

THE EFFECTIVENESS OF TREATMENT
FOR SUBSTANCE DEPENDENCE
WITHIN THE PRISON SYSTEM IN
ENGLAND: A REVIEW

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CONTENTS

1. Executive Summary	2
2. Introduction	5
3. Illicit drugs and Penal policy	6
4. The treatment of drug and alcohol dependence	11
5. Drug Services in Prison	19
6. The evidence base for prison treatment	20
6.1 12 Steps Facilitation	20
6.2 Acupuncture	21
6.3 Behavioural approaches	22
6.4 Counselling	23
6.5 Educational programmes	23
6.6 Group Work	24
6.7 Motivational interviewing	25
6.8 Pharmacotherapy	25
6.9 Relapse Prevention Training	27
6.10 Therapeutic Communities	27
7. Current treatment regimes	32
8. Conclusion	38
9. Acknowledgements	39
10. References	40

The Effectiveness of Treatment for Substance Dependence within the Prison System in England: A Review

Executive Summary

This review was jointly commissioned by Geoff Cooke, Area Drug Strategy Co-ordinator for the Prison Service, the East and West Kent Health Authorities and the West Sussex Drug Action Team, as part of a wider programme of work evaluating the outcome effectiveness of drug treatment services within Kent, East Surrey and Sussex prisons. The specific aims of this scoping review were to identify treatments that are used for those with substance dependence, describe the current regimes available in prison, and to evaluate the effectiveness of the treatments, drawing on research evidence from the UK and the US through major bibliographic databases, such as BIDS, and other published and publicly available research materials.

Illicit drugs and penal policy

Drug use among offenders causes significant problems for the Prison Service, including illicit trading and bullying, as well as presenting public-health risks, for prisoners, staff and local communities. The Government and the Prison Service have developed strategies to address the issue of drug use among offenders in response to intense political pressure. In 1998, the White Paper *Tackling Drugs to build a Better Britain* (Lord President of the Council, 1998) and the Prison Service *Tackling Drugs in Prison* set the objectives of increasing participation of problem drug users in drug treatment programmes, sustaining the use of Mandatory Drug Testing and improving security, collaborating with community agencies to ensure continuity of care was linked to community provision. The Updated Drug Strategy stressed the continued importance of reducing the prevalence of drugs and drug-related crime, but also emphasised the need to reduce the demand for drugs, through extra investment in the number of treatment places available in high and low intensity programmes for problematic drug users and enhanced throughcare (Drugs Strategy Directorate, 2002).

The treatment of drug and alcohol dependence

The treatments for drug and alcohol dependence vary greatly, reflecting the absence of consensus over the nature of the problem. The majority of randomised controlled trials focus on alcohol related disorders; those with drug therapies have focused on methadone or comparisons with other substitute drugs. There has been no unequivocal evidence, however, favouring one treatment over another. The review considers arguments as to why specialised treatments have often been regarded as limited in their role in reducing drug and alcohol use, the significance of spontaneous remission, and the fact that the socio-economic and psychiatric profile of an individual can be a better predictor of treatment success than type or intensity of treatment. The review acknowledges that abstinence should not be the sole criterion for success of a treatment intervention: formal treatment may not have a major role in abstinence, but harm reduction and reduction in use leads to positive economic returns to society and the criminal justice system, reduces criminal activity and hospital admissions and improves health status.

Drug services in prison

Prison provides an opportunity for the treatment and rehabilitation of offenders with drug and alcohol related problems. A number of drug treatments operate in the British prison system, ranging from 12 Steps facilitation to acupuncture, cognitive-behavioural methods, educational programmes, relapse prevention training, therapeutic communities and pharmacological treatments. There has been a lack of systematic evaluations of these interventions within the prison system.

The evidence base for prison treatment

Some of the findings include:

- Few independent studies of 12 Steps facilitation methods, and the evaluation studies to date have been methodologically poor.
- Cognitive-behavioural therapies (CBT) have a consistent record for effectiveness, having value in motivating people to change behaviour and helping with co-occurring problems such as anxiety and depression.
- Evidence for the effectiveness of Motivational Interviewing is strong, especially with those resistant to change.
- Evidence for non-directive counselling techniques was not strong in general, and even more limited for its use within the criminal justice system.
- Although popular, evidence is lacking for the effectiveness of educational programmes. The model of change advocated by Prochaska and DiClemente (1986), however, suggests they may help those who are pre-contemplative to move to a contemplative state, increasing the likelihood of eventual behaviour change.
- Educational programmes may have some benefit for imparting specific information to improve health and reduce risk-taking behaviour, for example, preventing the transmission of communicable diseases.
- The most commonly used pharmacotherapy in prison is methadone maintenance. Despite the difficulties posed for prisons, there is good evidence that methadone maintenance reduces injecting risk behaviour in prison, reduces the risk of overdose on release and has a positive impact on crime rates.
- Relapse prevention is generally effective, especially with alcohol related problems.
- Therapeutic Communities (TC) in American prisons have claimed consistent reductions in reconviction rates and relapse into drug use. The existing US research is methodologically flawed, however; and even if success rates were higher than claimed, TCs could be the least cost-effective option for treating drug and alcohol dependence. The forthcoming expansion of TCs within the English prison system will provide an opportunity for rigorous evaluation research.

Current treatment regimes

Although there is some US-based research, there have been no methodologically rigorous evaluations of drug services within British prisons. Running treatment programmes and conducting research within the prison environment face a number of problems intrinsic to

the system. These range from disagreement about treatment goals to obtaining client data, issues of confidentiality, the availability of drugs, and divergence in meeting targets over, for example, mandatory drugs testing.

