Strong evidence indicating the effectiveness of opioid agonist treatment

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We read with interest the study by Natasa Gisev and colleagues,[1] which provides further robust evidence for the effectiveness of opioid agonist treatment (OAT) in ameliorating the harm associated with opiate users' criminal offending. The study used secondary data from a large, population-based, retrospective cohort and observed that OAT was strongly associated with a significant reduction in the incidence of recorded offending. The study adds particular value in clarifying that the association between OAT and reduced offending risk is not straightforward, such that any protective effect diminished over time and was reduced with repeated exposure and briefer treatment contact. These observations underline the importance of providing high quality OAT of sufficient duration for patients to experience a therapeutic dose that is adequate for them to effect lasting change. The findings also chime with the serious concerns that the UK Advisory Council on the Misuse of Drugs has expressed regarding the adequacy of some OAT provision.[2]

As an observational cohort study without a control group, the investigation shares some of the same limitations as previous research on this topic, particularly insofar as its capacity to infer a causal relationship between treatment exposure and subsequent reductions in offending risk is constrained. However, the use of secondary data sources to delineate a study cohort of substantial size yielded adequate power for comprehensive adjustment for a variety of covariates including, notably, time spent incarcerated. Additionally, the use of arrest records provided an accurate and objective longitudinal measure of offending outcome, albeit one that does not capture offending behaviour that did not result in contact with the criminal justice system.

The quality of evidence available from the few randomised controlled trials (RCTs) that have been done in this area has been low.[3] Furthermore, withholding from participants an evidence-based treatment that is associated with a variety of positive effects—notably, reduced mortality risk—[4,5] for the purpose of doing an RCT, would be unethical. Hence, large observational studies of the type reported by Gisev and colleagues provide a pragmatic and highly cost-effective solution to developing our understanding of the treatment's association with reduced offending and of its other benefits. Of course, a fundamental difficulty with such an observational design is that patients' functioning might have deteriorated in the period immediately preceding their entry to treatment, including potential escalation in criminal behaviour, and therefore the apparent benefits associated with treatment that have been observed could merely be a consequence of regression to the mean.[6] However, published research findings suggest that the evidence for reduced functioning before treatment is equivocal and, if it does occur, "may represent circumstantial scenarios rather than changes in behaviour".[7]

The study makes a valuable contribution to the literature in showing that, in general terms, OAT is associated with a reduced offending risk, but that this relationship is also complex. However, there is perhaps scope for more detailed future exploration as to whether benefits accrue more readily for some sections of the opioid-dependent patient population than others, or are more likely to occur in particular settings or contexts. For example, work in England delineated and examined a large cohort (n=14 802) of opioid users identified specifically in a criminal justice setting, but found no evidence of reduced offending risk following treatment initiation. That study, which was also based on secondary analysis of treatment and criminal justice records, attempted to emulate the principles of a trial design by employing treated and untreated groups with propensity score matching.[8] Moreover, in that study there was evidence of elevated offending risk in the period soon after initial treatment contact.[9] Although this finding should not be taken as detracting from Gisev and colleagues' observation that OAT, in general terms, is associated with reduced offending, it perhaps illustrates a need for more specific, detailed future investigation of this phenomenon. Additionally, future observational studies might consider the potential to use designs that, as mentioned above, more closely resemble RCT designs.

OAT is the first-line treatment response for opiate dependence in many countries. However, OAT provision is far from universal, whether due to lack of capacity or because of stigma.[10] We therefore believe that the findings

reported by Gisev and colleagues further strengthen the evidence base supporting the treatment's utility, and thereby strengthen the case for its more widespread and properly adequate provision.

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1 Gisev N, Bharat C, Larney S. The effect of entry and retention in opioid agonist treatment on contact with the criminal justice system among opioid-dependent people: a retrospective cohort study. *Lancet Public Health* 2019; published online June 11. http://dx.doi.org/10.1016/S2468-2667(19)30060-X.

2 Advisory Council on the Misuse of Drugs (ACMD). How can opioid substitution therapy (and drug treatment and recovery systems) be optimised to maximise recovery outcomes for service users? October 2015. https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/470399/ACMD_RC_OPTIMISING_OST_REPORT_231015.pdf (accessed May 28, 2019).

3 Perry AE, Neilson M, Martyn-St James M, et al. Pharmacological interventions for drug-using offenders. *Cochrane Database Syst Rev* 2015; **6:** CD010862.

4 Sordo L, Barrio G, Bravo MJ, et al. Mortality risk during and after opioid substitution treatment: systematic review and meta-analysis of cohort studies. *BMJ* 2017; **357:** j1550.

5 Pierce M, Bird SM, Hickman M, et al. Impact of treatment for opioid dependence on fatal drug-related poisoning: a national cohort study in England. *Addiction* 2016; **11:** 298–308.

6 Hough M. Drugs misuse and the criminal justice system: a review of the literature. London: Home Office, 2016. http://www.dldocs.stir.ac.uk/documents/houghdrugscrime.pdf (accessed May 28, 2019).

7 Jones A, Emsley R, Hayhurst KP. Peaks in substance use prior to treatment presentation—a re-evaluation. *Addict Res Theory* 2019; **27:** 285–93.

8 Rubin DB, Thomas N. Matching using estimated propensity scores: relating theory to practice. *Biometrics* 1996; **52:** 249–64.

9 Pierce M, Bird SM, Hickman M, Marsden J, Dunn G, Seddon T, Millar T. Effect of initiating drug treatment on the risk of drug-related poisoning death and acquisitive crime among offending heroin users. *Int J Drug Policy* 2018; **51:** 42–51.

10 Volkow ND. Medications for opioid use disorder: bridging the gap in care. *Lancet* 2018; **391:** 285–87.