

10.3 Clinically relevant comparison supports buprenorphine as methadone alternative

Finding An Australian study which approximated recommended clinical procedures found buprenorphine roughly equivalent to methadone as a maintenance treatment for opiate dependence.

In [study 1](#) 394 heroin addicts seeking treatment at three methadone clinics were randomly assigned for 13 weeks to buprenorphine or methadone and received at least one dose. Each also received dummy doses of the other drug and neither they nor staff knew which was the active medication. Medication was taken at the clinic and adjusted up to 32mg buprenorphine or 150mg methadone daily. From week seven buprenorphine patients received double doses on alternate days. By the end fewer (50% versus 59%) buprenorphine patients were still in treatment and over the 13 weeks they had left slightly but significantly earlier due to excess drop-out in the first two weeks. Alternate-day dosing did not affect retention, perhaps partly because patients who experienced discomfort could return to daily dosing. One in ten did. Among retained patients the two drugs led to roughly equivalent falls in heroin use and improvements in physical and psychological health, infection risk behaviour, and social functioning. However, methadone patients expressed significantly greater liking for their medication, felt a greater 'buzz', and suffered slightly fewer withdrawal symptoms.

Based on another three months' treatment, [study 2](#) estimated that the costs of buprenorphine treatment were higher but not significantly so. Given plausible assumptions about future price reductions and efficiency improvements, cost and cost-effectiveness became comparable, largely because, though more expensive, buprenorphine can be taken (and supervised) once every two days.

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In context The study used commercial buprenorphine tablets, dosed flexibly in response to patient requests and signs of withdrawal or sedation, and followed recommended induction procedures, enhancing real-world applicability. Previous studies favouring methadone have featured low or inflexible dosing and drawn out induction leading to high early drop-out (the featured study may also have suffered from this). As in the UK, the fallback option of methadone was available to buprenorphine drop-outs, probably an important influence on retention. The major departure from normal practice was that even on alternate-day dosing, buprenorphine patients had to attend daily and take dummy doses, robbing them of the convenience of alternate-day attendance. Without this, retention might have been better. Also, it is unclear what proportion of eligible patients agreed to enter the study or how typical they were of all patients at the clinics.

A recent meta-analysis indicates that the study's findings on retention and heroin use are typical of flexible-dose comparisons, and that any slight retention advantage for methadone could be due to over-cautious induction. Findings of equivalent outcomes and costs were replicated in a later Australian study set in primary care.

Practice implications Roughly equivalent retention, outcomes, costs, and convenience for the prescriber (in Britain, both can be prescribed to be dispensed daily) mean that the choice between methadone and buprenorphine must be made on other grounds. Inexperienced doctors may prefer the safety of buprenorphine, especially if they can arrange supervised consumption. Buprenorphine is easier to withdraw from and transfer to naltrexone can be more rapid, so it is more attractive for patients aiming realistically for abstinence who require prior stabilisation. Those with commitments which make daily visits difficult may prefer a three-times-a-week buprenorphine regime. Methadone may be preferred for its opiate-type effects or to avoid the opiate-blocking effects of buprenorphine, and high-dose heroin users may find buprenorphine inadequate.

Featured studies 1 Mattick R.P. *et al.* "Buprenorphine versus methadone maintenance therapy: a randomized double-blind trial with 405 opioid-dependent patients." *Addiction*: 2003, 98, p. 441–452 2 Doran C.M. *et al.* "Buprenorphine versus methadone maintenance: a cost-effectiveness analysis." *Drug and Alcohol Dependence*: 2003, 71(3), p. 295–302. Copies: for both apply DrugScope.

Additional reading Johnson R.E. *et al.* "Buprenorphine: how to use it right." *Drug and Alcohol Dependence*: 2003, 70, p. S59–S77. Copies: apply DrugScope.

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