Conclusion

Although formal treatment appears to have a relatively minor role in helping people with drug problems, this Prison Service strategy is rational, in economic terms, because the benefits from reductions in offending behaviour and improvements in health status will outweigh the costs of treatment to the Prison Service. Intervention has the potential of improving prison security, as well as the health and social functioning of prisoners, and it can enhance the achievement of key Prison Service aims and objectives, such as the rehabilitation of offenders. The evidence is strongest for interventions based on cognitive-behavioural principles, particularly if this is understood to include Motivational Interviewing. The greatest threat to the success of prison-based treatment comes from the failure of throughcare and aftercare arrangements, which are partly beyond the control of the prison authorities. There is an urgent need for independent and systematic outcome evaluations of drug services in prison, in line with the commitment of the Prison Service to evidence-based practice and continual improvement of services.

2. Introduction

This review will identify current regimes within the prison system for the treatment of people with drug and alcohol problems and will review the evidence on their effectiveness. The main source of data is the current literature on the effectiveness of treatment for substance dependence and on treatment regimes for prisoners. The review is a scoping review rather than a comprehensive, systematic review; that is to say, the literature search was restricted to major bibliographic databases like BIDS, PsychInfo and Project Cork, and to published and publicly available research.

First, the review outlines briefly the problems illicit drug use poses for the Prison Service. The Government and Prison Service policy of reducing drug use in prison, while providing effective help for offenders who have drug problems, is then summarised. An overview of the literature on treatment is presented, before the literature on treatment in prison and treatment effectiveness is examined in detail.

3. ILLICIT DRUGS AND PENAL POLICY

Under the Misuse of Drugs Act 1977, the use of all drugs proscribed by law is classified as misuse. Drug misuse may be recreational and involve few current problems for the individual; it may involve physical and/or psychological dependence, and be termed drug dependence; or it may be part of a wider spectrum of problematic or harmful behaviour, and be termed drug abuse. The American Psychiatric Association (1994) definition of substance abuse is use that leads to clinically significant impairment or distress, including failure to fulfil major role obligations, recurrent use in physically hazardous situations, recurrent substance related legal problems and persistent or recurrent interpersonal problems related to substance use

Although the relationship between drug use and crime is a complex one, which cannot be reduced to a simple need to commit property crimes or prostitution in order to pay for illicit drugs (Hammersley et al., 1989), there is political pressure to reduce drug use amongst offenders. In the 1995 White Paper *Tackling Drugs Together*, the Conservative Government responded to public concern about drug related crime by adopting the objectives of reducing the incidence of such crimes, reducing public fear of such crimes and reducing the level of drug misuse in prison (Lord President of the Council, 1995: para 1.5).

In formulating the latter objective, the Government was aware that illicit drug use causes a number of problems for the Prison Service; both for discipline, the illicit trade in drugs having been linked to bullying and on occasion prison disorders, and for the prevention of suicide, about 75% of all self-inflicted deaths in custody being drug related (HM Chief Inspector of Prisons, 1999: appendix 1.8). Moreover, drug offences have made a significant contribution to the growth in the prison population, which has increased pressure on the prison system over the last 20 years. Illicit drug use in prison also has public health implications, as seen in the outbreak of the blood-borne diseases hepatitis B and HIV/AIDS in HM Prison Glasgow in 1993 (Hutchinson et al., 1998). The Glasgow outbreak showed that longstanding concerns about the transmission of HIV and other diseases through the sharing of injecting equipment in prison were not without

foundation, and that prison drug use led to heightened risks for prisoners, prison staff and local communities.

The 1995 White Paper *Tackling Drugs Together* announced that reducing drug misuse would become a key performance indicator for the Prison Service, and that improved security, mandatory drug testing for prisoners and effective treatment services were the means by which improvements would be achieved (Lord President of the Council, 1995: para 1.6). The incoming Labour Government endorsed this strategy in its 1998 White Paper *Tackling Drugs to Build a Better Britain* (Lord President of the Council, 1998). It noted that there was an acute shortage of drug services nationwide, and set the objective of increasing the participation of problem drug users, including prisoners, in drug treatment programmes (Lord President of the Council, 1998: aim 3). The emphasis was placed on encouraging the Prison Service to collaborate with community based agencies in order to introduce effective drugs services into prisons: the Prison Service, the Government announced, “should aim to direct resources from within (its) budget to drugs-specific partnership work, including treatment provision, with explicit priority given to this work in the Prison Service business plan, and performance indicators and targets aligned explicitly to the new strategy” (Lord President of the Council, 1998: aim 3). The Government also stressed the need for throughcare and aftercare arrangements for drug misusing prisoners to be “coherent, focused and linked to community provision” (ibid.).

The Prison Service published its drugs strategy, *Tackling Drugs in Prison* in 1998, to coincide with the Government White Paper (Prison Service, 1998). In this and subsequent strategy documents, the Service aims to be able to offer support and treatment to any prisoner with a drug problem. In order to do this, it will improve the availability and quality of treatment programmes in prison, and increase the availability of places on drug free wings. It is also committed to continuing the Mandatory Drug Testing programme, reducing the supply of drugs into prisons, and improving staff training (Prison Service, 1998).

The updated strategy was released in November 2002. The importance of reducing the prevalence of drugs, and reducing drug related crime remains, but there is an increased emphasis on reducing the demand for drugs, by increasing the number of treatment places for problematic drug users. Annual expenditure will increase, allowing for an expansion of the provision of substance misuse treatment within the youth justice system, and an increase in prison-based treatment provision with additional places in high and low intensity treatment programmes and enhanced throughcare (Drugs Strategy Directorate, 2002).

A key component in the Prison Service strategy is CARAT (Counselling, Assessment, Referral, Advice, and Throughcare), an initiative aimed at providing specialized treatment and throughcare for drug users in prison. Prison throughcare and aftercare have longstanding problems, the House of Commons Social Services Committee having criticised the lack of liaison between prisons and community-based agencies in its 1986 report on the Prison Medical Service (Social Services Committee, 1986). The Home Office (1988) responded to the Social Services Committee with a policy statement committing the Prison Service to better liaison. In 1998, however, the Parliamentary All-Party Drugs Misuse Group (1998) was extremely critical of the quality of aftercare for offenders with drug problems, observing that to release drug offenders who had received treatment in prison, without providing aftercare, including help with accommodation and employment, was not cost-effective. In response, the Government agreed to contribute £72.5 million over three years to CARAT.

