

# CONTINGENCY MANAGEMENT FOR SUBSTANCE USE DISORDER PROFESSIONALS

OHIO SUBSTANCE USE DISORDERS CENTER OF EXCELLENCE

**SARAH HILL, MSSA, LISW-S, LCDC III**

TRAINER / RESEARCH ASSOCIATE

**DANIELLE LANNING, MSSA, LISW-S**

TRAINER / RESEARCH ASSOCIATE

Please sign-in through the chat box:

1. Full name
2. Email address
3. License and/or Certification number

**You are required to be on camera and/or participating in the training to be eligible for the CEU certificate**

---

# OBJECTIVES

1. Review and process the connection between operant conditioning, learning and substance use behavior.
2. Identify and explain basic parameters of contingency management within substance use disorder treatment settings.
3. Define and describe 7 principles for contingency management.
4. Develop understanding of how contingency management can be integrated and implemented into substance use disorder treatment.

---

# TELL US ABOUT A TIME....



<https://www.menti.com/aleh1qdvsvq8>

---

# WHAT IS CONTINGENCY MANAGEMENT?

- **Definition-** “a type of behavioral therapy in which individuals are ‘reinforced’, or rewarded, for evidence of positive behavioral change.” (NIH, 2011)
- Evidence based practice with a goal to reduce substance use through implementing a tangible reward structure within the individual's treatment.

---

# HISTORY OF CONTINGENCY MANAGEMENT IN SUBSTANCE USE DISORDER TREATMENT

1960's

Operant Conditioning for SUD to reinforce abstinence



1980's

Voucher method implemented



2000's

Cost effective implementation of CM developed: Fishbowl Method



1970's

Assistance of reinforcements for alcohol use

1990's

Research finds CM helpful for use of cocaine and opioids

---

# COMMON BELIEFS AND CHALLENGES

- The belief that individuals utilizing substances do not deserve to be rewarded for behaviors they "should" already be doing.
- Contingency management is supplementing one addictive behavior for another.
- Historical models of care for substance use treatment continue to overshadow acceptance and implementation of evidence-based interventions.
- Implementation of evidence-based practice needs buy in from providers to ensure high quality of care and adherence to the model.

---

# OPERANT CONDITIONING

- Contingency Management (CM) is based on the learning theory of Operant Conditioning.
- Behaviors will increase or decrease when something in the environment is either added or removed.
- The three methods for altering behaviors are:
  - Positive reinforcement
  - Negative reinforcement
  - Punishment
- CM uses positive reinforcement exclusively.



---

## WHAT THE RESEARCH TELLS US

- Individuals with a stimulant use disorder are twice as likely to benefit from CM than typical treatments such as cognitive behavioral therapy (CBT), motivation interviewing (MI), and counseling. Combining such treatment approaches with CM also increases outcomes (U.S. Department of Human Services, 2023).
- CM is effective when working with individuals from diverse populations such as dual diagnosis, the homeless population, racially and socioeconomic diverse populations and individuals involved in the criminal justice system (U.S. Department of Human Services, 2023).



---

## WHAT THE RESEARCH TELLS US

- Research found that implementation of CM within HIV prevention clinics was beneficial in increasing abstinence rates among the male homeless population while also increasing healthier behaviors. CM also increased the length of retention in the study with a reduction in substance use being maintained at a 9 and 12 month follow up (Reback, et al. 2010).
- CM has been shown to be effective no matter the individual's age, race/ethnicity, sex, income or presenting problem (Petry, 2017).

---

# TYPES OF CONTINGENCIES

**Reinforcements**- Goal of increasing occurrence of a behavior. Includes both positive and negative reinforcement.

**Punishments**- Goal of decreasing occurrence of a behavior. Typically involved introduction of aversive stimuli when undesired behavior occurs.

# TYPES OF REINFORCEMENT

## Positive

Presence of a stimuli after behavior occurs.

## Negative

Removal of a stimuli after behavior occurs.

