

Issue BRIEF

Using Financial Incentives to Treat Stimulant Use Disorders

A Contingency Management Approach

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Key Findings

Stimulants are playing a prominent role in the current U.S. overdose crisis. As stimulant use continues to mount, the need for evidence-based treatment grows more urgent. This brief highlights contingency management, the most effective treatment for stimulant use disorder, and reviews the current barriers to its widespread use along with practice and policy strategies for increasing implementation.

Stimulants are involved in a substantial and growing percentage of the more than [100,000 overdose deaths](#) in the United States each year.¹ Methamphetamine and cocaine are increasingly present in overdoses involving fentanyl (Figure 1)—fueling what has been called the "fourth wave" of the opioid overdose crisis.² Unlike opioid use disorder, there are no FDA-approved medications to treat stimulant use disorder. However, a behavioral intervention called contingency management (CM) has been proven effective in managing a variety of substance use disorders, including tobacco, alcohol, cannabis, and stimulants. Also known as motivational incentives, CM reinforces positive recovery behaviors, including abstinence and retention in treatment programs, with financial rewards. Despite the considerable evidence for its efficacy, CM is underutilized in the treatment of stimulant use disorders, prompting recent commentators to call it "[the most effective, evidence-based treatment you've never used](#)."³ This brief reviews available evidence, implementation examples, and promising strategies for increasing CM use in treating stimulant use disorder.