The CARAT initiative was launched in 1999 (Gravett, 2000). It funds a range of interventions, starting with an initial needs assessment on a prisoner's reception into a prison or Young Offender Institution (YOI), and it helps promote liaison between prison service establishments and community agencies, in order to ensure continuity of care. In Hull, for example, the *Breaking the Chain* project provides a social worker to visit prisoners three months prior to release, to assess their treatment needs. A treatment plan is agreed between HM Prison Hull and the project workers, and regular contact is

maintained with the prisoner for up to six weeks after release. CARAT also enables prison staff to continue providing services to ex-prisoners for a short period after release.

Reports from HM Chief Inspector of Prisons in 1999 showed that, one year after the introduction of the Prison Service drugs strategy, it was not being implemented consistently across regions and kinds of establishment (Gravett, 2000). While many adult prisons were making progress, the YOIs, where the highest proportion of offenders with drug problems are found, appeared to have fallen behind schedule. Of five YOIs inspected, for example, only one was making acceptable progress in the view of the Chief Inspector of Prisons, and four were not (Gravett, 2000: 184). Despite this poor start, by the year 2001, only 12% of prisoners were testing positive for drugs, on average, compared with over 30% when testing was introduced, and more than 55,000 prisoners each year were agreeing to voluntary drug testing in England and Wales (Prison Service Agency, 2001).

Unfortunately, it has been more difficult to influence throughcare and aftercare, which involves the cooperation of other agencies. The provision of funding for transitional aftercare under the CARAT initiative appears to have encouraged other authorities to do less (Burrows et al., 2000). Part of the problem is that responsibility for aftercare for ex-prisoners falls between different agencies:

... responsibility for this issue does not fall to any single agency or post-holder. Indeed, it is not the top priority for any of the six or more agencies who have been identified as critical to the delivery of an effective service.
(Burrows et al., 2000: 40)

Given the competition for scarce resources, it would not be surprising if agencies funded by the Home Office and the Department of Health attempted to offload expenditure onto each other, and this seems to have happened to some extent. Several local authorities have disqualified ex-prisoners from receiving drug services, for example, thereby increasing the risk of unsuccessful rehabilitation (Burrows et al., 2000).

Summary The Prison Service is committed to introducing effective services for those prisoners who have problems with illicit drug use. In the following section, the evidence on the treatment for substance dependence is outlined, before research that focuses on interventions within the prison system is discussed in more detail.

4. THE TREATMENT OF DRUG & ALCOHOL DEPENDENCE

The treatments offered for drug and alcohol dependence are extremely diverse, reflecting the absence of consensus over the nature of the problem. There are also differences of emphasis between the UK and the US. American Federal agencies like the National Institute on Drug Abuse (NIDA) promote the view of drug dependence as a disease of the brain, and are funding major research programmes to establish the genetic basis of the disease, and to discover effective vaccines against marijuana and cocaine use (NIDA, 1996). Treatment programmes based on religious principles, and on the 12 Steps of Alcoholics Anonymous and Narcotics Anonymous, are very popular in the US, and abstinence is widely seen as the only legitimate goal of intervention. In the UK, less importance is attached to the biological component of addiction, and there is more interest in cognitive behavioural treatments. The difference between the two countries is partly due to the existence of a very large private treatment sector in the US; private addictions treatment is an extremely profitable business which has resisted systematic evaluation (Smeeth & Fowler, 1990). In contrast, the publicly funded NHS has often responded fairly rapidly to research on alcohol and drug dependence (Harrison, 1996). Harm Minimisation is accepted by the British as an acceptable goal for intervention, and the UK Departments of Health are committed to the adoption, wherever possible, of evidence-based practice (Lord President of the Council, 1995, 1998).

Randomised controlled trials (RCTs) provide the strongest evidence of treatment efficacy, and there would appear to be no shortage of trials to inform a search for evidence-based practice. Up to the end of the year 2000, at least 39 RCTs had been conducted on acupuncture alone. But historically, the quality of RCTs in the addictions field has been poor (Breslin et al., 1997). Riet and colleagues (1990) used a checklist of 18 predefined criteria of good methodology to examine the conduct of 22 RCTs of acupuncture. They found that not one of the 22 RCTs could be awarded more than 75 points out of 100 for methodology, and over half earned less than 50 points. Breslin and colleagues (1997), reviewing the methodology of 61 alcohol treatment outcome studies published between 1989 and 1993, claimed that only a minority met even the most basic requirements of experimental studies. Until recently, reviews of treatment effectiveness

have been extremely selective, therefore, and studied a restricted number of trials which possessed acceptable methodology (Emrick, 1975; McCrady, 1991; Miller & Hester, 1986).

The methodological quality of controlled trials in the alcohol field has improved in recent years, although a number of serious reservations remain about the design of many studies (Miller & Wilbourne, 2002; Moyer, Finney, & Swearingen, 2002; Moyer et al., 2002). It is also worth noting that the majority of trials focus on treatments for alcohol related disorders; there are relatively few RCTs concerned with drugs of dependence other than alcohol or tobacco. Trials of treatments for drug dependence have largely concerned pharmacotherapy, chiefly aspects of methadone maintenance, or comparisons between methadone and buprenorphine. There are, for example, at least seven meta-analyses dealing with the effectiveness of methadone, but none on psychotherapy (Barnett, Rodgers, & Bloch, 2001; Caplehorn et al., 1996; Farre et al., 2002; Glanz et al., 1997; Griffith et al., 2000; Marsch, 1998; West, O'Neal, & Graham, 2000).

Although better conducted RCTs have been able to eliminate several lines of enquiry, such as electrical stimulation therapy, or the use of Risperidone, Carbamazepine and Amantadine for the treatment of cocaine dependence (Georgiou et al., 1998; Grabowski et al., 2000; Kampman et al., 1996; Montoya et al., 1995), it is arguable that they have not produced unequivocal evidence in favour of any particular treatment. There is qualified support for pharmaceutical treatments such as the use of the opium antagonist Naltrexone as a way to counter the positive reinforcement obtained from heroin use (Chick et al., 2000), and there is forty years of consistent evidence supporting methadone substitution as a harm reduction measure in cases of dependence on opiates. Pharmaceutical measures seem to work best when combined with psychological treatments, however (Chick et al., 2000).