# 7 PRINCIPLES OF CONTINGENCY MANAGEMENT

1 Target behavior

2 Target population

3 Type of incentive

4 Amount of incentive

5 Frequency of incentive

6 Timing of incentive

7 Duration of incentive

---

# 1. TARGET BEHAVIOR

**Objective, Observable,  
and Measurable**

Self-report is not acceptable because it is not objective, observable, or measurable.

**Clearly Contracted**

Both individuals and staff are clear about what is required to receive an incentive.

**Closely Tracked**

Important to monitor incentives to assure high fidelity and positive outcomes.

---

## EXAMPLE TARGET BEHAVIORS

- Group attendance
- Completion of treatment plan goals
- Following up with needed medical care
- Negative urine screens
  - Must provide immediate & rapid results to be effective. Consider how long a substance remains in the system.
  - Contested positive results should be set to lab for confirmation.



## ESTABLISH AN AGREED UPON CONTRACT

- Allows both the clinician and the individual to establish and identify expectations in a clear manner prior to the start of the intervention.
- Contracting with each person interested in participating on or prior to the first session is important and should include:
  - The way in which the program will be laid out and what the expectations will be.
  - The way in which incentives will accrue or reset.
  - Participation within the program is voluntary.

Adapted from (Pfund et al., 2021)

---

# SUCCESSIVE APPROXIMATIONS & SHAPING

- Successive approximations are the small steps that a person takes that are in alignment with their goal, but not yet achieving the target behavior.
- Shaping is the use of a reinforcement to reward successive approximations towards the target behavior.
- Can be used when an individual is unable or unwilling to engage in the initially identified target behavior. Allowing for individualized treatment goals.
- This is implemented by either increasing the reinforcement or lowering the requirements for earning the reinforcement.



# SHAPING & SUCCESSIVE APPROXIMATIONS EXAMPLES


## Smoking Cessation (Lamb et al., 2004)

- Participants provided a breath sample using a carbon monoxide (CO) monitor.
- The first 10 appointments were to identify each participant's baseline.
- Appointments 11-70, participants provided a breath sample and received an incentive if the CO level was at or below prior levels.
- The study yielded high levels of program retention.
- Additionally, a high rate of participants provided at least one CO level indicative of abstinence.

---

# SHAPING & SUCCESSIVE APPROXIMATIONS EXAMPLES

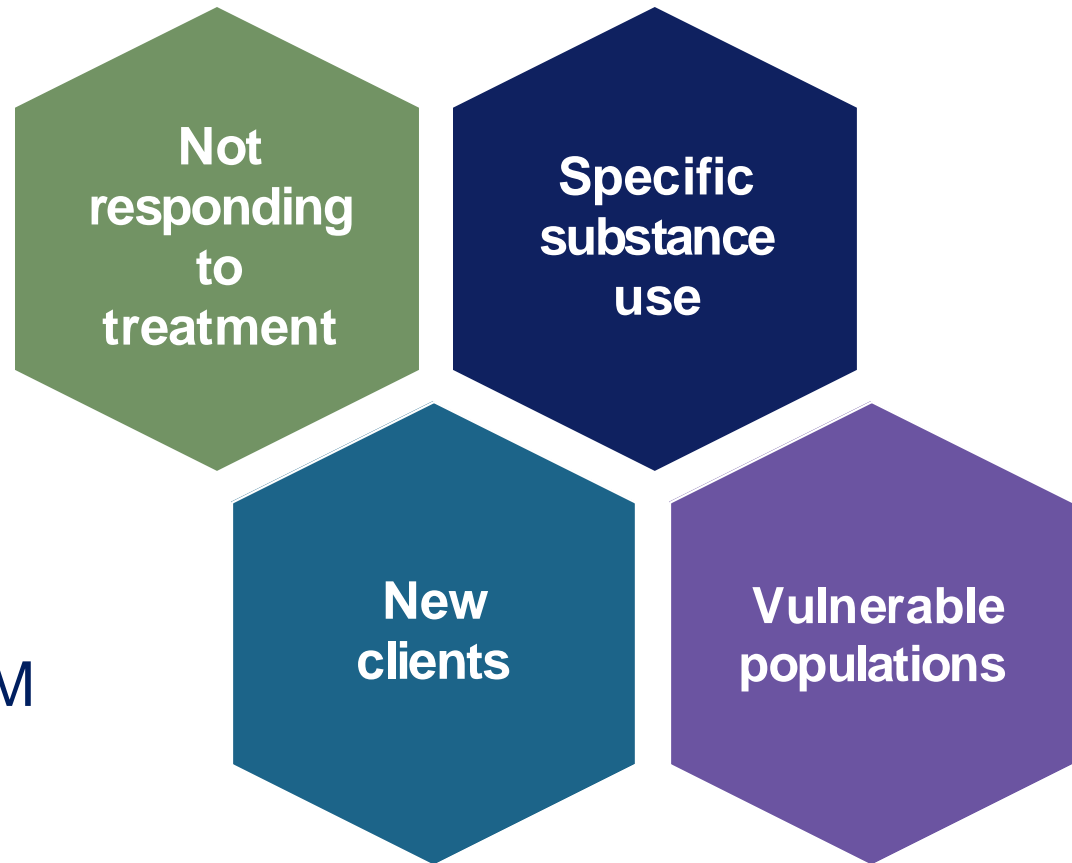
## Cocaine Use Disorder & Methadone Maintenance (Preston et al., 2001)