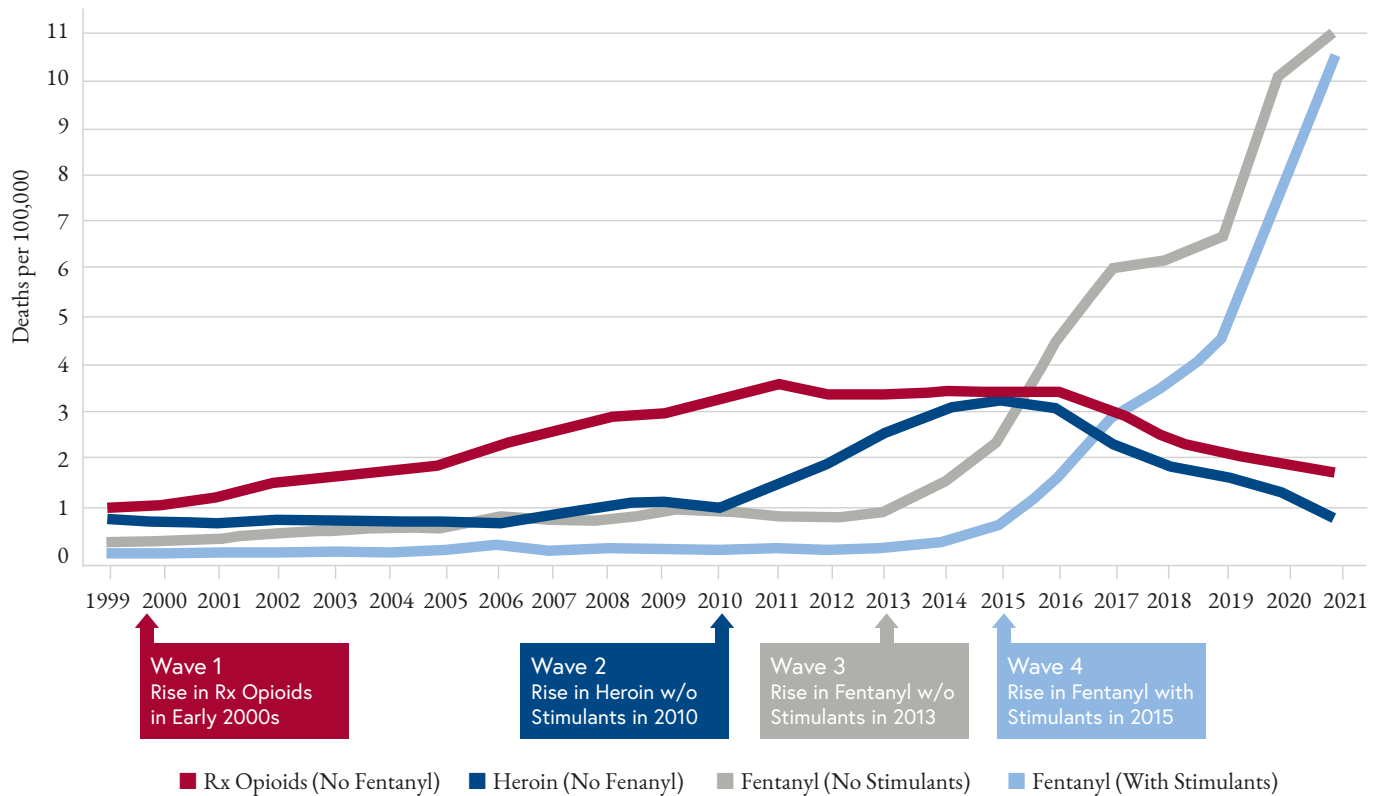
HOW CM WORKS

Based on psychological principles of operant conditioning, CM uses financial incentives to reinforce healthy behaviors. In substance use treatment, for example, an individual can receive a reward for providing a drug-free urine sample or for attending a treatment appointment. The reward can be structured as a voucher or gift card with a set value, or as a prize with a chance for rewards of varying values, usually from \$1 to \$100.

[Decades of evidence](#)⁴ show that CM is the most effective treatment available for stimulant use disorder, with [significant impacts](#)⁵ on abstinence during treatment and adherence to treatment plans. These effects on abstinence can persist at least one year after treatment. CM is about twice as effective as other behavioral treatments, including cognitive-behavioral therapy, counseling, or motivational interviewing. CM is effective alone or in combination with other evidence-based behavioral therapies, with some evidence of increased benefit when combined with a community-reinforcement approach (CRA). Voucher-based and prize-based rewards have been found to be equally

Figure 1.

Four waves of overdose mortality. A simplified schema of the four waves of the United States overdose mortality crisis.¹²



effective, with longer treatment periods (for example, 16 to 24 weeks) associated with greater effectiveness.⁶ One influential group of [experts](#) recently suggested that incentives at the level of \$100-\$200 (USD 2022) per month are most effective and have the greatest likelihood of producing benefits that exceed the costs beginning in the first year.⁷

Despite the strength of this evidence, CM approaches have not been widely implemented by health systems and treatment programs. One notable exception is the Department of Veterans Affairs (VA), which has implemented CM for the treatment of stimulant use disorder and cannabis use disorder across its health system. [More than 100 VA medical centers](#) offer a CM program that involves twice-weekly prize-based rewards for negative urine screens over the course of 12 weeks.³ The average value of incentives over the 12 weeks is about \$200 per veteran, with coupons redeemable for merchandise at any Veterans Canteen Service retail store, cafeteria, or coffee shop. More than [6,300 veterans](#) have received contingency management treatment since 2011. Among the nearly 82,000 urine

samples submitted, more than 90% tested negative for the target substance (most commonly stimulants).⁸

In 2021, the Centers for Medicare & Medicaid Services (CMS) approved California as the first state to cover CM for stimulant use disorder through a Medicaid demonstration waiver. In June 2023, CMS also approved Washington, and since then, Delaware, Montana, and West Virginia have submitted similar requests for Medicaid coverage of CM for stimulant use disorder.

The California program, known as [Medi-Cal Recovery Incentives](#), involves counties covering 88% of California's Medicaid population and runs through March 2024.⁹ Eligible Medi-Cal members participate in a structured 24-week outpatient program, followed by at least six months of additional recovery support services. Participants meet with a trained CM coordinator twice weekly for the first 12 weeks of the program, and then weekly for weeks 13 to 24 to complete a drug test. Participants receive a small gift card each time they test negative for stimulants and can earn up to \$599 per year in incentives.

