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What works in substance misuse treatments for offenders?

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ABSTRACT

Background *The prevalence of problematic drinkers and drug users in correctional services of England and Wales is high, with implications not only for the health of prisoners, but also for substance-related crime. For most illicit drug users, the biggest criminological concern is acquisitive offending to fund the habit, whereas with alcohol it is violence and disorder. There is clearly a strong need in correctional services for treatment for both drug and alcohol use. What works in substance misuse treatments for offenders?*

Findings *This review shows that the evidence is strongest for the effectiveness of therapeutic communities and cognitive-behavioural therapies. Purely behavioural therapies are ineffective, as are boot camps and group counselling. Maintenance prescription for offenders addicted to heroin, especially if combined with psychological treatment, shows promise. Arrest-referral schemes, court-mandated drug rehabilitation and drug courts can be effective, but improvements in multi-agency working are also necessary.*

Conclusions *There is evidence that treatment for substance abuse in correctional settings can work to reduce reoffending, and so it is worth focusing on how the effectiveness of these interventions may be improved. Improving completion rates, developing programmes aimed at specific drug- and alcohol-related offences, introducing stepped care and designing programmes to meet the needs of specific groups of offenders are all considered.*

Introduction

In England and Wales in 1997, 63% of male sentenced prisoners reported hazardous drinking the year before coming into prison, and 30% had severe alcohol problems, with the percentages for convicted women being 39% and 11% respectively (Singleton et al., 1999). Among male sentenced prisoners, 43% reported moderate or severe drug dependence in the year prior to imprisonment; the percentage for sentenced women prisoners was 42% (Singleton et al., 1999). These

proportions of problematic substance users are far in excess of those observed in the general population.

Such figures give cause for worry about offenders' health, but substance use is also related to crime. The biggest concern with illicit drugs is for economically driven offences, committed to support a habit, including shoplifting, burglary, selling drugs, procuration and prostitution, and fraud. In a sample of UK offenders in drug treatment at the end of the 1990s, Turnbull et al. (2000) found the average annual expenditure on drugs to be £21,000 per person. Where alcohol is concerned, violence and disorder are the main concerns, with street violence by young male binge drinkers being highly problematic in many UK towns and cities (Richardson and Budd, 2003), and with alcohol often increasing the likelihood and degree of domestic violence (Leonard, 2001).

There is clearly a strong need for both drug and alcohol treatments in correctional services. What works in substance misuse treatments for offenders?

The evidence

What is not effective

In their Correctional Drug Abuse Treatment Effectiveness (CDATE) project, which was a meta-analysis of substance use treatment evaluations in correctional settings, Pearson and Lipton (1999) examined studies published between 1968 and 1996. Interventions that were identified as *ineffective* were boot camps, a militaristic experience intended to shock young people into mending their ways, and group counselling.

What is effective

Therapeutic communities. One type of intervention that has proved effective is the therapeutic community (TC). In a subsequent report from the CDATE project, 35 methodologically sound corrections-based studies of TC or milieu therapy for adults were examined (Lipton et al., 2002a). Together they included almost 1000 participants. A comparison of recidivism between treated and untreated or treatment-as-usual groups gave a positive mean effect size of 0.14, a modest but worthwhile effect, favouring the TC. As observed in other TC studies, the effectiveness increased with time in treatment.

Therapeutic communities (TCs) aim to change dysfunctional behaviour through living in a democracy where residents confront and correct each other's maladaptive behaviours, while offering each other support through the difficult change process. Improvement is rewarded by promoting residents through the community's hierarchy. The term 'concept TC' refers to those TCs designed specifically to assist people with substance use problems, and these are usually based on the abstinence-oriented, 12-step approach of Narcotics Anonymous

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(NA) and/or Alcoholics Anonymous (AA). TCs in correctional settings have a good track record, particularly in the USA (Wexler, 1997).

More recently TCs have been introduced in the UK. In an evaluation of a 12-step therapeutic community for drug and alcohol misusers in prison, Martin and Player (2000) collected reconviction data from the Home Office's Offender Index at 13 months, showing that significantly fewer TC graduates than non-graduates had been reconvicted, with success in treatment being associated with attending treatment and abstaining from the illicit drug of choice.