- During the first three weeks, the shaping group earned incentives for UDS showing abstinence or at least a 25% reduction in cocaine metabolite levels, while the standard CMgroup only received rewards for abstinence.
- In this period, 96% of the shaping group and 53% of the standard CMgroup earned vouchers. 
- The last 5 weeks , both groups were rewarded only for UDS indicating abstinence.
- The shaping group consistently provided more negative UDS samples than the standard CMgroup.

---

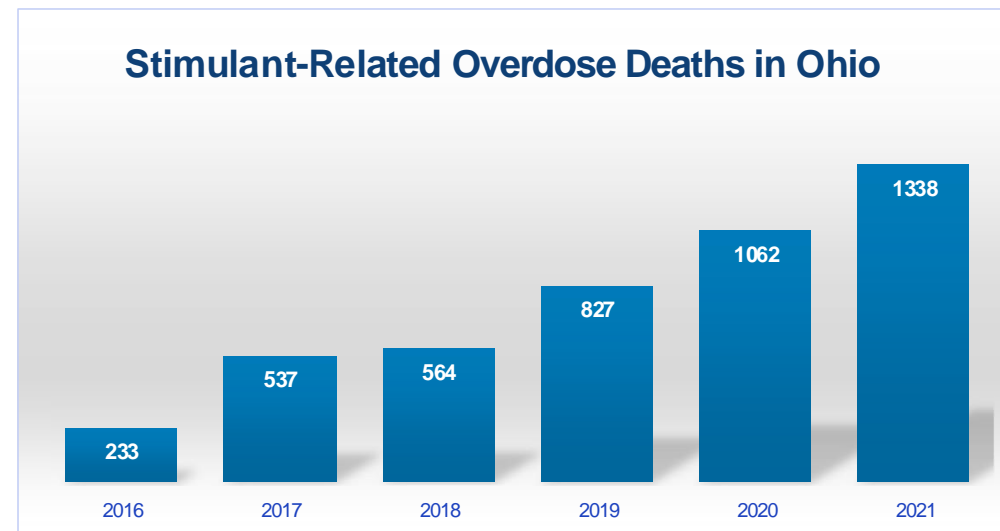
## 2. IDENTIFY THE TARGET POPULATION

- It's not always logistically or economically possible or necessary to provide reinforcement for all individuals.
- It is important to clearly identify who qualifies for a CM program.



## STIMULANT USE AND CM

- Escalated methamphetamine use and increased treatment admission numbers calls for high-quality evidence-based treatments such as CM.
- Attention to this population is key in reducing the overwhelming mortality rate directly impacting individuals, families and communities.
- Research suggests that there is increased efficacy for stimulant use disorder when CM is combined with other treatment interventions (U.S. Department of Health and Human Services, 2023).
- Research found that individuals using methamphetamines were less likely to use when given the opportunity to choose between the substance and the monetary reinforcement (Roll, 2007).