BARRIERS TO IMPLEMENTING CM WIDELY

More widespread implementation of CM is hindered by a number of practical, policy, and attitudinal barriers. These barriers include concerns about potential violation of federal fraud and abuse laws; limited funding and reimbursement opportunities, program restrictions on use of CM; and a lack of provider knowledge along with negative attitudes and stigma toward CM.³

Federal rules prohibiting kickbacks, physician self-referrals, and patient inducements may deter some providers from participating in CM programs. But a [2020 Office of Inspector General \(OIG\) report](#) clarified that CM programs would not run afoul of these rules, as long as safeguards are in place to prevent fraud and abuse, paying for referrals, or marketing to patients to select a specific provider.¹⁰ In response, a [policy group](#) has recommended "guardrails" that can minimize the risk of violating these federal statutes.⁷

Funding for CM programs have been limited by a common misperception that federal guidelines prohibit CM program incentives above \$75 in aggregate per person per year. The [OIG](#) has clarified that all cash and cash-equivalent payments, including in-kind incentives above \$75, would need to be evaluated on a case-by-case basis.¹⁰ Despite this ruling, the federal [Substance Abuse and Mental Health Services Administration](#) (SAMHSA) maintains budget restrictions for its grant recipients that limit rewards in CM programs to \$15 for each reward and \$75 per client per budget period,¹¹ amounts well below what has been shown to be effective in research and in large-scale implementation at the VA. Even when programs can offer rewards greater than \$75, they often cap the value at [\\$599 per year](#) to prevent the incentives from becoming taxable income, which could threaten clients' eligibility for public benefits. A [policy group](#) has called on the Internal Revenue Service to recognize incentives within a CM program as part of a health care intervention, and consequently, consider them to be medical treatment and not taxable income.⁵

Finally, provider stigma and misperceptions hinder more widespread adoption of CM. Some clinicians object to CM on the grounds that it undermines internal motivation, fails to address underlying issues for the individual, costs too much, or is too hard to implement. Other health professionals cite the possibility of trading the reward or gift for illicit drugs as a reason to mistrust CM. Some policymakers question the ethics of contingency management, and whether such patients "deserve" a reward.⁴ Some opponents consider CM to be "bribery" and hesitate to reward people for staying off drugs. Recently, these attitudes about the use of CM with patients have been reframed as stigma, and provider training efforts are underway to promote better acceptance of CM among health professionals and the public.⁴

PRACTICAL AND POLICY STRATEGIES

A new [report](#) to Congress by the HHS Office of the Assistant Secretary for Planning and Evaluation (ASPE) presents practical and policy opportunities that could overcome barriers to widespread implementation of CM for stimulant use disorders.⁴ Opportunities outlined by the ASPE include:

- Given the evidence on the magnitude of effective rewards, federal agencies and other funders should consider aligning funding limits with the research evidence to maximize CM effectiveness.
- To reduce uncertainty about whether and when federal kickback and patient inducement statutes apply to CM rewards, OIG and HHS should consider implementing a formal "safe harbor" for evidence-based CM incentives.
- To help address knowledge gaps and misperceptions about CM, organizations should develop training workshops for clinical leaders, clients, and community members.
- To allay fears about misuse or misdirection of rewards, funders should require strict adherence to clinical protocols within CM programs, and disburse incentives as gift cards or vouchers rather than as cash.

AREAS FOR FURTHER RESEARCH

While the evidence base for CM as a treatment for stimulant use disorders is strong, many questions remain about implementing CM within the current environment of increasing overdose deaths and polysubstance use. Research is needed to address the following questions:

- Are the incentive values used decades ago (for example, \$100-\$200 per month) still the most effective amount going forward? Is there an optimal treatment duration beyond which the cost-effectiveness of CM decreases?
- Should CM be used to incentivize harm reduction goals for stimulant use disorder (for example, less frequent drug use and retention in treatment), in addition to abstinence-based approaches?
- How can advances in technology, such as mobile phone or internet-based delivery, be used to implement CM programs more efficiently and effectively?
- Can CM be used to address polysubstance use, especially the co-occurrence of opioid and stimulant use disorders? Further research should focus on understanding the unique challenges and barriers that people who use multiple substances may encounter, and how providers can expand their CM services to include additional treatment modalities for co-occurring substance use disorders.

