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► Medically assisted recovery from opiate dependence within the context of the UK drug strategy: methadone and suboxone (buprenorphine-naloxone) patients compared.

McKeganey N., Russell C, Cockayne L.

Journal of Substance Abuse Treatment: 2013, 44(1), p. 97–102.

Unable to obtain a copy by clicking title? Try asking the author for a reprint by adapting this [prepared e-mail](#) or by writing to Dr McKeganey at cdmres@drugmisuseresearch.org.

Opiate dependent patients in Scotland who opted for or were allocated to methadone sustained their abstinence from heroin as well as those on buprenorphine, but buprenorphine was far better at helping continuing heroin users cut back – suggestive, but the study's constraints make the practice implications unclear.

SUMMARY In the light of national UK [recovery-oriented](#) addiction treatment policies and [concern](#) over methadone-related overdose deaths, the challenge for drug treatment services is to provide medications which help patients stop using opiates yet do not increase their risk of death when combined with street heroin. In these respects, [Suboxone](#) may be a valuable, recovery-focused alternative to methadone. It combines the synthetic opiate-type drug buprenorphine, which prevents withdrawal symptoms when heroin use stops or reduces, with the opiate-blocking drug naloxone [Editor's note: intended to prevent the medication being injected because it is active when injected but inactive when taken as intended under the tongue].

Compared with oral methadone, Suboxone's advantages include better cognitive performance and decision-making, less intense side effects, greater patient satisfaction, improved respiratory functioning, more patients stopping heroin use, more rapid stabilisation, and fewer interactions with other drugs.

The featured study sought to assess whether these advantages were apparent in heroin use trends among patients in Scotland [being prescribed](#) either methadone or Suboxone on a long-term basis in the treatment of their opiate dependence. To test this it recruited 109 opiate-dependent adults who had been prescribed these drugs for the past six months, considered long enough for their therapeutic effects to have become apparent. Patients were recruited from among those whose details were supplied by pharmacies across Glasgow and by one of the main drug treatment clinics in Fife.

Typically men in their 30s and 40s who had started using heroin in their mid-20s, the 56 methadone patients were prescribed on average 76mg per day of the drug while the 53 on Suboxone averaged [13mg](#). Researchers interviewed them at the start of the study when they had been on their medications for six months, and then were able to follow up about two thirds eight months later, when they would have been on their medications for [14 consecutive months](#). At issue was whether Suboxone patients were either more likely to have stayed abstinent from heroin or to have made greater reductions in use than those on methadone. Abstinence and use levels were assessed by patients' reports to researchers of their heroin use over the past [three months](#).

Main findings

Baseline measures taken at the start of the study after six months in treatment showed the two sets of patients were similar in many respects including age, age at start of heroin use/problems, and treatment histories. However, Suboxone patients scored as seeing their drug use as a slightly less of a problem and as less ready for treatment. They were also nearly twice as likely (40 of 56 as opposed to 20 of 53 for methadone) to have abstained from heroin over the past three months, though at an average of about four days in ten, those who had used did so just as often. It was not possible to say how far any differences reflected the impact of treatment, or differences between the patients even before they had started treatment.

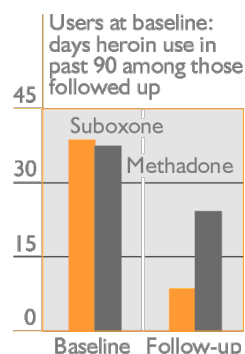
After taking in to account [potentially relevant](#) differences between the patients, eight months later Suboxone patients who had been using heroin at baseline had made far greater reductions in their use, down from nearly 39 days in the past 90 to just 8.5 among the 14 (out of 16) who could be followed up. Corresponding figures for the 20 (out of 33) followed-up methadone patients were 37 days and 24 days – a statistically significant reduction, but much smaller than among the Suboxone patients ► [chart](#). Assuming those who could not be followed up had continued to use at the same level enabled another analysis to include all the patients who had been using heroin at the start of the study. On this basis, the extra reduction among Suboxone patients was no longer as great, and no longer statistically significant.

In contrast, the 60 patients who had *not* been using heroin at baseline were just as likely to have sustained abstinence regardless of whether they had been prescribed Suboxone or methadone. All but three of the 24 (out of 40) Suboxone patients who could be followed up were still abstinent, and every one of the 13 (out of 20) methadone patients.

The authors' conclusions

Overall these results argue for prescribing services to make greater use of Suboxone in the treatment of heroin dependence. Though Suboxone and methadone were equally and highly effective at converting short- to long-term heroin abstinence, Suboxone patients who had been using heroin made greater reductions in their use between six months and 14 months after starting their current treatment.

