background/Disclosures

- Chief Medical Officer at Affect Therapeutics, a virtual substance use disorder treatment company that uses contingency management to treat addiction, in addition to counseling and medical appointments
- Previous:
  - Chief of Psychiatry and Interim Chief of Behavioral Health at Mann-Grandstaff VA Medical Center
  - Medical Director of Telepsychiatry at Wellstar Health System
  - Psychiatry Residency - Emory School of Medicine
  - Psychiatry Internship - Dartmouth-Hitchcock Medical Center
  - Medical School - University of Mississippi Medical Center
- OHSU Inpatient Contingency Management research study
- Not currently participating in other research grants, paid speaking events, consulting projects, or other potential conflicts of interest

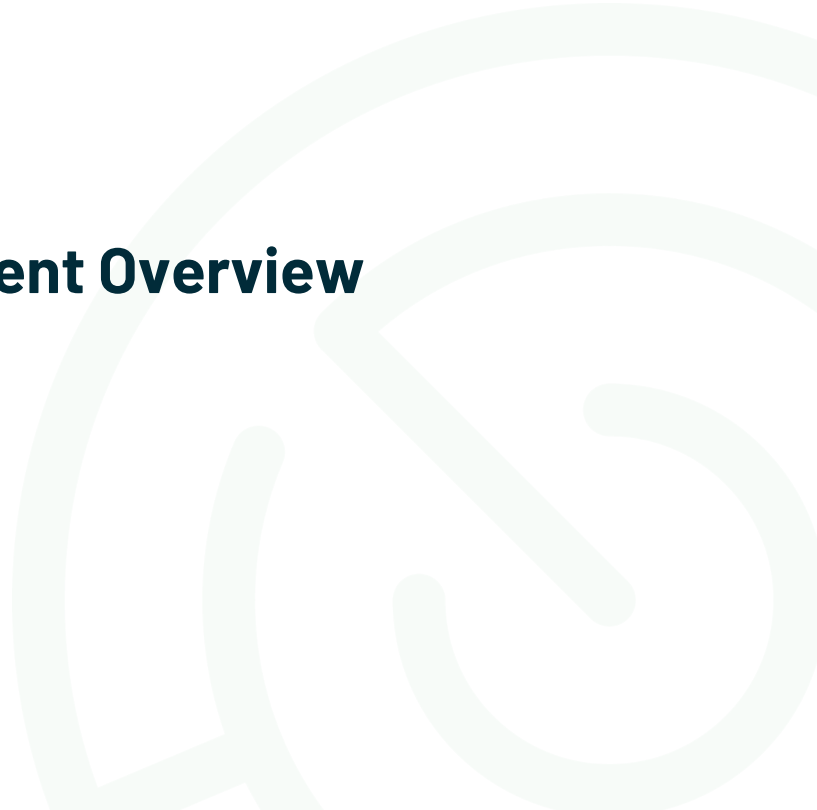
# Objectives

- Cover gaps in Stimulant Use Disorder treatment options
  - Learn how contingency management works
  - Review the evidence base for contingency management
  - Discuss challenges and opportunities of providing contingency management in a virtual setting
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# My Story