(Ohio Department of Health, 2022)

---

## RESEARCH LIMITATIONS

- Contingency Management has been found to improve retention and abstinence among those involved with the legal system and those who are unhoused. However, it is not recommended for those in which more frequent urine screens could lead to punitive effects or loss of housing (Petry et al., 2014).
- CM might exhibit reduced effectiveness when used for individuals with severe mental illness in comparison to those without (Foster et al., 2019).
  - Nevertheless, CM has been shown to yield improved retention and higher rates of abstinence, among individuals with severe mental illness in comparison to standard care (Foster et al., 2019).
- Although this field of study is expanding, there is a noticeable gap in research concerning the application of CM to adolescents (HHS, 2023).

### 3. TYPE OF INCENTIVE

No matter what type of incentive is chosen, it needs to be desirable to the target population.

#### Access to clinic privileges

No added cost

Methadone take-home privileges

Shift goods and services received to distribute on a contingent basis.

#### On-site prize distribution

Able to immediately select their prize

Gift cards, bus passes, clothes, food

#### Vouchers & token economy systems

Receive points for engaging in specific behaviors

Build up a “bank account” to cash in for goods and services

---

## 4. AMOUNT OF INCENTIVE



**The magnitude of reinforcement needed to sustain change may differ for different behavior targets.**

**There is a point when the incentive's value is too low and will not be effective.**

**Once initially established, incentives should gradually increase over the course of the program.**

---

## 5. FREQUENCY OF INCENTIVE



Decisions about reinforcement frequency are connected to such factors as the target behavior, the resources available, and the amount of clinical contact desired.

Contingency Management works best when rewards are delivered consistently and frequently.

If too infrequent, the rewards are unable to counteract the immediate reinforcing effects of substance use.



---

## **6. TIMING OF INCENTIVE**



**Reinforcement needs to follow the display of the target behavior as closely as possible to avoid the value of the reinforcement diminishing.**



**The more rapid the incentives are distributed, whether material or symbolic, the more effective they will be.**

---

## 7. DURATION OF INCENTIVE

The standard duration of CM is 12 weeks.

CM programs with durations shorter than 12 weeks have not demonstrated a sustained impact on continued abstinence.

If resources permit, providers have flexibility to extend the duration of incentives.

Early research indicates that longer durations may be particularly beneficial for populations with high-risk for relapse, comorbidities, and those facing significant barriers to treatment and recovery.

---

## RESPONDING TO SETBACKS

- Returning to old, longstanding behaviors is normal and expected when treating chronic health conditions.
- Punishments are not used in contingency management, although there is an emphasis on accountability.
- With a positive drug screen, no reward is earned for that visit.
- Reset:
  - If monetary incentives are being provided, participants temporally “reset” to the lowest award level.
  - Participants will have the chance to recover the incentive by providing a pre-determined number of negative drug screens.

# EXCUSED AND UNEXCUSED ABSENCES

- **Excused absences:**

- Except for a medical emergency, absences must be communicated to program staff before the scheduled appointment.
- Providers should show flexibility if a CM participant has been in communication.
- Providers also need to determine the number of consecutive excused absences permitted before incentives are reset.

- **Unexcused absences:**

- If program is providing escalating incentives, participant's incentive level is "reset".

- **Contracted expectations:**

- How a program responds to absences should be clearly outlined in the CM contract.

- **Fidelity to the model:**

- Keeping things consistent
- Staying true to what evidence has shown to be effective.

# ORGANIZATIONAL IMPLEMENTATION CONSIDERATIONS

- Contingency Management Champions
  - Agencies should appoint at least individual to serve in this coordinating role, though a team of 3 provides the most stability.
- Training & Coaching
  - Program staff should receive training on CM before implementation begins.
  - Coaching should be provided on an ongoing basis.

(U.S. Department of Human Services, 2023)

# INTEGRATION & IMPLEMENTATION

To implement a CM program, these characteristics must be present.



Achievable behavior that is clearly defined.



Target population is specified.



Incentives are enticing and tangible.