Caution is demanded in assessing the implications of these findings because patients had not been randomly allocated to the treatments. Such differences as were found could be due not to the treatments but to differences between patients who chose or were allocated to Suboxone versus methadone. For example, some methadone patients might have been on that medication precisely because they found it more difficult to do without heroin. Arguing against this is the similarity of the patients at the start of the study on the variables which could be assessed, and the fact that the extra reduction in use remained statistically significant after adjusting for several variables likely to be related to the chances of a patient reducing their use. It is also not possible to say which drug had the greater impact, not from a baseline already six months in to treatment, but from the start of treatment. Neither is it known which drug if any was associated with broader improvements in the patients' lives seen as characterising recovery from addiction.



FINDINGS COMMENTARY The authors were [rightly cautious](#) about extrapolating their findings to practice, but it does seem that buprenorphine is more suited than methadone to abstinence, normalisation and reintegration objectives, and more likely to be chosen by patients for whom these are priorities (1 2). Buprenorphine is also easier to withdraw from, so fits better with current UK national policy which emphasises moving patients through and out of treatment to (it is hoped) secure recovery via social reintegration and employment. Failing this, methadone's retention advantage (see below) helps keep patients safe for longer.

However one balances these pros and cons, nothing will be gained from diverting patients to buprenorphine if (as [can happen](#)) many then drop out and presumably return to dependent heroin use who would have been retained by methadone. Similarly, it would be counterproductive to deter patients from entering treatment by making this contingent on accepting buprenorphine (the same applies to methadone), or to switch patients to Suboxone in such a way that the extra cost of the drug and of its dispensing restricted treatment access.

UK guidance

Relative to buprenorphine, it was largely methadone's retention advantage which led [an assessment](#) conducted for the UK's National Institute for Health and Clinical Excellence (NICE) to calculate that it also created slightly greater improvements in (largely health-related) quality of life. Since methadone also resulted in lower health care costs, it was judged more cost-effective than buprenorphine.

Grounded more in UK practice, experts and advisers convened by NICE put a [different spin](#) on largely the same evidence. Their advice was that the choice between the medications should be made "case by case", based on issues like whether buprenorphine's safety was a priority for that individual, whether the patient was aiming to withdraw from opiate-type drugs altogether (easier with buprenorphine), and patient preference. When for an individual the medications were equally appropriate, methadone might take precedence because it cost less and on average prolonged the benefits of being in treatment. Current [UK prescribing guidelines](#) take a similar line. Buprenorphine's better safety profile and its attraction for a less severely affected caseload commend it particularly to primary care settings; [in Birmingham](#) for example, it was twice as likely to be prescribed as a maintenance drug by GPs as by specialist addiction services.

Caution needed over practice implications

As the authors of the featured study warned, before it can be concluded that Suboxone more effectively curbed heroin use than methadone, we would need to know use levels before the patients *started* treatment. Three to six months in to treatment they were using heroin on about four days out of ten. Before starting and in order to qualify for the treatment, most would presumably have been using practically every day and several times a day. More serious is the fact that we do not know how many patients who started treatment on the two medications had already left before six months, so were not in a position to join the study. Methadone [generally](#) has the retention advantage (see below) so may have helped more patients than Suboxone achieve six months continuous treatment, rather than dropping out early to resume daily heroin use. Also casting some doubt over the implications of the findings is the fact that nearly a third of patients who had used heroin three to six months in to treatment could not be followed up. When they were assumed to still be using at the same rate, Suboxone's advantage in reducing heroin use – its sole advantage in the findings – diminished to a non-significant level.

Apart from the cautions expressed by the authors, their report does not say how many of the patients asked to join the study did not do so. It could be that patients who the researchers were able to contact and who agreed to be interviewed were not representative of all those in treatment in the two cities. A slightly higher proportion of Suboxone than methadone patients (68% v. 62%) could be followed up. If this reflects retention in treatment, it seems to contradict findings in [England](#), where at three clinics twice as many methadone patients were retained for six months. Before this time 47% of buprenorphine patients had left for [seemingly negative](#) reasons compared to 29% of methadone patients. [Internationally](#) too in trials which randomly allocated patients to the two drugs, methadone has been found to retain patients longer than buprenorphine. The results of the featured study were confined to heroin. Unknown is how many patients resorted to other opiate-type drugs such as non-prescribed methadone or buprenorphine, or to other types of drugs such as benzodiazepines.

Of interest is that after six months on their respective medications, methadone patients felt about as well as those prescribed Suboxone, seemingly contradicting the supposed advantage of buprenorphine in maintaining a clear head and less sedated lifestyle. Rather than any inherent lack of motivation on the part of the Suboxone patients, the greater motivation of the methadone patients expressed in their recognition they had a drug problem and their readiness to have it treated may reflect the fact that they did in reality have more of a continuing heroin problem which needed addressing.

For more extended consideration of the evidence on the relative merits of buprenorphine versus methadone see these two [\(1 2\)](#) Findings analyses.

Thanks for their comments on this entry in draft to research authors Neil McKeganey and Christopher Russell. Commentators bear no responsibility for the text including the interpretations and any remaining errors.

Last revised 15 July 2014. First uploaded 07 July 2014

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