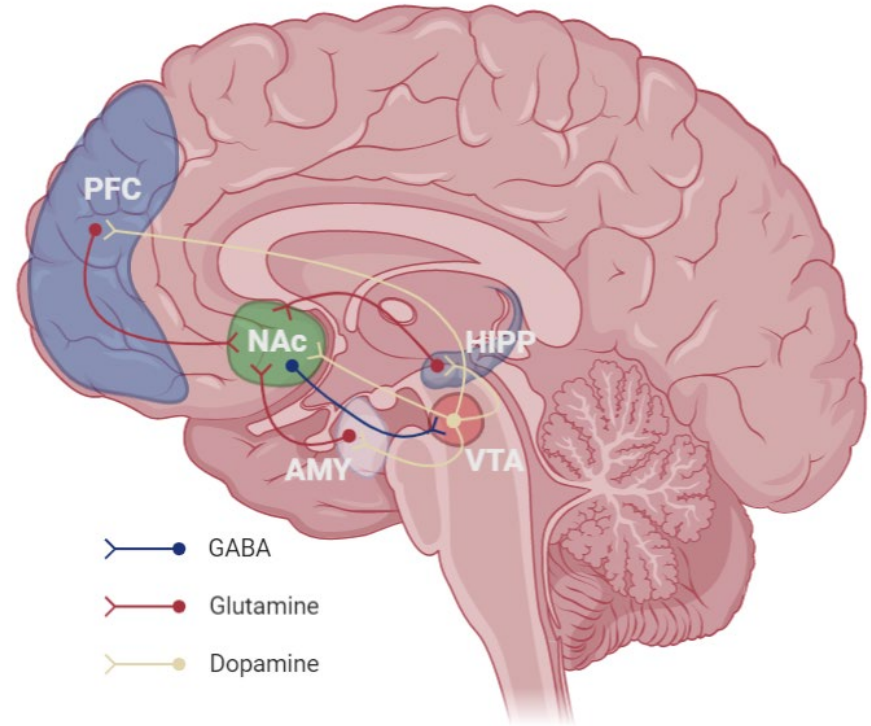
- **Wellstar**
  - Oversaw ED behavioral health delivery for the largest hospital system in GA
  - Provided clinical services at 5th busiest ED in the country
  - Pain points/ observations:
    - Lack of stimulant treatment options
    - Lack of mental health/ addiction access generally
    - Homelessness
- **Research**
  - Question: What's the best treatment for stimulant use disorder?
  - Answer: CONTINGENCY MANAGEMENT
- **Veterans Affairs**
  - Strong homelessness program
  - Contingency management
- **Affect Therapeutics**
  - Expanding contingency management beyond VA, research studies, state programs

# **Contingency Management Overview**



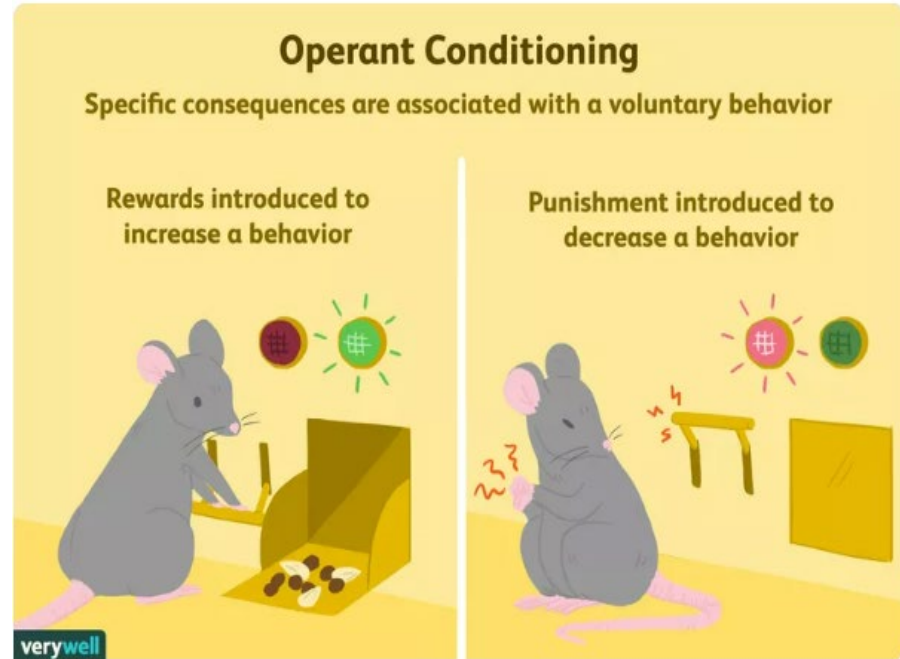
# What is Contingency Management?