Cognitive-behavioural programmes. A second type of intervention that has support from the CDATE meta-analysis is cognitive-behavioural therapy (CBT). Lipton et al. (2002b) identified 68 methodologically acceptable behavioural and cognitive-behavioural corrections-based treatment evaluations with over 10,000 participants in total. A comparison of recidivism between treated and untreated or treatment-as-usual groups gave a positive mean effect size of 0.12, favouring CBT, again modest but worthwhile. Separate analyses revealed that purely behavioural programmes (i.e. without the cognitive element), of which there were 23 evaluations, produced a positive mean effect size of 0.07, whereas cognitive-behavioural programmes (i.e. with a cognitive element), of which there were 44 evaluations, produced a positive mean effect size of 0.14.

The Correctional Service of Canada delivers two evaluated CBT programmes: the Offender Substance Abuse Pre-Release Program (OSAPP; Lightfoot, 2001), designed for imprisoned offenders with intermediate to severe alcohol and drug problems; and *Choices*. The former consists of 26 three-hour group sessions plus three individual counselling sessions, while the latter is a 10 three-hour session programme for offenders with low levels of substance abuse problems, and who are on conditional release in the community (Lightfoot, 2001). An evaluation of OSAPP and *Choices* indicated good completion rates (89% for OSAPP; 91% *Choices*). Violation of release conditions or a new offence at one year after release, serious enough to result in readmission to prison, was significantly less for OSAPP programme completers compared with an untreated matched control group (Porporino et al., 2002). Effects were greatest for offenders showing greater levels of substance abuse severity, as measured by psychometric test scores, and for offenders who had a *less* extensive criminal history. The effects of OSAPP on reducing readmission were significantly greater for offenders who additionally engaged in a community-based programme after release.

In prisons in England and Wales, the earliest accredited CBT programmes developed to address substance misuse were the Programme for Reducing Individual Substance Misuse (PRISM), an individual treatment programme, and P-ASRO, an adaptation for prisons of the Addressing Substance-Related Offending (ASRO) programme for offenders in the community (McMurran and Priestley, 2004). ASRO and P-ASRO target medium-risk offenders and consist of 20 two-hour sessions. Hollin et al. (2004) evaluated the outcome of a number of probation treatment programmes, which had ASRO as part of them. Overall, 3333

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offenders (90% male) were identified as requiring treatment, of which 49% (n = 1625) did not start, 23% (n = 751) did not complete, and 29% (n = 957) completed. ASRO participants numbered 457 within this study. These were compared with a randomly selected sample of offenders not referred for treatment (n = 3305; 83% male). Overall, reconviction rates at between 1.50 and 2.85 years were 33% for completers, 64% for untreated, 73% for non-starters and 74% for non-completers, with data specifically for ASRO referrals being similar (37% completers, 82% non-starters and 78% non-completers). When non-completers are excluded from the analysis, treated offenders are reconvicted at significantly lower rates than are untreated offenders.

Pharmacotherapy. One other approach that showed promise in the CDATE meta-analysis, but with too few studies to draw strong conclusions, was methadone maintenance for offenders addicted to heroin (Pearson and Lipton, 1999). In community samples, methadone maintenance has been shown as effective in reducing acquisitive crime (Parker & Kirby, 1996; Coid et al., 2000; Keen et al., 2000), although some studies have shown that prescription of pharmaceutical heroin (diamorphine) is superior to methadone at keeping people in treatment and reducing crime (McCusker and Davies, 1996; Metrebian et al., 2001). In most cases, the effectiveness of drug treatment is enhanced by adjunctive psychosocial interventions (Rohsenow, 2004). Combined treatment is possible in prisons, as evidenced by Shewan et al. (1996), who evaluated a prison drug treatment programme that combined methadone prescription and counselling, with treatment completers significantly reducing their drug use in prison over those referred but who did not take up treatment.

Diversion of drug-using offenders into treatment

Recently, attention has been given to ways of linking offenders into drug and alcohol treatment services, particularly early on in the criminal justice process. Many of these efforts are linked with drug testing by police, probation and prison personnel. On-charge testing by police opens the opportunity for arrest-referral procedures; pre-sentence testing opens opportunities for probation orders with drug monitoring and treatment provision; and post-sentence testing opens opportunities for drug treatment in prison and follow-through on licence. In conjunction with treatment, drug testing shows promise in reducing drug use and offending (Matrix Research and Consultancy & NACRO, 2004).