When psychological treatments are considered for alcohol dependence, the evidence favours behavioural treatments rather than psychodynamic and insight oriented individual, group or family therapy (Miller, Brown, & Simpson, 1995). Among

behavioural treatments, there has been a shift away from approaches based on classical conditioning, like aversion therapy, which were popular in the 1960s but have not stood up to rigorous evaluation (Wilson, 1987), in favour of approaches like cognitive behavioural Coping Skills Therapy and Motivational Interviewing (Miller & Rollnick, 1991; Project MATCH Research Group, 1997). There are also multiple well designed trials supporting Community Reinforcement, Behavioural Self Control Training, Behavioural Marital Therapy and Social Skills Training (McCrary, 1991; Miller, Brown, & Simpson, 1995; Miller & Wilbourne, 2002).

Following the inconclusive results of Project Match (Project MATCH Research Group, 1997), it is widely believed that the evidence has yet to emerge which would support the adoption of any one approach to treatment for alcohol dependence, like Cognitive Behavioural Therapy, over rivals like 12 Steps facilitation. However, Miller and Wilbourne (2002), in their meta-analysis of 361 treatment trials for alcohol-related disorders, claimed a clear advantage for behavioural approaches. Six of the ten treatments with the strongest evidence for effectiveness utilised some form of behavioural skills training, and three of these paid attention to social support networks (Miller and Wilbourne, 2002: 176). In contrast, 12 Steps approaches, like the Minnesota Method and mandatory Alcoholics Anonymous participation, did relatively badly.

In the absence of agreement over the interpretation of the research evidence, treatments based on contradictory theoretical principles remain in common use. The generally accepted view is that *any* treatment for substance dependence is better than *no* treatment (Raistrick, Hodgson, & Ritson, 1999). This is because all major treatment programmes can show a significant improvement over baseline measures of drug or alcohol-related problems among research subjects (Project MATCH Research Group, 1997). Such improvements are not necessarily related to the treatment on offer, however. In their classic study comparing in-patient treatment of alcoholism with brief intervention, Orford and Edwards (1977) showed that, when asked about reasons for their improvement, subjects rated other life events as more important than the treatment they received. This

raises doubts about the impact of specialised treatment, which may be only one of a number of changes occurring in people's lives at the time when they seek help.

Because of these difficulties, many have preferred to compare the results obtained by treatment with spontaneous remission, or the recovery from alcohol and drug dependence without formal treatment (Marshall, 1996). Babor (1995) argues that treatment is effective for alcohol dependence because only about one third of people might be expected to recover without professional help, whereas two thirds would recover following treatment. Such arguments depend on the way in which several key concepts are defined and operationalised, however. Depending on how dependence and remission are defined, rates of natural recovery have ranged from 37% to 54% (Marshall, 1996). In the most recent Canadian studies, as many as three quarters of all problem drinkers in the community recovered without formal treatment, which compares favourably with the success rates for most therapies (Sobell, Cunningham, & Sobell, 1996).

On this evidence, there is little reason to think that intervention is superior to natural recovery, and a number of longitudinal studies have supported the view that formal treatment does not play a major role in recovery from alcohol and drug dependence. As Vaillant (1995) concluded in relation to alcohol dependence, following his ground-breaking 50 year longitudinal study of more than 600 men, "... alcoholics recover not because we treat them but because they heal themselves" (Vaillant, 1995: 384).

There are five reasons for believing that specialised treatment has a relatively limited role. First, the majority of people resolve alcohol and drug-related problems without professional help (Sobell, Cunningham, & Sobell, 1996; Vaillant, 1995). For many people, including some of those with the greatest severity of alcohol problems, treatment is not *necessary* for recovery (Bischof et al., 2001).

Second, self-help manuals and mutual aid groups, like Alcoholics Anonymous and Narcotics Anonymous, are a marked feature of this field, either operating in conjunction with formal treatment or as an alternative to it. Mutual aid groups can help by providing

social support through a social network that is not centred on drug use (Nealon, Ferrari, & Jason, 1995). Since treatments of different kinds have relatively poor success rates in the absence of adequate levels of social support, it is clear that treatment is not *sufficient* for recovery.

Third, there is ample evidence that quite brief interventions for alcohol dependence, such as a single meeting with a counsellor, can initiate change (Bien, Miller, & Tonigan, 1993). Indeed, the evidence from studies of cost effectiveness is that, on the whole, treatment success has an inverse relationship to cost (Holder et al., 1991). That is, the most expensive interventions for alcohol dependence, like in-patient treatment and residential rehabilitation, appear to be the least effective (Annis, 1986a; Holder et al., 1991). Brief interventions have been very successful with alcohol problems but are under-utilised with other drug problems.

Fourth, despite frequent claims that success is linked to the length of stay in treatment, no consistent evidence has been found that increasing the length or intensity of treatment improves outcomes (Miller, 2000). Many residential programmes exclude from their evaluation all clients who withdraw prematurely, and base their success rates on the better motivated clients who complete the programme. Such practices are questionable, as the challenge in the addictions field is to find ways to help clients resolve ambivalence and improve their motivation (Miller & Rollnick, 1991). Well-motivated clients can usually recover without intensive intervention.

Fifth, well-conducted studies like Project MATCH, which was a five year randomised controlled trial, involving over 1600 subjects, have shown that, although there are major theoretical differences in the rationale for different therapeutic approaches, they achieve broadly similar outcomes (Project MATCH Research Group, 1997). The client's socioeconomic and psychiatric profile is a much better predictor of treatment outcome than is the kind or intensity of the treatment programme. Patients with better social support, and fewer psychiatric problems, do well in most treatments.