- Based on operant conditioning pioneered by B.F. Skinner
- Uses knowledge of neurocircuitry to activate the brain's reward system and reinforce behaviors
- Reward activation in SUD
  - Drugs/ alcohol: quick, reliable, BAD
  - Sobriety: delayed, unpredictable, GOOD



# Operant Conditioning<sup>1</sup>

- Positive reinforcement
  - **Increases** likelihood of behavior by **adding** a **pleasant** stimulus
- Negative reinforcement
  - **Increases** likelihood of behavior by **removing** an **unpleasant** stimulus
- Positive punishment
  - **Decreases** likelihood of behavior by **adding** an **unpleasant** stimulus
- Negative punishment
  - **Decreases** likelihood of behavior by **removing** a **pleasant** stimulus



# Contingency Management for SUD Treatment

- Types of Desired Behaviors
  - Attendance - Did the person come to the appointment?
  - Sobriety - Did the person have a negative UDS or breathalyzer?
  - Blended - Combination of the above
- Types of Payment Structures
  - Voucher-Based Reinforcement - escalating rewards based on streaks
  - Fishbowl Method - increased opportunity for reward through increasing draws
  - Others Exist
- Types of Rewards
  - Cash
  - Vouchers (e.g., VA Canteen Vouchers)
  - Prizes (e.g., Toy Chest Draw)
  - Validation (e.g., Good Job!)
  - Other
  - NOTE: all the above are SURROGATES

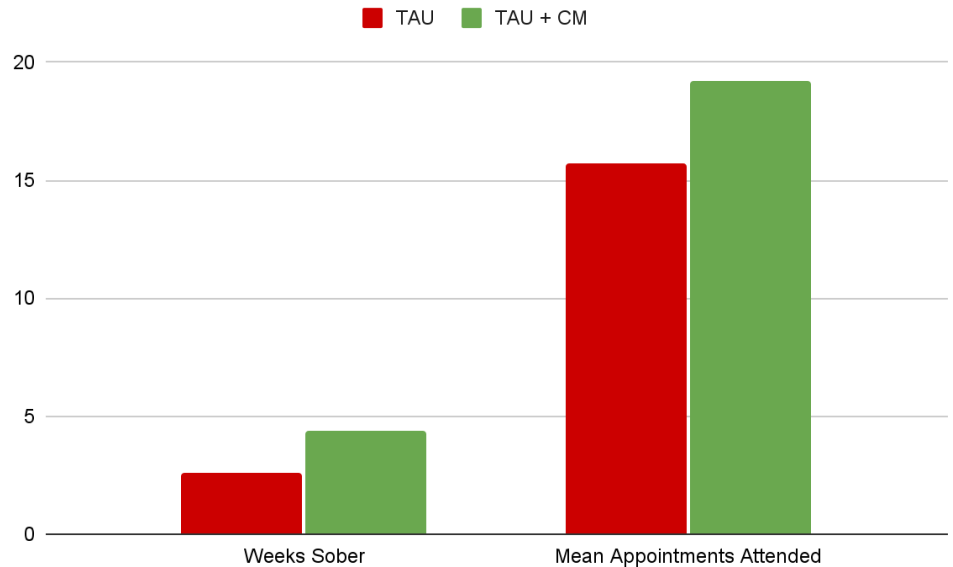


# **Contingency Management: Evidence Base**



# Effect of Prize-Based Incentives on Outcomes in Stimulant Abusers in Outpatient Psychosocial Treatment Programs<sup>2</sup>

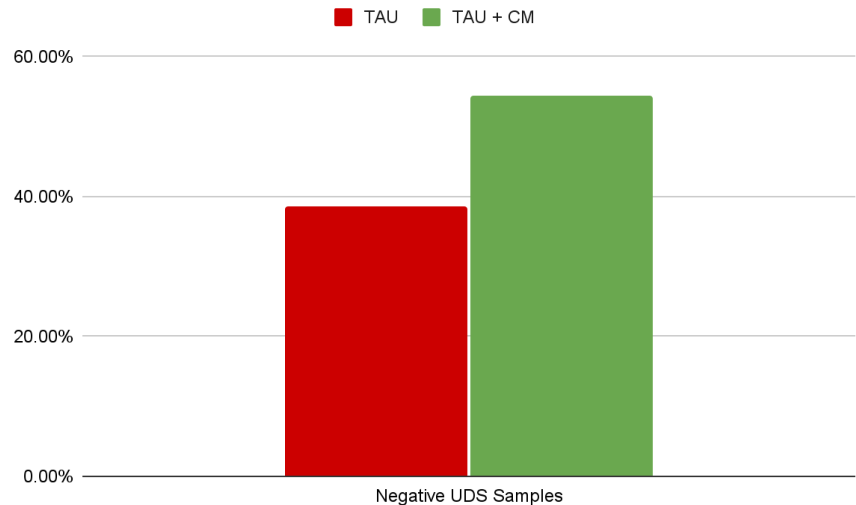
- 12 week study
- n = 415 (cocaine, meth)
- Abstinence based CM
- TAU vs TAU + CM
- Results favored CM
  - Increased weeks sober
    - 4.4 vs 2.6
  - Increased attendance
    - 15.7 vs 19.2
  - More stimulant-free samples