Arrest-referral schemes permit the early identification of drug-using offenders by employing drugs workers to approach arrestees in custody and offer advice or channel them into treatment. Evaluations of arrest-referral schemes show positive outcomes in recruiting drug users into treatment and reducing both substance use and crime (Crossen-White and Galvin, 2002; Seeling et al., 2001).

The UK's Drug Treatment and Testing Orders (DTTOs), now replaced by a Community Order with a Drug Rehabilitation Requirement (DRR), allow offend-

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ers to receive treatment as an alternative to custody. Probation services link with other agencies to provide treatment under DTTOs, and offender self-report data indicate substantial reductions in drug use and offending both during the DTTO and after its expiry (Turnbull et al., 2000). However, Hough et al. (2003) collected recorded crime data from the Offenders' Index on 174 DTTO referrals over two years and found a high incidence of reconviction (80%), although reconviction was significantly less likely amongst those who completed their order (53%) than amongst those whose order was revoked (91%). Diversion from criminal justice into treatment requires effective multidisciplinary and inter-agency working, but this was a weak spot in treatment provision (Turnbull et al., 2000).

In Scotland, Drug Courts have a range of sentencing and treatment options open to them, depending on what services are available locally (Eley et al., 2002; McIvor et al., 2003). Drug courts have been used elsewhere, particularly the US, with some evidence that offenders processed by them are less likely to recidivate than those on regular probation orders, although failure of individuals to meet the Drug Court's requirements is common (Rodriguez and Webb, 2004).

Discussion and conclusions

There is evidence that substance abuse treatments in correctional settings can work to reduce reoffending. It is, therefore, worth focusing on how the effectiveness of these interventions may be improved. One serious concern in relation to correctional interventions, including substance misuse programmes, relates to high non-completion rates (e.g. Hough et al., 2003; Hollin et al., 2004; Rodriguez & Webb, 2004). In a recent review of 16 studies of treatment non-completers across a range of CBT programmes, McMurran and Theodosi (2007) noted that, on average, 15% of institutional samples and 45% of community samples did not complete treatment. Furthermore, non-completers were *more likely* to reoffend than untreated offenders ($d = -0.16$), with this effect being more pronounced in community samples ($d = -0.23$) than institutional samples ($d = -0.15$). Non-completers may constitute a biased group of high-risk offenders compared with those who do complete treatment, but it seems that, on some level, offender treatment programmes do not serve the needs of high-risk offenders. What surely need attention is issues to do with responsivity, that is selecting offenders appropriately for programmes relevant to their needs. Where substance misuse treatment is concerned, at least three issues demand attention: the type of programme on offer, the intensity of treatment and the specific needs of various subgroups of offenders.

Specific programmes

Generic programmes that aim to reduce or stop drug use can be effective. There are, however, many different drugs with varied effects on people's behaviour,

DOI: 10.1002/cbm

which raises the issue of whether programmes aimed at specific drug- and alcohol-related offences may be more useful in some cases. For example, there are specific drink-driving programmes. In a meta-analysis of 215 treatment programmes for drink-drivers, Wells-Parker et al. (1995) found an overall mean effect size of 0.19, representing an 8–9% reduction in recidivism for treated over untreated participants. This is a greater effect size than for many offender treatments. Although this may be explained by the fact that, in UK programmes at least, drink-drivers are low risk offenders (National Offender Management Service, 2005), it may be that specific programmes have a place in a treatment development agenda. One example is 'Control of Violence for Angry Impulsive Drinkers' (COVAID), a programme that integrates anger management with tackling intoxication (McMurran and Cusens, 2003). This may be more relevant to younger people than abstinence-oriented approaches, aimed at offenders who are alcohol dependent (McMurran, 2006). Studies have shown COVAID to have promise in that participants show significant changes on treatment targets and are less likely than those referred but untreated to have been reconvicted of a violent offence in the short term (McMurran & Cusens, 2003; McMurran and McCulloch, 2007).

Intensity

The question of how intensive a substance use treatment programme needs to be requires further examination. In meta-analyses of offender treatment studies, Lipsey (1992, 1995) identified higher dosage treatments as most effective in reducing recidivism. These intensive treatments were of at least 26 weeks' duration, with two or more contacts per week, and amounting to more than 100 hours of treatment. However, the offender treatment literature and the clinical treatment literature, particularly that for alcohol treatment, are somewhat at odds with regard to treatment intensity. In alcohol treatments, brief interventions, including advice, self-help manuals and motivational enhancement therapy, have a good record of effectiveness, particularly with people with less severe drinking problems who request help (see review by Heather, 2004). The accreditation only of intensive programmes for high-risk offenders means that there is little support for briefer interventions. This is different from the approach in clinical settings, where awareness of limited resources and the need for cost-effectiveness has led to a stepped-care model of treatment, where a minimal intervention is given first, and, if that does not work, successively more intensive interventions are given until the client shows signs of benefit. High-risk offenders and serious, long-term drug users are unlikely to benefit from brief interventions but, for others, brief, early interventions may be beneficial. It seems likely that a stepped-care model could usefully translate to criminal justice settings.

