Contingency Management for Alcohol Use Disorder



February 2023

Q: What is contingency management?

A: Contingency management (CM) refers to the systematic reinforcement of desired behaviors (Higgins & Petry, 1999). Grounded on principles of positive reinforcement, CM encourages positive behavior change by rewarding patients, often with financial incentives or 'vouchers' exchangeable for goods, based on objective evidence of behavior change (such as abstinence from drinking confirmed by negative breathalcohol tests, medication compliance, or treatment attendance; Higgins & Petry, 1999). Voucher-based reinforcement therapy is a common CM intervention. Patients earn vouchers by providing negative biological samples which are exchanged for goods and services (Lussier, Heil, Mongeon, Badger, & Higgins, 2006). The 'fishbowl' procedure, another CM technique, involves a lottery system where patients receive draws for providing negative biological samples (Petry & Martin, 2002).

Q: What is the treatment model underlying CM for alcohol use disorder?

A: CM is based on the principles of operant conditioning which involve the use of consequences (rewards and punishments) to change the form and frequency of voluntary behavior (Higgins & Petry, 1999). In the case of alcohol use disorder (AUD), alcohol use is the behavior, and it is positively reinforced (or "rewarded") by both its biochemical effects on the brain and by environmental influences like peer encouragement. Animal research has demonstrated that increasing non-alcohol sources of reinforcement, such as food, can lead to decreases in alcohol use. Likewise, non-alcohol sources of reinforcement, for example entertainment, can reduce alcohol use in humans. CM aims to achieve behavior change by consistently reinforcing alcohol non-use (Higgins & Petry, 1999).

Q: Is CM recommended as a treatment for AUD in the Military Health System (MHS)?

A: No. The 2021 VA/DoD Clinical Practice Guideline for the Management of Substance Use Disorders describes CM as having insufficient evidence as a primary treatment and questionable evidence as an adjunctive treatment for AUD during early recovery (first 90 days).

The MHS relies on the VA/DoD clinical practice guidelines (CPGs) to inform best clinical practices. The CPGs are developed under the purview of clinical experts and are derived through a transparent and systematic approach that includes, but is not limited to, systematic reviews of the literature on a given topic and development of recommendations using a graded system that takes into account the overall quality of the evidence and the magnitude of the net benefit of the recommendation. A further description of this process and CPGs on specific topics can be found on the VA clinical practice guidelines website.

Q: Do other authoritative reviews recommend CM as a treatment for AUD?

A: No. Other authoritative reviews have not substantiated the use of CM for AUD.



Other recognized organizations conduct systematic reviews and evidence syntheses on psychological health topics using similar grading systems as the VA/DoD CPGs. Most notable of these organizations is Cochrane – an international network that conducts high-quality reviews of healthcare interventions.

Q: What conclusions can be drawn about the use of CM as a treatment for AUD in the MHS?

A: The current state of evidence for CM is not mature enough to recommend it as an effective evidence-based treatment for AUD in the MHS. Research using technologies which enable continuous monitoring of alcohol use has the potential to change future recommendations of CM as a treatment for AUD, but the evidence is emerging and currently consists primarily of small pilot studies. Multiple, methodologically rigorous randomized controlled trials are needed to form a body of evidence supporting the use of CM before it can be considered as an evidence-based treatment for AUD in the MHS.

References

Department of Veterans Affairs/Department of Defense. (2021). VA/DoD clinical practice guideline for the management of substance use disorders. Version 4.0. Washington (DC): Department of Veterans Affairs/Department of Defense.

Lussier, J. P., Heil, S. H., Mongeon, J. A., Badger, G. J., & Higgins, S. T. (2006). A meta-analysis of voucher-based reinforcement therapy for substance use disorders. *Addiction*, 101(2), 192–203.

Higgins, S. T., & Petry, N. M. (1999). Contingency management. Incentives for sobriety. *Alcohol Research & Health*, 23(2), 122–127.

Petry, N. M., & Martin, B. (2002). Low-cost contingency management for treating cocaine- and opioid-abusing methadone patients. *Journal of Consulting and Clinical Psychology*, 70(2), 398–405.