2- Petry, et al. "Effect of prize-based incentives on outcomes in stimulant abusers in outpatient psychosocial treatment programs: a national drug abuse treatment clinical trials network study". Arch Gen Psychiatry. 2005 Oct;62(10):1148-56. Doi: 10.1001/archpsyc.62.10.1148

# Effects of Lower-Cost Incentives on Stimulant Abstinence in Methadone Maintenance Treatment<sup>3</sup>

- 12 week study
- Lower cost prize-based CM in a methadone treatment clinic
- TAU (n=198) vs TAU + CM (n=190)
- Results favored CM
  - Increased abstinence
    - 2.8 weeks vs 1.7 weeks
  - Increased negative samples
    - 54.5% vs 38.7%



3 - Peirce, et al. "Effects of lower-cost incentives on stimulant abstinence in methadone maintenance treatment: a National Drug Abuse Treatment Clinical Trials Network study". *Arch Gen Psychiatry*. 2006 Feb;63(2):201-8

# Additional Research<sup>4</sup>

- CM's Effect on Readiness to Change/Intrinsic Motivation
  - Carroll et al. 2002 - declines in scores on readiness to change over time in OUD
  - Budney et al., 2000; Ledgerwood & Petry 2006; Litt et al., 2008 – no difference
  - CM likely does not have an adverse effect on readiness to change
- Long-Term Effects After Reinforcement Stopped
  - Mixed results; 20+ studies; 29% show long-term effects remain
  - No studies show poorer long-term effects after CM
- Costs
  - Cost to individual clinics may go up
    - \$300-1200 per patient over 12 weeks + admin costs
    - \$258 per week of abstinence per patient (Olmstead, Sindelar and Petry, 2007)
  - Cost to health system likely decrease, but these aren't always seen by the clinic/ provider

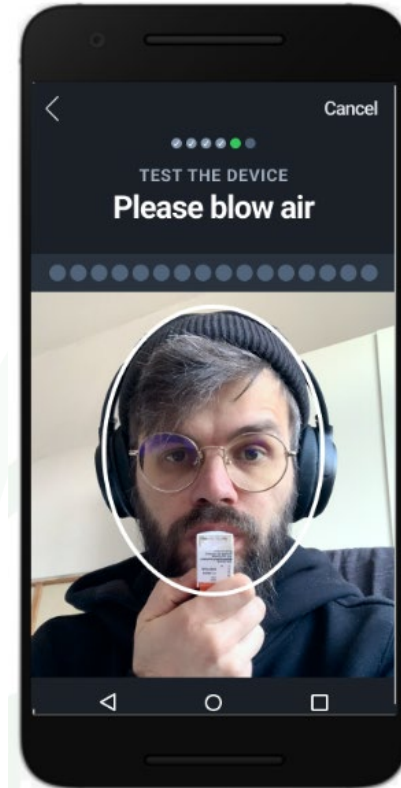
4 - Petry et al., 2017. "Contingency management treatment for substance use disorders: How far has it come, and where does it need to go?". *Psychol Addict Behav.* 2017 Dec; 31(8): 897-906.