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Responsivity

Finally, an under-investigated issue is what works for specific groups. With women offenders there may be different antecedents to and criminal consequences of substance use, with abuse and sex work figuring more prominently, yet services specific to their needs remain under-developed (Smith and Marshall, 2007). Black and minority ethnic groups may come from cultural and religious backgrounds on some of which the use of alcohol or drugs is proscribed by religious rules; this can create special difficulties for people who do use them. Programmes for young offenders need to take into account developmental issues, for instance the relative lack of impact of health and mortality messages and the greater importance of social image.

In all of these areas, and more, there is scope for developing correctional treatments for substance misuse. Alongside these clinical considerations, good evaluative research is an absolute necessity.

References

Coid J, Carvell A, Kittler Z, Healey A, Henderson, J (2000) *The Impact Of Methadone Treatment on Drug Misuse and Crime*. Research Findings No. 120. London: Home Office.

Crossen-White H, Galvin K (2002) A follow-up study of drug misusers who received an intervention from a local arrest-referral scheme. *Health Policy* 61: 153–171.

Eley S, Malloch M, McIvor G, Yates R, Brown A (2002) *The Glasgow Drug Court in Action: The First Six Months*. Edinburgh: Scottish Executive Social Research.

Heather N (2004) Brief interventions. In Heather N, Stockwell T (eds) *The Essential Handbook of Treatment and Prevention of Alcohol Problems*. Chichester: Wiley pp. 117–138.

Hollin CR, Palmer EJ, McGuire J, Hounsome J, Hatcher R, Bilby C, Clark C (2004) *Pathfinder Programmes in the Probation Service: A Retrospective Analysis*. Home Office Online Reports, No. 66/04. London: Home Office. http://www.homeoffice.gov.uk/rds/pdfs04/rdsolr6604.pdf [22 August 2006]

Hough M, Clancy A, McSweeney T, Turnbull PJ (2003) *The Impact of Drug Treatment and Testing Orders on Offending: Two-year Reconviction Results*. Home Office Research Findings No. 184. London: Home Office.

Keen J, Rowse G, Mathers N, Campbell M, Seivewright N (2000) Can methadone maintenance for heroin-dependent patients retained in general practice reduce criminal conviction rates and time spent in prison? *British Journal of General Practice* 50: 48–49.

Leonard KE (2001) Domestic violence and alcohol: what is known and what do we need to know to encourage environmental interventions? *Journal of Substance Use* 6: 235–247.

Lightfoot LO (2001) Programming for offenders with substance abuse and dependence problems. In Motiuk LL, Serin R (eds) *Compendium on Effective Correctional Programming 2000*. Ottawa: Correctional Service Canada pp. 98–112.

Lipsey MW (1992) Juvenile delinquency treatment: a meta-analytic inquiry into the variability of effects. In Cook TD, Cooper H, Cordray DS, Hartman H, Hedges LV, Light RJ, Louis TA, Mosteller F (eds) *Meta-analysis for Explanation: A Casebook*. New York: Russell Sage Foundation pp 83–127.

Lipsey MW (1995) What do we learn from 400 research studies on the effectiveness of treatments with juvenile delinquents? In McGuire J (ed.) *What Works: Reducing Reoffending*. Chichester: Wiley pp. 63–78.

Lipton DS, Pearson FS, Cleland CM, Yee D (2002a) The effects of therapeutic communities and milieu therapy on recidivism. In McGuire J (ed.) *Offender Rehabilitation and Treatment: Effective Programmes and Policies to Reduce Re-offending.*Chichester: Wiley pp. 39–77.

Lipton DS, Pearson FS, Cleland CM, Yee D (2002b) The effectiveness of cognitive-behavioural treatment methods on offender recidivism. In McGuire J. (ed). *Offender Rehabilitation and Treatment: Effective Programmes and Policies to Reduce Re-offending.* Chichester: Wiley pp. 79–112.