REFERENCES

1. Ahmad, F.B., Cisewski, J.A., Rossen, L.M., & Sutton, P. (2023). *Provisional Drug Overdose Death Counts*. National Center for Health Statistics. Retrieved January 2023 from <https://www.cdc.gov/nchs/nvss/vsrr/drug-overdose-data.htm>
2. Rawson, R.A., Erath, T.G., & Clark, H.W. (2023). The Fourth Wave of the Overdose Crisis: Examining the Prominent Role of Psychomotor Stimulants with and without Fentanyl. *Preventive Medicine*, 176(Nov). <https://doi.org/10.1016/j.ypmed.2023.107625>
3. Proctor, S., & Reiser, I. (2023). *Contingency Management for Stimulant Addiction: The Most Effective, Evidence-Based Treatment You've Never Used*. Society for the Advancement of Psychotherapy. Retrieved January 2023 from <https://societyforpsychotherapy.org/contingency-management-for-stimulant-addiction-the-most-effective-evidence-based-treatment-youve-never-used>
4. U.S. Department of Health and Human Services. (2023). *Contingency Management for the Treatment of Substance Use Disorders: Enhancing Access, Quality, and Program Integrity for an Evidence-Based Intervention*. Retrieved January 2023 from <https://aspe.hhs.gov/reports/contingency-management-treatment-suds>
5. Rawson, R.A., Erath, T.G., Chalk, M., Clark, H.W., McDaid, C., Wattenberg, S.A., Roll, J.M., McDonnell, M.G., Parent, S., & Freese, T.E. (2023). Contingency Management for Stimulant Use Disorder: Progress, Challenges, and Recommendations. *Journal of Ambulatory Care Management*. 46(2):152-159. <https://doi.org/10.1097/JAC.0000000000000450>
6. Higgins, S.T., Allison, N.K., & Davis, D.R. (2019). Voucher-Based Contingency Management is Efficacious but Underutilized in Treating Addictions. *Perspectives on Behavior Science*. 42(3): 501–524. <https://doi.org/10.1007/s40614-019-00216-z>
7. Motivational Incentives Policy Group. (2022). *Letter to Secretary Becerra*. Retrieved January 2023 from https://www.naadac.org/assets/2416/mipg_letterto_hhs_sec_becerra_on_cm_12_may_2022.pdf
8. Senate Committee on Veterans' Affairs. (2023). *Statement of E. Scavella*. Retrieved January 2023 from <https://www.veterans.senate.gov/services/files/CFEB8D42-EA25-4FEA-B3BE-B79A39919BB8>
9. California Department of Health Care Services. *The Recovery Incentives Program: California's Contingency Management Benefit Fact Sheet*. Retrieved January 2023 from <https://www.dhcs.ca.gov/CalAIM/Documents/CM-Fact-Sheet.pdf>
10. Office of Inspector General, Department of Health and Human Services. (2020). *Public Inspection: Medicare and State Health Care Programs: Fraud and Abuse; Revisions to Safe Harbors Under the Anti-Kickback Statute, and Civil Monetary Penalty Rules Regarding Beneficiary Inducements*. Retrieved January 2023 from <https://www.federalregister.gov/documents/2020/12/02/2020-26072/medicare-and-state-health-care-programs-fraud-and-abuse-revisions-to-safe-harbors-under-the>
11. Substance Abuse and Mental Health Services Administration (SAMHSA). (2023). *Standard Funding Restrictions*. Retrieved January 2023 from <https://www.samhsa.gov/grants/how-to-apply/budget-and-narrative/standard-funding-restrictions>
12. Friedman, J., Shover, C.L. (2023). Charting the Fourth Wave: Geographic, Temporal, Race/Ethnicity and Demographic Trends in Polysubstance Fentanyl Overdose Deaths in the United States, 2010–2021. *Addiction*. 118(12). <https://doi.org/10.1111/add.16318>

NOTES

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Research Contribution by Lyric Harris

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