Also, therapist variables are also more important than theoretical perspectives (Miller, 2000). In particular, the ability of therapists to empathise with clients seems to predict success (Miller, 2000). Specialised treatment seems to be less important than many assume, therefore, although it is worth noting that it can make matters worse: it is probably easier for improper treatment to retard recovery than for proper treatment to hasten it (Emrick, 1975).

As Vaillant (1995) argues, however, our inability to alter the natural course of a disorder does not mean that intervention should not take place. Vaillant uses the example of tuberculosis, where medicine was able to save lives by enhancing natural recovery, long before an effective cure was found. Progress may come from finding ways to strengthen resilience and promote the natural processes that foster recovery from alcohol and drug dependence.

Studies of natural recovery have identified *perceived social support* as one of the most important factors associated with lifestyle change (Marshall, 1996: 155). Social support is also one of most important predictors of success for people in treatment. As long ago as 1966, Vaillant showed that in New York, prison followed by parole was fifteen times more successful in promoting the resolution of drug problems than in-patient hospital treatment, which in those days was not accompanied by aftercare. What seemed to count was structured support in dealing with problems, in the environment in which they developed, alongside practical help with employment and accommodation (Vaillant, 1966).

Because of the US emphasis on biological research, studies of social support have been neglected in recent years, apart from research on the Community Reinforcement Approach, where support is contingent on compliance with an abstinence-oriented treatment regime (Smith, Meyers, & Miller, 2001). The inclusion of Social and Behavioural Network Therapy in the UKATT trials in the UK may represent a reappraisal of the significance of social intervention, certainly in Europe, and the development of more structured approaches to its provision (Copello et al., 2001).

Such research is likely to prove crucial to the future success of prison aftercare. As Burrows and colleagues (2000: 40) note, in commenting on the difficulties faced by ex-prisoners: “Many have housing and financial difficulties and even psychiatric problems. They may be released to either poor family support or indeed deeply dysfunctional families and friends”. For this reason, many agencies which started by taking an exclusively psychological approach to the provision of drug services have been “obliged to widen their remit to providing a general support function – such as helping ex-prisoners with obtaining housing, social security benefits” (Burrows et al., 2000: 40). This is often described as providing a ‘holistic’ approach, when it might be better described as a reorientation to the fundamental core of successful intervention in alcohol and drug problems.

Another reason for optimism, despite the modest success rates associated with specialised treatment, is that abstinence has often been held to be the sole criterion of success. This ignores the fact that even if intervention only manages to reduce the frequency of relapse, it may serve to lengthen the lifespan and can therefore be justified. Treatment often has a number of positive outcomes but the “substantial level of improvement in ‘unremitted’ clients tends to be overlooked when outcomes are dichotomized as successful or relapsed” (Miller, Walters, & Bennett, 2001). In order to decide whether treatment is worthwhile it is necessary to adopt a more sophisticated approach to evaluation, one that recognises that the goal of intervention is broader than abstinence. This can be achieved through the use of economic methods of appraisal such as cost benefit, cost offset and cost effectiveness analyses. These can determine whether the cost of treatment is outweighed by its benefits, whether the cost is offset by a reduction in other costs, such as crime, and which kinds of treatment provide the most benefit for a given level of resource, or which provide equivalent benefits for least cost (Godfrey, 1992).

There is now a growing body of evidence, from the US and from Britain, that the treatment of drug dependence is economically efficient; that is, that the benefits of treatment outweigh the costs. A review of 18 American cost-benefit studies showed consistent positive economic returns to society (Cartwright, 2000). In the UK, post

treatment reductions in health care costs and in offending behaviour mean that intervention is cost effective even when problem drug use continues (Gossop, Marsden, & Stewart, 1998). In a study of 221 opiate addicts receiving six months of methadone treatment in East London, for example, the cost of treatment (£960) was more than offset by the reduction in illegal earnings over the same period (between £2,142 and £7,878) (Coid et al., 2000). The US research on drug treatment in the criminal justice system, which is much more extensive than that in the UK, shows that drug treatment reduces criminal activity, and hospital admissions, while improving health status. Overall, reductions in costs to the criminal justice system of up to 20% have been found (Harwood et al., 1988). For this reason, the Prison Service has calculated that even relatively modest reductions in offending would make treatment programmes in prison economically efficient. If 3,000 prisoners a year benefited from treatment and ceased to offend, there would be a net benefit to society, even though this number represents less than 2.5% of the annual intake of prisoners (Gravett, 2000).

Summary While formal treatment may not play a major role in promoting abstinence from alcohol and drug use, intervention is economically efficient because the benefits from reductions in offending behaviour and improvements in health status outweigh the costs of treatment. This is likely to be even more true in the prison system, where drug use creates a range of specific problems for security, prisoner and community health, and for the achievement of the Prison Service's aims and objectives. The following section outlines the treatments available within the prison system, and the evidence for their effectiveness. Then, current treatment regimes are discussed, along with problems of conducting treatments and research within prison.

5. DRUG SERVICES IN PRISON

Most British research on the prison system has focused on how the diversion of drug offenders from custody is cost effective (Mauser, Van Stelle & Moberg, 1994), and on the public health risks associated with injecting drug use in prisons, rather than on how prison-based treatment can be improved (Freudenberg, 2001; Malliori et al., 1998; Martin et al., 2000; Shewan et al., 2000).

Clearly, treatment in prison will never be a viable alternative to treatment in the community, because of the high cost of imprisonment: the annual cost per prisoner in the year 2000 was £27,566 (Home Office, 2001). Given that many offenders have severe problems with illicit drugs, however, it would be unethical not to utilise the opportunity that imprisonment provides for treatment and rehabilitation (Brooke et al., 1998; Keene, 1997; Maden, Swinton, & Gunn, 1992). Indeed, because the expense of imprisonment is a *sunk cost*, some forms of residential treatment, which might not be economically efficient in the community, become feasible for prisoners. The true costs of a prison therapeutic community, for example, are the *marginal* costs; that is, the difference between the cost of the standard prison regime and the therapeutic regime. An economic evaluation would consider whether the total benefits, in terms of the number of prisoners rehabilitated, exceeds the cost *at the margin* of providing the therapeutic community, or an alternative treatment. Information about marginal costs and benefits is not available to policy makers currently, and there is, therefore, an urgent need to conduct independent, systematic and careful evaluations of prison treatment.