Incentives are only provided upon completion of desired behavior.



Incentives are provided consistently.

---

# BARRIERS FOR IMPLEMENTATION

Reduced alignment  
with providers typical  
theoretical orientation

Financial restraints

Lack of time  
to  
implement  
a novel  
program

Stigma  
surrounding  
intervention

Stigma of  
population  
served

Maintaining  
fidelity to  
the model

# Contingency Management Program Examples

The state of California and the VA respond to the increase in mortality rates related to stimulant use.



- The state of California developed and implemented their CM programming for individuals with Stimulant Use Disorder and beneficiaries of California's Medicaid.
  - First state to cover CM as a Medicaid benefit.
  - 24 of California's 58 counties are enrolled as participants in this program, with 66 treatment organizations having begun implementation.

WLC2

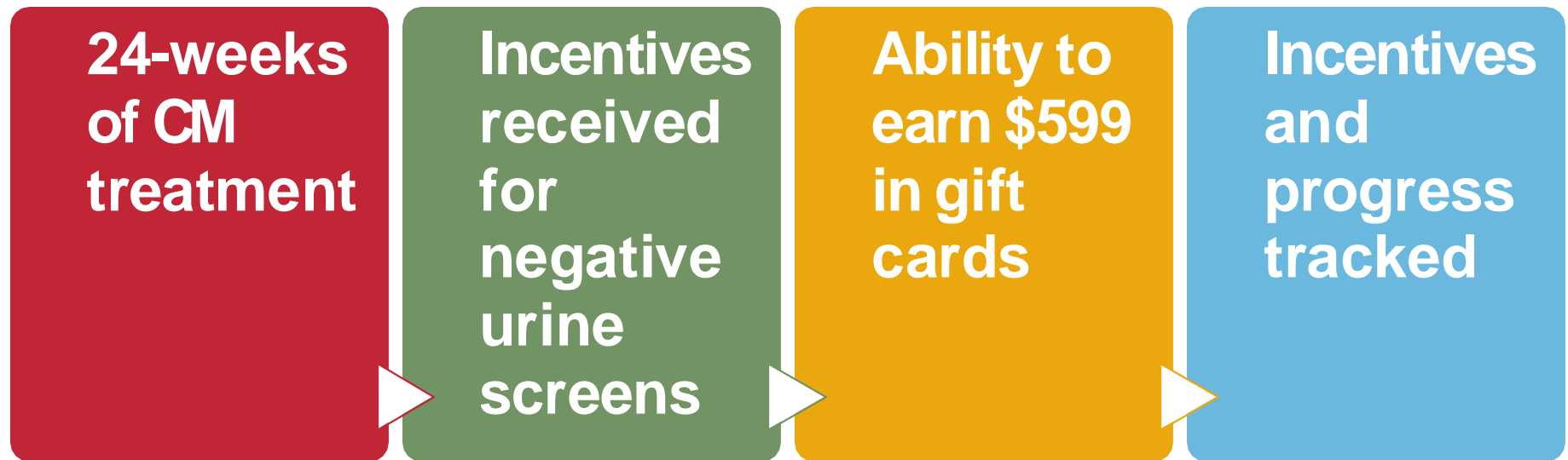


- In 2011 the Veteran's Administration (VA) identified the need for greater implementation of CM and called for CM to be implemented in all VA intensive outpatient programs (IOPs) with a focus on those using stimulants.
  - In 2010, less than 1% of veterans received CM services.
  - Goal was to implement CM to address SUDs without medication assisted treatment available, specifically stimulant use disorders.

WLC0



# RECOVERY INCENTIVES PROGRAM: CALIFORNIA'S CONTINGENCY MANAGEMENT BENEFIT



# RECOVERY INCENTIVES PROGRAM: CALIFORNIA'S CONTINGENCY MANAGEMENT BENEFIT

## Weeks 1-12

- Focus on escalation/ reset/ recovery.
- UDT collected twice per week.
- Incentive is
  - \$10 for each negative UDT
  - Increase of \$1.50 for each remaining week

## Weeks 13-24

- Focus on stabilization.
- UDT collected once weekly.
- Negative samples gain
  - \$15 gift card in weeks 13-18
  - \$10 gift card for weeks 19-23

---

# THE VETERANS AFFAIRS (VA) CONTINGENCY MANAGEMENT PROGRAM

February 2011,  
VA called for  
implementation  
of CM.