Martin C, Player E (2000) *Drug Treatment in Prison: An Evaluation of the RAPt Treatment Programme.* Winchester: Waterside Press.

Matrix Research and Consultancy and NACRO (2004) *Evaluation of Drug Testing in the Criminal Justice System.* Home Office Research Study No. 286. London: Home Office.

McCusker C, Davies M (1996) Prescribing drug of choice to illicit heroin users: the experience of a UK community drug team. *Journal of Substance Abuse Treatment* 13: 521–531.

McIvor G, Eley S, Malloch M, Yates R (2003) *Establishing Drug Courts in Scotland: Early Experiences of the Pilot Drug Courts in Glasgow and Fife.* Crime and Criminal Justice Research Programme, Research Findings No. 71. Edinburgh: Scottish Executive.

McMurran M (2006) Controlled drinking goals for offenders. *Addiction Research and Theory* 14: 59–65.

McMurran M, Cusens B (2003) Controlling alcohol-related violence: a treatment programme. *Criminal Behaviour and Mental Health* 13: 59–76.

McMurran M, McCulloch A (2007) Evaluation of a treatment programme for alcohol-related aggression. Paper under review.

McMurran M, Priestley P (2004) Addressing Substance-Related offending (ASRO): A structured cognitive-behavioural programme for drug users in probation and prison services. In Reading B, Weegman M (eds) *Group Psychotherapy and Addiction.* London: Whurr Publishers pp. 194–210.

McMurran M, Theodosi E (2007) Is treatment non-completion associated with increased reconviction over no treatment? *Psychology, Crime and Law* 13: 333–343.

Metrebian N, Shanahan W, Stimson GV, Small C, Lee M, Mtutu V, Wells B (2001) Prescribing drug of choice to opiate dependent drug users: a comparison of clients receiving heroin with those receiving injectable methadone at a West London drug clinic. *Drug and Alcohol Review* 20: 267–276.

National Offender Management Service (2005) *Annual Report for Accredited Programmes, 2004–2005.* London: Home Office.

Parker H, Kirby P (1996) *Methadone Maintenance and Crime Reduction on Merseyside.* Police Research Group, Crime Detection and Prevention Series, Paper 72. London: Home Office.

Pearson FS, Lipton DS (1999) A meta-analytic review of the effectiveness of corrections-based treatments for drug abuse. *Prison Journal* 79: 384–410.

Porporino FJ, Robinson D, Millson B, Weekes JR (2002) An outcome evaluation of prison-based treatment programming for substance users. *Substance Use and Misuse* 37: 1047–1077.

Richardson A, Budd T (2003) Young adults, alcohol, crime, and disorder. *Criminal Behaviour and Mental Health* 13: 5–17.

Rodriguez N, Webb VJ (2004) Multiple measures of juvenile drug court effectiveness: results of a quasi-experimental design. *Crime and Delinquency* 50: 292–314.

Rohsenow DJ (2004) What place does naltrexone have in the treatment of alcoholism? *CNS Drugs* 18: 547–560.

Seeling C, King C, Metcalfe E, Tober G, Bates S (2001) Arrest referral – a proactive multi-agency approach. *Drugs: Education, Prevention, and Policy* 8: 327–333.

Shewan D, Macpherson A, Reid MM, Davies JB (1996) The impact of the Edinburgh prison (Scotland) drug reduction programme. *Legal and Criminological Psychology* 1: 83–94.

Singleton N, Farrell M, Meltzer H (1999) *Substance Misuse among Prisoners in England and Wales*. London: Office for National Statistics.

Smith FM, Marshall LA (2007) Barriers to effective drug addiction treatment for women involved in street-level prostitution: a qualitative investigation. *Criminal Behaviour and Mental Health* 17: 163–170.

Turnbull PJ, McSweeney T, Webster R, Edmunds M, Hough M (2000) *Drug Treatment and Testing Orders: Final Evaluation Report*. Home Office Research Study 212. London: Home Office.

Wells-Parker E, Bangert-Drowns R, McMillen R, Williams M (1995) Final results from a meta-analysis of remedial interventions with drink/drive offenders. *Addiction* 90: 907–926.

Wexler H (1997) Therapeutic communities in American prisons. In Cullen E, Jones L, Woodward R (eds) *Therapeutic Communities for Offenders*. Chichester: Wiley pp. 161–179.

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