6. THE EVIDENCE BASE FOR PRISON TREATMENT

The drug services available within the British prison system range from 12 Steps facilitation (e.g. Norwich), acupuncture (e.g. Bristol), Cognitive Behavioural Treatment (e.g. Wormwood Scrubs), educational programmes (e.g. Full Sutton), groupwork (e.g. Elmley), relapse prevention training (e.g. Askham Grange), therapeutic communities (e.g. Channings Wood) to pharmacological treatment including methadone maintenance (Gravett, 2000; Burrows et al., 2000). Non-directive counselling and Motivational Interviewing are probably the most common interventions. Although no outcome evaluations are available from the prisons involved, it is possible to refer to the US evidence on treatment effectiveness, provided caution is exercised in generalising from the American to the British situation, because of differences in culture, the policy context, and the health and penal systems. Although no substitute for outcome evaluation research in British prisons, the following section summarises briefly the largely US research on the treatment programmes that are in common use within UK prisons.

6.1 12 Steps Facilitation

All 12 Steps programmes derive ultimately from the methods developed by the self-help group Alcoholics Anonymous, and its later offshoots like Narcotics Anonymous. Independent evaluations of 12 Steps programmes are thin on the ground, but the largest comparative study, conducted by Project MATCH, found that its results were comparable to cognitive behavioural approaches, which have been much more extensively evaluated (Project MATCH Research Group, 1997).

Alcoholics Anonymous has always refused to become involved in the evaluation of effectiveness and will not usually agree to the randomized allocation of clients. Some randomized studies have been conducted in the US, however, using clients mandated to attend Alcoholics Anonymous meetings by the American courts. A meta-analysis of 21 controlled trials of Alcoholics Anonymous found that those trials that had been able to adopt the randomized allocation of subjects obtained less favourable results than the non-randomized trials, although this may have been a selection bias due to the inclusion of

coerced subjects in the randomized trials (Kownacki & Shadish, 1999). Kownacki and Shadish (1999) found attendance at Alcoholics Anonymous meetings to be worse than no treatment or alternative treatment, while residential 12 Steps treatments had no advantage over alternative forms of residential treatment.

Only seven studies of Alcoholics Anonymous met the methodological criteria to be included in Miller and Wilbourne's (2002) meta-analysis. Most used clients mandated to attend Alcoholics Anonymous meetings by the courts. Alcoholics Anonymous was one of the treatments with the least evidence for effectiveness, ranked in the last ten of 46 different treatment modalities. Neither did the Minnesota Method or other forms of 12 Steps facilitation, receive strong support.

Although the 12 Steps movement insists on its non-denominational status, always being careful to refer to "God as you understand Him" eight of the 12 steps refer to God, and the movement has its origins in the Oxford Movement and in American Midwestern Christianity. Although it has been exported all over the world, Alcoholics Anonymous is culturally specific. It has been most successful in Protestant countries, with the notable exception of the Irish Republic. In recent years, the US court practice of mandating those guilty of alcohol-related offences to attend Alcoholics Anonymous meetings has been declared unconstitutional, because of the religious basis of Alcoholics Anonymous (Harrison, 1996).

6.2 Acupuncture

Over ten years ago, Riet and colleagues (1990) undertook a meta-analysis of 22 trials of acupuncture with three substances: tobacco (15), heroin (5) and alcohol (2). They concluded that there was no support for the claim that acupuncture was an effective treatment for addiction, although they conceded that it may have a useful placebo effect during drug withdrawal (Riet, Kleijnen, & Knipschild, 1990). In Miller and Wilbourne's more recent (2002) meta-analysis, only three trials of acupuncture met the strict inclusion criteria, but they received relatively high cumulative evidence scores, so that acupuncture was judged to have stronger support than many pharmacotherapies, like the use of serotonin antagonists. Acupuncture appears to be gaining in acceptance, and on this

evidence those prisons that have introduced acupuncture treatment regimes, like HMP Bristol, would seem to be justified.

6.3 Behavioural Approaches

Miller and Wilbourne (2002) found that behavioural skills training – including social skills training, community reinforcement, behaviour contracting, self monitoring techniques and behavioural marital therapy - dominated the ‘top ten’ treatment modalities in their meta-analysis, having the strongest evidence for effectiveness. This may reflect the greater likelihood that behavioural methods will be evaluated. As Miller and Wilbourne point out, the high ranking of behavioural treatments does not necessarily mean they are more effective than other approaches, simply that the evidence for their effectiveness is stronger. Behavioural skills training shared two features with other high-ranking treatments like brief interventions and Motivational Interviewing (often considered to be a cognitive behavioural treatment but here considered separately): an emphasis on self-efficacy and attention paid to motivation. Many of the leading treatments also featured some measure of intervention in the client’s social support system.

The results from trials of other behavioural therapies are less clear-cut, although at least one approach, cue exposure, appears to show some potential (Carter & Tiffany, 1999; Conklin & Tiffany, 2002). There is rather more evidence in favour of Cognitive Behavioural Therapy. The rationale for using cognitive behavioural principles to help people who have drug problems was summarised by Miller and Brown (1997). They argue that drug using behaviours follow general behavioural principles, and that problem drug use frequently occurs within a broader cluster of psychological problems. For Miller and Brown, cognitive-behavioural principles are of demonstrable value not only in motivating change in drug using behaviours, but in helping people with co-occurring problems such as anxiety states and depression.

There is a larger research base on Cognitive Behavioural Therapy than on any alternative approach in the addictions field, and it has a consistent record for effectiveness. There is

also North American research on the use of cognitive behavioural programmes within the criminal justice system, largely by the probation service, which suggests that it is an effective way to help offenders (Vennard, Hedderman, & Sugg, 1997). Yet although over 30 English probation areas use cognitive behavioural programmes, there appears to have been no British evaluative research. Research on the use of cognitive behavioural programmes within the prison system is surprisingly limited: three projects were reported to be underway in the US in 1997, but have not resulted in publications yet (Edens, Peters, & Hills, 1997).

