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▶ A randomized trial of methadone initiation prior to release from incarceration.

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This US randomised trial in Rhode Island among formerly opiate dependent prisoners found that starting methadone treatment in prison radically improved treatment uptake on release and reduced heroin and cocaine use over the following six months, confirming results from Baltimore.

Summary Just over half of US prison systems offer any methadone treatment to opioid-addicted prisoners and those which do, offer it to very few, while the patients face financial and other barriers to continuing treatment on release. The featured study sought to determine whether initiating methadone in prison and/or funding it on release would help opioid-addicted prisoners continue in treatment and reduce their drug use and associated risks after leaving prison. It was conducted across the US state of Rhode Island's prison/jail system, a system centralised at a single site. For prisoners on methadone at entry, generally the system maintains them for a further week and then tapers the dose, meaning that (depending on the sentence) their dose at release could be very low or zero.

Instead the study aimed to randomly allocate prisoners who were injecting drugs just before their imprisonment, and were on methadone or dependent on heroin, to one of three approaches to arranging methadone treatment on release (to enter the study this had to be their aim). Before their release all the prisoners in the study were counselled about the risks of HIV and overdose and helped to link up to their chosen post-release methadone programme. The first clinic appointment was arranged and help given with required documentation and arranging transport. For one set of randomly allocated prisoners (referral-only) this was the sole assistance. For another set (referral-plus-funding) their post-release methadone treatment was funded in full for 12 weeks and

half-funded for another 12. Finally, another set (referral-plus-funding-plus-methadone) received all this assistance, and could also begin their methadone treatment (all on the basis of supervised consumption) whilst still in prison, which could be continued after release at their chosen programme.

Approaches to over 1500 inmates (the researchers could not know in advance who might qualify) netted 90 who could and did join the study and were randomised to one of the three release planning options. Two inmates were later found not to meet the study's criteria, and 19 transferred to the referral-plus-funding group. Four did so after being unable to start treatment in prison. Another 15 allocated to referral-only took advantage of a new federal scheme funding post-release treatment for six months, effectively making them referral-plus-funding patients. The result was that 25 patients were actually offered methadone in prison (of whom 21 could be assessed six months later), 48 were referred and had their treatment funded (of whom 32 were reassessed), and just 15 were left to be referred with no funding (of whom nine could be reassessed). Typically they were white men who had not completed high school, never been married, were not working before their imprisonment, and had no health insurance cover on their release.

The 22 patients who were not only offered but started methadone in prison averaged about a fortnight on the drug ranging up to a month. On release they averaged a dose of 33mg and at the most 38mg.

Main findings

The researchers analysed their results in two ways: firstly, on the basis of the post-release arrangements intended by the study; secondly, on the basis of the actual arrangements. Given that 19 of 88 patients did not receive their intended allocation, the researchers placed greatest weight on the results as per the arrangements actually implemented. Unless indicated otherwise, these are the results reported below, based on the 62 patients followed up six months after their release.

First issue was whether starting methadone before release promoted continuing treatment after release. This was clearly the case: within a month of release 86% of prisoners offered methadone in prison had (re)started methadone treatment, on average within two days. Without this and even if the treatment had been funded, under half as many (41%) started methadone treatment on release, and just two of the nine referral-only patients. These differences were statistically significant, as were the figures when analysed in terms of the arrangements the patients had been allocated to. By the end of the six-month follow-up 68% of the prisoners offered methadone in prison were in methadone treatment, 21% and 24% more than without this offer. There was no clear tendency for patients not offered methadone in prison to access other forms of addiction treatment more often on release to make up for their lower rate of access to methadone.

In the final month of the six-month follow-up only 14% of the referral-plus-funding-plus-methadone prisoners had used heroin compared to 56% and 44% of those not offered methadone in prison. There were similar differences in cocaine use and (but not to a statistically significant degree) in the prevalence of injecting and overall substance use.

Opiate overdose claimed the lives of two prisoners within days of their release; neither had been offered methadone in prison or started it on release. Over the six months another eight former prisoners experienced non-fatal overdoses; all but three had not

engaged in methadone treatment. However, release arrangements made no clear difference to the chances that the prisoners would be re-arrested or re-imprisoned.