Held ½ day  
trainings with  
focus on  
outcomes data  
and skill  
practice

Individual VA  
programs  
allowed to  
customize CM  
to fit their  
population's  
needs

Most programs  
making use of  
on-site  
“Canteens” for  
prizes

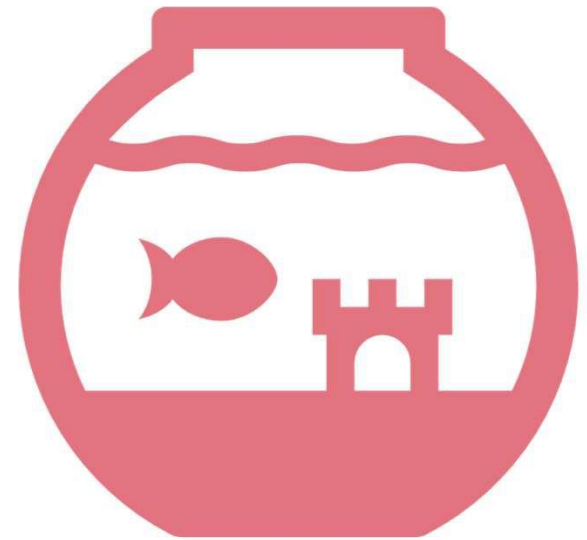
(Petry et al., 2014)

---

## THE VETERANS AFFAIRS (VA) CONTINGENCY MANAGEMENT PROGRAM (FISHBOWL METHOD)

- Testing for stimulants twice a week.
- Participants earn one draw for the first negative drug screen.
- If the screen is positive, a refusal is made or an unexcused absence occurs on testing day, the number of draws resets.
- Fishbowl contains slips of paper reading: “Good Job!”, \$1, \$20 & \$100. Most VA programs provide gift certificates to their onsite Canteens.

(Petry et al., 2014)



# FISH FOOD FOR THOUGHT

How might you see this working for your programs?



---

## SUMMARY

- Contingency Management is rooted in operant conditioning principles.
- The use of contingency management has been found to assist in increasing treatment retention and positive outcomes.
- Incentives must be tangible and consistent.
- Goals for individuals need to be achievable.
- Barriers for implementation exist but are adaptable for different needs.

# QUESTIONS?

---

---

# REFERENCES

- Aaronson, D. E., Dienes, C. T., Musheno, M. C., Frase, R. S., Musheno, M. C., McCleary, R., & Musheno, M. C. (1978). Changing the Public Drunkenness Laws: The Impact of Decriminalization. *Law & Society Review, 12*(3), 405-436. <https://doi.org/3053287>
- Cauchon, D. (2021). Meth overdose deaths in ohio soar to nearly 1,400 in 2021. Harm Reduction Ohio. <https://www.harmreductionohio.org/meth-overdose-deaths-soar-to-nearly-1400-in-2021/>
- Forster, S. E., DePhillippis, D., & Forman, S. D. (2019). “I’s” on the prize: A systematic review of individual differences in Contingency Management treatment response. *Journal of Substance Abuse Treatment, 100*, 64-83. doi: 10.1016/j.jsat.2019.03.001
- Ginely, M. K., Pfund, R. A., Rash, C. J., Zajac, K. (2021). Long-term efficacy of contingency management treatment based on objective indicators of abstinence from illicit substance use up to 1 year following treatment: A meta-analysis. *National Library of Medicine, 89* (1): 58-71. Doi: 10.1037/ccp0000552
- Higgins, S. T., & Petry, N. M. (1999). Contingency management. Incentives for sobriety. *Alcohol research & health : the journal of the National Institute on Alcohol Abuse and Alcoholism, 23*(2), 122–127.
- Kazdin, A. E. (1994). Behavior modification in applied settings (5th ed.). Pacific Grove, CA: Brooks/Cole Publishing Co.
- Kellogg, S.H., Stitzer, M.L., Petry, N.M., Kreek, M.J. (2007). Foundations and Principles contingency management Introduction and background. (n.d.). Retrieved December 14, 2023, from <https://attcnetwork.org/sites/default/files/2021-01/Kellog-Stitzer.pdf>