6.4 Counselling

Rogerian non directive counselling is popular among service providers, particularly those in the non-statutory sector (Hunt, Mellor, & Turner, 1992). Despite its popularity, the evidence that it helps people with alcohol and drug problems is not strong (Miller & Hester, 1986). The evidence supporting its use within the criminal justice system system is even more limited. In Egg and colleagues' (2000) meta-analysis of treatment in the German criminal justice system, four studies of programmes offering counselling for drink-driving offenders obtained results which, while not statistically significant, were considered promising enough to warrant further research. However, the failure of psychotherapy and counselling to make an impact on drug problems in all previous studies should counsel caution.

6.5 Educational programmes

Although drugs education remains popular with policy makers, particularly when targeted at school children, the evidence that providing knowledge or seeking to change attitudes is an effective way to modify behaviour has always been lacking (Baldwin, 1990; Raistrick, Hodgson, & Ritson, 1999). Although over 2,000 probation clients graduated from alcohol education courses in the 1980s, for example, and the approach became the 'treatment of choice' for drink driving offences in the UK, no controlled evaluation was undertaken and evidence of effectiveness was meagre (Baldwin & Heather, 1987). Pilot studies of prison educational courses in Australia and in Britain have occasionally shown promise (Crundall & Deacon, 1997; MacMillan & Baldwin,

1993), but a meta-analysis of research on the impact of treatment programmes in the German criminal justice system, between 1968-1996, found that educational programmes had no effect in reducing reconviction rates (Egg et al., 2000).

Perhaps reducing reconviction rates is an over-ambitious target for educational programmes, however. Those working within Prochaska and DiClemente's (1986) conceptual framework would argue that education might be appropriate for those offenders who were *pre-contemplative*, in that they had yet to make a connection between their drug use and the problems they were experiencing in life. From this point of view, educational programmes often suffer from being unfocussed, and might best be targeted at those who were in need of 'consciousness raising'. They should seek to provide specific information, like the health information on preventing the transmission of HIV/AIDS, rather than general exhortations, like "heroin screw you up". Enabling clients to move from a *pre-contemplative* to a *contemplative* stage increases the likelihood of eventual behaviour change substantially (Prochaska and DiClemente, 1986). In support of this argument is the impact of information campaigns by the Royal Medical Colleges on cigarette smoking, which have resulted in dramatic reduction in smoking prevalence since 1972, despite the falling price of cigarettes in real terms over most of this period (Raistrick, Hodgson, & Ritson, 1999).

6.6 Group work

Group work has been favoured in the treatment of substance problems for some time, partly for reasons of cost limitation, and it has been in use within the English prison system since the 1960s (Glatt, 1982). Like psychoanalysis, it is not an approach that has been characterised by frequent attempts at outcome evaluation. There have been occasional outcome studies of group work within the prison system, usually of programmes for those sentenced for alcohol-related offences, and they have received mixed results (Berlinger, 1987; Panepinto et al., 1982). In Dugan and Everett's (1998) trial, 145 prisoners with problems of drug dependence were assigned randomly to a treatment group and a control group. Treatment involved 72 hours of group therapy. Reconviction rates 2 years after release indicated no significant difference between the treatment and control groups. Group work is often a key component of therapeutic

communities, however, which have received positive evaluations, and so it may be considered as contributing to the apparent success of prison therapeutic communities (see below).

6.7 Motivational Interviewing

Motivational Interviewing is a non-confrontational, research-based method of helping clients to resolve ambivalence and enhance their motivation to change (Miller, Benefield, & Tonigan, 1993; Miller & Rollnick, 1991). The evidence for its effectiveness is strong, particularly with clients who are angry and resistant to change (Project MATCH Research Group Research Group, 1997; Project MATCH Research Group et al., 1997). In Miller and Wilbourne's (2002) meta-analysis, Motivational interviewing ranked second, as one of the treatments with the strongest evidence for effectiveness. It is being evaluated currently in the UK as part of the UKATT trials (Copello et al., 2001). Although its use in prison has more justification than most drug treatments in general use, there is no specific literature on its use within the prison system.

6.8 Pharmacotherapy

The pharmacological treatment that has had most application within the criminal justice system has been the use of the long acting opiod methadone hydrochloride as a substitute for heroin. Despite initial anxieties about its use for opiate detoxification within a prison setting (Jeanmonod, Harding, & Staub, 1991) it has been adopted for this purpose in at least seven countries, including the UK (Dolan & Wodak, 1996). The British Government has allocated over £10 million to improve detoxification facilities in local prisons, and the Prison Service aims to bring the standard of medical care for drug detoxification into line with that available in the community (Gravett, 2000). Under the recommended detoxification regime, prisoners receive decreasing doses of oral methadone over a seven-day period, minimising the discomfort of withdrawal and the risk of illegal drug use, or in some cases of suicide. In some prisons, such as HMP Lindholme, lofexidine hydrochloride is used in place of methadone (Gravett, 2000). Lofexidine is a non-opiate treatment for opiate withdrawal which, while it may be less

effective than methadone in the early stages, has less serious side effects (Bearn, Gossop, & Strang, 1996).

There is good evidence that methadone maintenance has a positive impact on crime rates, and this has been largely responsible for optimism about the benefits of treatment for drug using offenders (Coid et al., 2000). Methadone maintenance attracts and retains more heroin injectors than any other form of treatment (Dolan & Wodak, 1996). In the US, Barnett (1999) showed that for every year of life that is saved by providing methadone to heroin addicts, an additional \$5,915 in treatment costs were incurred, giving methadone maintenance a cost-effectiveness ratio of less than \$10,000 per-life year, which is much lower than that of many common medical therapies. Nevertheless, there has been reluctance to consider its use in prison, despite its potential for reducing injecting drug use and the transmission of blood borne diseases (Dolan, Hall, & Wodak, 1998; Dolan, Wodak, & Hall, 1998).