# **Contingency Management and Technology**



# Affect Therapeutics Overview

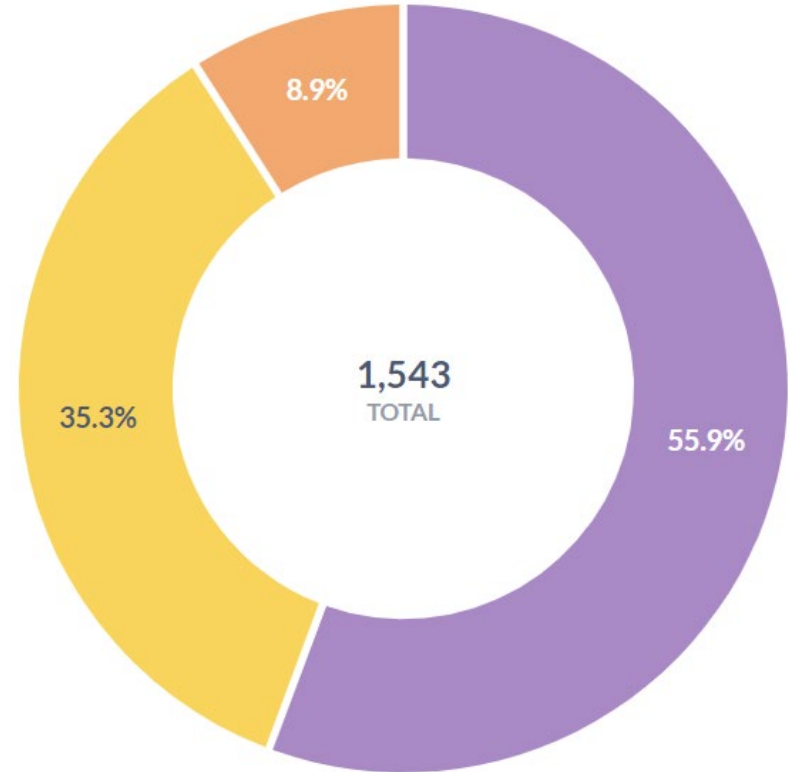
- First national, 100% virtual provider utilizing contingency management
- Services
  - Addiction counseling
  - Medical appointments
  - Case management
  - Contingency management
  - Near future: peer support, dual diagnosis pilot, IOP pilot
- Treat Alcohol, Stimulants, Cannabis
- Can coordinate with brick and mortar labs when required by CJ, medical necessity



# Outcomes

- 83% negative UDS results
- 93% negative BAC results
- 70% monthly retention overall
  - 41% 100 day retention in AUD
  - 30% 100 day retention in StimUD
- NPS 75
- Member wellbeing

- greatly improved
- moderately improved
- slightly improved



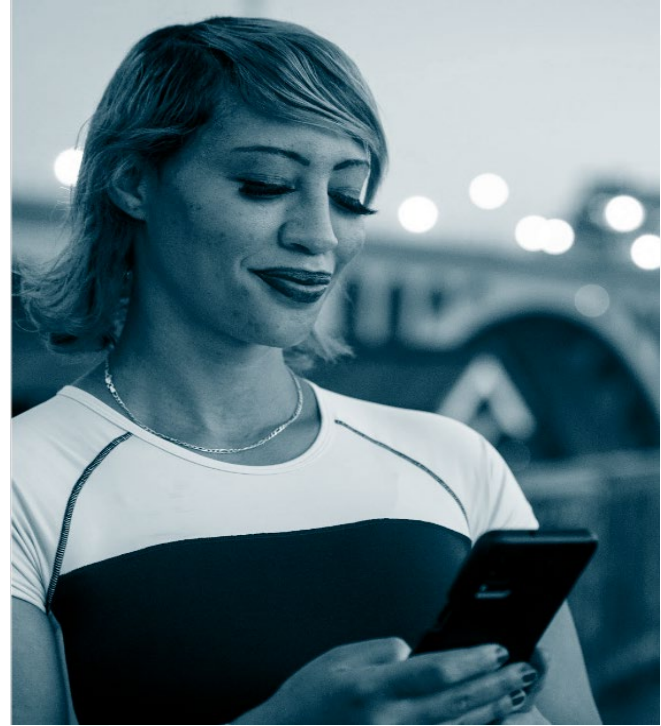
# Contingency Management and Technology

- Advantages

- Ease of access
- More touchpoints
- Data gathering and response times
- Comfort
- Confidentiality
- Safety

- Challenges

- Meaningful reward-bad behavior conflict
- State-specific compliance
- Privacy
- Bugs/ Tech support
- Some people prefer in person





**Questions?**



# For more information

To learn more about Affect's approach, visit our website or scan the QR code to download our app and see how it works.

[www.affecttherapeutics.com](http://www.affecttherapeutics.com)

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