The authors' conclusions

The interval before released prisoners enrol in community-based methadone treatment is critical given the high risk of relapse, crime, disease transmission, and overdose. The featured study study showed that initiating methadone (even for a short period and on a low dose) in the weeks before release is feasible and improves access to pre-funded methadone treatment after release, as to a lesser degree does providing funding alone. Pre-funding plus methadone in prison also led to fewer patients using heroin.

The findings from this study complement those from a trial in Baltimore with similar results, but after initiating methadone three months before release rather than the 15-day average in the featured study. The results suggests that the benefits of pre-release methadone may not require several months of gradual dose escalation, or the attainment of a dose high enough to block the effects of opiate-type drugs.

Among other limitations of the study, only a small number of prisoners were recruited to the trial and it was affected by the new treatment funding scheme which led to prisoners being funded despite their allocation to referral-only. Unlike in Baltimore, entry to the study was restricted to prisoners who had previously been in methadone treatment, in hindsight an unnecessary caution.

FINDINGS Compared to just having a funded treatment slot arranged on release, starting methadone in prison meant that within the first month another 45% of offenders took up that slot; even by the end of the six month follow-up the difference was 21%. The result was reduced heroin and cocaine use, but over the first six months no documented impact on crime. There is also a strong indication that ensuring seamless transfer to methadone saved lives, one of its primary justifications in the UK. Besides post-release benefits, within prison itself methadone programmes improve the climate and reduce drug use, injecting and infection risk behaviour.

A key issue is whether starting methadone in prison perpetuated dependence among people who would have sustained abstinence on release. Both prisoners and staff commonly hope that an enforced break from drugs will provide an opportunity to reconstruct lives so the 'break' continues on release. In Rhode Island as in Baltimore there was some evidence that this was a realistic concern. Though funded and professing a desire for post-release methadone treatment, just 13 of 32 prisoners started it within a month and at the end of the six-month follow-up most (17) remained unprotected by methadone. That some did not need this protection, and that for some starting treatment in prison might have been superfluous, is also suggested by the fact that 44% of those who could be reassessed had not used heroin in the final month of the follow-up, though some may have used other opiates. Again as in Baltimore, the risk of perpetuating opioid dependence by facilitating methadone treatment must be set against the benefits of cutting heroin and cocaine use and injecting across the general run of patients in the studies, and thereby perhaps saving lives from overdose and infection. Given good access to housing, employment, psychosocial treatment, and other forms of good quality and attractive resettlement support, the balance of benefit may be tipped against initiating methadone in prison. Such supports are however in limited supply in Britain.

Conceivably the impact underpinning all the others was that more of the offenders

started on methadone in prison continued treatment immediately after release. An optimistic interpretation is that having benefited from methadone in prison, offenders wanted to continue with their recovery on release; another is that leaving prison with a methadone habit, they faced an uncomfortable withdrawal unless they continued treatment. As the authors comment, this was less an issue in the featured study than in Baltimore, where the prisoners left prison on 60mg a day of methadone. Even if withdrawal avoidance was the motivation, it did lead (presumably via treatment) to more advanced recovery in the form of reduced heroin and cocaine use, and the prisoners voluntarily put themselves in this position.

Even for formerly heroin dependent injectors, prison methadone maintenance is clearly not a universally applicable treatment or one all would want. Relatively long sentences in the USA allow for therapeutic communities. Together with aftercare (especially if this is required as part of the sentence) these reduce drug use and crime. Such facilities are rare in British prisons, but there are a number of other less intensive and/or shorter term programmes which have yet to be adequately evaluated. According to a UN/WHO guide on opiate maintenance in prisons, none of the alternative treatments are yet as reliably effective due to their limited attraction to prisoners and high drop-out and relapse rates.

See the Findings analysis of the Baltimore study for policy and practice in the UK shortly before the change of government in May 2010. Since then there have been structural and policy changes which may have altered the situation, but these are unlikely to have made the initiation of methadone maintenance in prison any less rare than it was.

Low recruitment to the featured study was attributed partly to the (even in a relatively favourable environment) substantial logistical and attitudinal barriers to mounting methadone maintenance programmes in US and other prisons. It cannot be assumed that results based on the 80 who were recruited and the 62 on whom the follow-up results were largely based would also apply to the greater number of prisoners who would be recruited in a routinised programme.

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