



Methadone plus contingency management or performance feedback reduces cocaine and opiate use in people with drug addiction


Schottenfeld RS, Chawarski MC, Pakes JR, *et al.* Methadone versus buprenorphine with contingency management or performance feedback for cocaine and opioid dependence. *Am J Psychiatry* 2005;162:340–8.


Q Does adding methadone to contingency management or performance feedback reduce illegal drug use in people with a history of drug addiction?


METHODS


 **Design:** Randomised controlled trial.

 **Allocation:** Concealed.


 **Blinding:** Double blind.


 **Follow up period:** Six months.

 **Setting:** One hospital in Connecticut, USA; recruitment February 1995 to July 1998.

 **Patients:** 162 people (mean age 36.2 years) with cocaine and opioid dependence. Eligible participants had at least a one year history of opioid dependence and cocaine abuse or dependence (DSM-IV diagnosis). Main exclusions: current dependence on alcohol or sedatives; significant medical comorbidity; current psychotic or bipolar disorder, major depression, or suicide risk; pregnancy; inability to read or understand English.

R_x **Intervention:** Methadone (65 mg/day maintenance dose) or buprenorphine (12 mg/day maintenance dose) plus contingency management or performance feedback (that is, four treatment groups). All participants provided urine samples for a drug test three times weekly. Contingency management consisted of rewarding participants with vouchers for each negative urine sample, worth up to US\$1033.50 in total. Performance feedback consisted of giving participants a piece of paper indicating the results of each urine test. All participants received community reinforcement approach counselling, twice weekly for the first 12 weeks and weekly thereafter.

 **Outcomes:** Maximum consecutive weeks of abstinence from drug (cocaine and opiate) use and proportion of drug free (cocaine and opiate) urine tests.

 **Patient follow up:** 54.9% of participants completed six months' treatment; 70% of urine tests were completed.

MAIN RESULTS

Adding methadone to either contingency management or performance feedback significantly increased abstinence from drug use and drug free urine tests at 24 weeks compared with adding buprenorphine (consecutive weeks of abstinence: 4.6 weeks with methadone *v* 2.3 weeks with buprenorphine; $p < 0.05$; proportion of drug free urine tests: 36.3% with methadone *v* 19.1% with buprenorphine; $p < 0.05$).

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CONCLUSIONS

Methadone plus contingency management or performance feedback increases abstinence from illegal drug use in people with a history of cocaine and opioid dependence.

Commentary

Schottenfeld *et al* describe results of a trial evaluating independent and additive effects of medication and contingency management (CM) for reducing drug use. The study addresses two major issues in treating opioid dependence: (1) which medication is best; and (2) can the addition of CM improve outcomes?

The findings suggest that methadone engenders greater retention and more abstinence than buprenorphine. These data confirm earlier reports demonstrating increased efficacy of methadone relative to buprenorphine.¹ The current study allowed for dose increases of both medications if continued use was occurring, a method commonly used in practice (which enhanced the external validity of the study). While buprenorphine has promise as a relatively safe maintenance medication with less overdose and abuse potential than methadone, results from this study suggest that patients may benefit more from the older medication.

This study also replicates other research findings on the efficacy of voucher based CM for decreasing substance use.² While CM enhances retention in non-opioid maintenance settings, this procedure rarely increases retention among methadone patients, presumably because methadone itself is a strong reinforcer. Some CM studies have failed to find beneficial effects of CM when abstinence from multiple substances is required to earn reinforcement,³ but Schottenfeld *et al*, along with one other study,⁴ did demonstrate decreased use of both opioids and cocaine while contingent reinforcement was available. As in other studies,^{5,6} no synergistic effects of CM were noted when combined with another effective intervention.

The results from Schottenfeld *et al* suggest that methadone should be the initial therapy recommended for opioid dependent patients. CM may bolster some outcomes, but given its added expense, lower cost alternatives should be explored,⁴ in conjunction with large scale cost-benefit analyses.

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