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▶ Estimating the crime reduction benefits of drug treatment and recovery.

National Treatment Agency for Substance Misuse.
[UK] National Treatment Agency for Substance Misuse, 2012.

England's National Treatment Agency for Substance Misuse calculates the crime reduction dividend for society arising from effective addiction treatment at billions of pounds, meaning that any cuts in funding would be more than wiped out by the costs of increased crime.

Summary This is one of several reports from the National Treatment Agency for Substance Misuse – a special health authority which aims to improve treatment for drug problems in England – presenting a picture of this treatment based largely on data from the National Drug Treatment Monitoring System to which services send information on the people they are treating and the treatments provided. The featured report draws on this to estimate the crime reduction dividend for society arising from effective treatment, and in turn how much of those cost savings would be lost if funding for treatment and therefore its availability were reduced. To reach these estimates treatment data was combined with data on crimes from patients in the DTORS study of addiction treatment in England, and with national police offender conviction records via a system which links the two datasets, enabling the criminal records of (anonymised) individual patients to be identified.

Main findings

The report estimates that drug treatment and recovery systems in England may have prevented about 4.9 million crimes in 2010/11, with an estimated saving to society of £960 million in costs to the public, businesses, the criminal justice system and the National Health Service (NHS). It can also be estimated that about 19.6 million crimes may be prevented during the Spending Review 2010 period (2011/12–2014/15), over which government sets its budgets, with an estimated saving to society of £3.6 billion. In addition, up to a further 4.1 million offences with an estimated value of £700 million may be prevented over the nine-year period from 2011/12 to 2019/2020, because an

estimated 13,702 people who left treatment in 2010/11 will go on to sustain long-term recovery. Continued investment in drug treatment over the Spending Review 2010 period could lead to up to an estimated 54,000 former clients sustaining long-term recovery, which may prevent up to 16.6 million more offences with an estimated value of up to £2.6 billion by 2023/24.

The mathematical model which produced these results also enables an estimate of the potential impact of disinvestment in adult drug treatment. All else being equal, for every £1 million taken out of the system, there could be an increase of approximately 9860 drug-related crimes per year at an estimated cost to society of over £1.8 million.

However, many of the figures included in this report are estimates rather than observations, and the figures cannot be interpreted as direct, quantifiable measures of a causal effect of drug treatment. As such, the findings are indicative and not definitive. Estimates were based on the best available evidence, but on some issues this was lacking and the calculations had to rely on un- or poorly evidenced assumptions. These estimates can be improved over time as new evidence comes to light.

The analysts faced the task of estimating how much crime patients commit before entering treatment, how much this is reduced by entering 'effective' treatment, and then attaching monetary values to this crime to estimate cost savings to society. These calculations were then extended to add in longer term savings in crime-related costs from the lasting recovery of patients who successfully complete treatment.

The resulting figures offer a rationale for continuing to invest in addiction treatment after the protective 'ring fence' around national addiction treatment funding is removed in 2013, allowing funds previously restricted to drug addiction treatment to be used for other public health purposes. The National Treatment Agency for Substance Misuse argues that 'disinvestment' will be constrained by the penalties local funding authorities will face if this results in fewer patients being retained in treatment for at least 12 weeks or successfully completing, but is sufficiently concerned at this possibility effectively to mount a campaign to forestall it, of which the featured report is a major part.

This strategy faces several obstacles, of which one is the credibility of the estimates it makes in the report. Inevitably the data was insufficient for the task, leading to assumptions and extrapolations which could have substantially biased the figures ▶ below. Many such risks are transparently acknowledged, and where there was a choice, the analysts often made assumptions which would have weakened the case that addiction treatment saves society money by cutting crime. Calculating the balance between over- and under-estimation would itself be a major analytic task. In its absence, all that can be said is that there were some clear and possibly substantial sources of over-estimation of the impact of treatment, but also clear and possibly substantial sources of under-estimation. The resulting figures are best seen as representing what the cost savings to society would be if all the assumptions and extrapolations made in the report were correct, figures which illuminate in which large ball park the savings might found in reality.

The agency also faces the consequences of in 2010 congratulating the treatment system on improving its "productivity" by spending less on each patient but improving outcomes. If this is the case, it remains to be shown why a reduction in funding could not be catered for by further increasing productivity, rather than (as the report envisages) a cut in

patient numbers of the kind which results in an increase in crime.

Arguably too the report swims if not against then not clearly with the policy tides of localism and public health said to characterise the future for addiction policy in England. Local and locally collected figures and case histories may be more persuasive to local authorities holding the treatment purse strings, which are being encouraged to make their own decisions based on local needs. While crime prevention was the policy priority and the basis for the justification of treatment in past decades, in the future it will at least be rivalled by public health objectives including reducing illness, premature death, and health inequalities. Making a national case on grounds of crime provides useful extra ammunition but arguably no longer goes the heart of the issues in the new policy environment.