---

# REFERENCES

Lamb, R., Morral, A. R., Kirby, K. C., Iguchi, M., & Galbicka, G. (2004). Shaping smoking cessation using percentile schedules. *Drug and Alcohol Dependence*, 76(3), 247-259. doi:10.1016/J.DRUGALCDEP.2004.05.008

Ohio Department of Health. (2022). 2022 Ohio Drug Overdose Report [Report]. Violence and Injury Prevention Program. Retrieved from <https://odh.ohio.gov/know-our-programs/violence-injury-prevention-program/media/2022-ohio-drug-overdose-report>

Peck, J. A., Freeze, T.E., Rutkowski, B.A., McDonell, M., Parent, S., Hirschak, K. (2023). Recovery Incentives Program: California's Contingency Management Benefit Program Manual.

Petry, N. M. (2011). Contingency management: What it is and why psychiatrists should want to use it. *The Psychiatrist*, 35(5), 161-163. <https://doi.org/10.1192/pb.bp.110.031831>

Petry, N. M., & Bohn, M. J. (2003). Fishbowls and candy bars: using low-cost incentives to increase treatment retention. *Science & practice perspectives*, 2(1), 55–61. <https://doi.org/10.1151/spp032155>

Petry, N. M., DePhilippis, D., Rash, C. J., Drapkin, M., & McKay, J. R. (2014). Nationwide dissemination of contingency management: The Veterans Administration initiative. *The American Journal on Addictions / American Academy of Psychiatrists in Alcoholism and Addictions*, 23(3), 205. <https://doi.org/10.1111/j.1521-0391.2014.12092.x>

Petry N.M., Alessi SM, Olmstead TA, Rash CJ, Zajac K. 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. doi: 10.1037/adb0000287. Epub 2017 Jun 22. PMID: 28639812; PMCID: PMC5714694.

# REFERENCES

Preston, K. L., Umbricht, A., Wong, C. J., & Epstein, D. H. (2001). Shaping cocaine abstinence by successive approximation. *Journal of Consulting and Clinical Psychology*, 69(4), 643-654. doi:10.1037//0022-006X.69.4.643

Rash C. J. (2023). Implementing an evidence-based prize contingency management protocol for stimulant use. *Journal of substance use and addiction treatment*, 151, 209079. <https://doi.org/10.1016/j.josat.2023.209079>

Reback CJ, Peck JA, Dierst-Davies R, Nuno M, Kamien JB, Amass L. Contingency management among homeless, out-of-treatment men who have sex with men. *Journal of Substance Abuse Treatment*. 2010 Oct; 39(3):255-63. doi: 10.1016/j.josat.2010.06.007. Epub 2010 Jul 29. PMID: 20667681; PMCID: PMC2937073.

Rolls, J. M. (2007). Contingency management: an evidence-based component of methamphetamine use disorder treatments. *Society for the Study of Addiction*, 102 (1), 114-120. <https://doi.org/10.1111/j.1360-0443.2006.01774.x>

Scott K, Murphy CM, Yap K, Moul S, Hurley L, Becker SJ. Health Professional Stigma as a Barrier to Contingency Management Implementation in Opioid Treatment Programs. *Transl Issues Psychol Sci*. 2021 Jun;7(2):166-176. doi: 10.1037/tps0000245. Epub 2020 Oct 15. PMID: 34485617; PMCID: PMC8412039.

U.S. Department of Health and Human Services (2023, November 7). *Contingency Management for the Treatment of Substance Use Disorders: Enhancing Access, Quality, and Program Integrity for an Evidence-Based Intervention*. <https://aspe.hhs.gov/sites/default/files/documents/72bda5309911c29cd1ba3202c9ee0e03/contingency-management-sub-treatment.pdf>