If health is to be the leading issue, that moves addiction treatment funding on to weaker grounds in cost-benefit and cost-effectiveness terms. In 2012/13 the estimated £500 million addiction treatment budget will largely be provided by health funders, yet these bodies are very minor beneficiaries in cost-savings terms from the crime reduction identified in the featured report. Later work will quantify health benefits to add to crime reduction, but in the DTORS study of addiction treatment in England in 2006 and 2007, health improvements were modest; one quality-adjusted life year was saved at a cost of £90,620, considerably worse than the £30,000 yardstick commonly cited for cost-effective medical treatment. These figures calculated for a year after treatment entry may look considerably better if the calculation can be extended over a lifetime, and take in the reduced long-term death rate associated with treatment.

Without making any specific reservations about the featured report, it should also be borne in mind that analysts with an interest in the success of a programme they are evaluating tend to produce more positive analyses than independent analysts – in research terms, the 'allegiance effect'. It is part of the remit of the National Treatment Agency for Substance Misuse to have an interest in the success of addiction treatment in England, to improve this, and to show this has been done by producing reports such as the featured report.

Were the assumptions valid?

The methodology followed by the report and some sources of possible over or under-estimation are considered in detail in the background notes. Only what may be major issues are flagged in this commentary.

A key source for the featured report was the DTORS study which sampled patients starting treatment for drug problems in England in 2006 and 2007. It was this study which supplied the data on how many crimes addicts commit before entering treatment, providing the multiplier to convert convictions in to crimes and to calculate reductions in crime based on reductions in convictions. Unfortunately this study only asked treatment entrants about the past 28 days, and this period was not all pre-treatment, but straddled treatment entry. Considerable but not entirely unevidenced leaps of faith were required to extrapolate this period to the entire two years before entering treatment and to make the corresponding assumption that this level of crime would have continued if treatment had been unavailable.

In the process a big divide was crossed when the crime record of people starting or restarting a new episode of treatment in the DTORS study was applied (as an estimate of the crimes they would commit if not in treatment) to almost the entire addiction

treatment caseload, most of whom had continued in treatment from at least the previous year, and many of whom will have been in treatment for several years. Either this envisages a situation where treatment had been unavailable for many years, so these patients could never have started treatment, or that suddenly in 2010/11 it was made unavailable to them – rather different to the situations of the DTORS patients who were operating within an environment where treatment was relatively easily available, and who were taking up that option, not having it withdrawn.

Another big divide between patients was crossed in the estimation of the reduction in crimes after entering treatment. This was based on the conviction records of an atypical minority of stable, long-term patients continuously in treatment for two years, but extrapolated to almost the entire caseload. Because staying in treatment is associated with greater reductions in crime than leaving or leaving and coming back, this perhaps overestimated the overall reduction by nearly a factor of two.

The last major step in the calculations was to convert crimes committed or prevented in to costs incurred or saved by society. As the product of a government body and reliant partly on the cooperation of Home Office economists, the report had to work to the Home Office's methodology for costing crime. Not unnaturally, this government law and order department is unwilling to countenance the undoubted fact that some parts of British society not only suffer losses due to crime, but also benefit – the reason why revenue-raising crimes are committed, and why there is a market for stolen goods. In turn this obliges the report's authors effectively to assume that stolen/defrauded money and goods were lost to society, rather than transferred from one member of society to another. Addicts commit the drug-related crimes included in the study primarily to raise money rather than to damage property or hurt or upset people, so these transfers form a major and almost certainly the largest single part of both the costs of crime and the estimated savings as calculated by the study. Without them the costs and savings would be much less.

The preceding estimates fed in to calculations of how much society saves because treatment shortens an estimated 20-year addiction career by nine years, the most evidence-based scenario in the report and one which provides its headline figures. The 20-year span is intended to be the career estimate if treatment were unavailable. However, the only documentary source presents this figure not as the span of a non-treatment career, but effectively of a treatment career, and speculates that some treatments might actually elongate careers.

Even if 20 years was the correct average, there are reasons to believe it would not apply to the former patients who provide the cost savings calculated in the report. They are the minority who successfully complete treatment and do not reappear in relevant treatment and criminal justice records, having (it is presumed) achieved lasting recovery from addiction. But the report cites research showing that these patients had unusually few convictions even before treatment. Conceivably along with a much lower than average (or more successful, avoiding convictions) crime record before treatment might also come the resources and stability to achieve a more than usually rapid remission in addiction.

Set against these possible sources of overestimation of benefit is the degree of crime reduction contributed by successful completers who reappear in the records, and patients

who leave without successfully completing treatment, neither accounted for in the analysis.

Thanks for their comments on this entry in draft to David MacKintosh of the London Drug Policy Forum in England. Commentators bear no responsibility for the text including the interpretations and any remaining errors.

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