In an attempt to stop the cycle of prison detoxification followed by relapse on release, with the attendant risk of death from overdose, a methadone maintenance programme was established at Rikers Island prison in New York, with a post-release referral to a community methadone programme (Magura, Rosenblum, & Joseph, 1992). A total of 250 prisoners, who were not on methadone maintenance on arrest, were randomly selected for the prison programme, and the preliminary evaluation was encouraging in terms of treatment retention, reductions in drug use and in high-risk behaviours for HIV transmission. Similarly, a comparison of prison and community methadone programmes in Australia showed that while methadone succeeded in reducing injecting drug use in both locations, prisoners injected less frequently than community patients (Darke, Kaye, & Finlay, 1998). Those who did inject in prison had higher levels of equipment sharing, however.

In all studies of prisons conducting methadone maintenance, there has been a positive effect on injecting drug use both within prison and on release. In Dolan and colleagues' (1998) study in New South Wales, 185 injecting drug users who had been recently

released from prison were interviewed about drug use and syringe sharing. Self-reported injecting risk behaviours were compared in prisoners who had received either counselling, methadone detoxification or methadone maintenance in prison. Subjects who had been maintained on methadone reported a significantly lower prevalence of heroin injection and syringe sharing, and they obtained lower scores on an HIV Risk-taking Behavioural Scale than subjects who received counselling or methadone detoxification. This study confirms that, despite the difficulties posed for prison regimes in having prisoners receive powerful analgesic drugs while in custody, methadone maintenance can reduce injecting risk behaviour in prison and the risk of heroin overdose on release.

6.9 Relapse Prevention Training

It is generally acknowledged that detoxification is not a particularly difficult stage of treatment for substance dependence; what is much more problematic is preventing relapse once prisoners are released. Relapse prevention is a cognitive behavioural approach to training clients in ways to anticipate and manage the circumstances which might lead to relapse (Annis, 1986b; Marlatt & Gordon, 1985). A meta-analysis of 27 published and unpublished studies of relapse prevention, representing a sample of 9,504 participants, indicated that it is generally effective, particularly for alcohol problems (Irvin et al., 1999). Not only does relapse prevention prolong the intervals between relapses, it reduces the severity of relapses once they occur (Carroll, 1996). Its use within pre-release training courses in prison can be justified, therefore, although once again there is not a specific literature on the outcome of relapse prevention training within the prison system.

6.10 Therapeutic Communities

Residential treatment is one of the least cost effective options for drug dependence (Annis, 1986a ; 1987). When compared directly with day care, residential treatment offers few advantages, and may even be less effective: social learning theory suggests that it would be better to modify behaviour in the environment in which problems arose. In Miller and Wilbourne's (2002) meta-analysis, milieu therapy and therapeutic communities received little support from controlled trials, although therapeutic

communities were represented by only one study, the others having been judged methodologically poor.

Despite these unpromising results, it is being claimed that therapeutic communities in American prisons have shown consistent reductions in reconviction rates and in drug use (Condelli & Hubbard, 1994; Eisenberg & Fabelo, 1996; Field, 1992; Inciardi et al., 1997; Nielsen, Scarpitti, & Inciardi, 1996). One therapeutic community which has been extensively researched is the Donovan prison therapeutic community and aftercare programme in San Diego, California (Wexler et al., 1999). Subjects were randomly assigned to a treatment and a no-treatment control group, taken from a waiting list of prisoners who had volunteered to participate. Reductions in reconviction rates of more than 40 per cent at 12 months and more than 50 per cent 24 months after release from prison were found, but only for the group that completed both the prison and aftercare programme (Wexler et al., 1999).

As in other studies of therapeutic communities, success was claimed for prisoners completing treatment, and prisoners who dropped out were excluded from the analysis. As De Leon et al. (2000), note: “most admissions leave treatment prematurely, particularly in the first months after admission.” In Eisenberg and Fabelo’s (1996) study of a Texas prison therapeutic community, the authors state explicitly that large numbers of prisoners did not complete treatment, and these prisoners had reconviction rates comparable to the control group.

Whether this is seen as a problem or not may depend on the reasons why some prisoners can be retained in treatment while others drop out. De Leon and colleagues (2000) make it clear in their study of a prison therapeutic community that those retained in treatment had higher motivation. Yet most prisons are likely to have large numbers of offenders who are ambivalent about changing their behaviour and have fluctuating levels of motivation, suggesting that if the therapeutic communities option is adopted, treatment resources are being concentrated on a small percentage of the prison population. Higher

overall success rates would be achieved by interventions that seek to help prisoners resolve issues of motivation, like Motivational Interviewing (Miller & Rollnick, 1991).

In Strauss and Falkin's (2000) study of a therapeutic community for women prisoners, those who dropped out reported conflicts or disagreements with the programme's rules. Since many American therapeutic communities adopt an extremely confrontational stance towards residents, such disagreements may be due to a large number of women resisting confrontational tactics. There is some evidence that a directive-confrontational therapeutic style results in significantly more resistance from clients, which in turn predicts poorer outcomes (Miller, Benefield, & Tonigan, 1993). In these circumstances, retention problems probably stem directly from a therapist style that is ineffective. Higher overall success rates would be achieved by working constructively with client resistance.

Almost all of the successful US prison therapeutic communities are linked to an aftercare programme. For example, the Oregon therapeutic community included an aftercare component that continued at least six months into the client's parole (Field, 1992). Inciardi and colleagues proposed a seamless transition between prison and community in Delaware, involving three stages:

The primary stage should occur in prison, where there is the time and opportunity for comprehensive treatment. The second stage is a transitional (therapeutic community), providing a therapeutic and prosaic milieu for individuals on work release. The third stage, when the client is back in the free community, involves counseling, group therapy, and participation in transition program activities.

(Inciardi, Lockwood, & Martin, 1994).

While such an integrated, multistage structure should guard against the problems experienced in Britain through the breakdown of aftercare arrangements, it raises questions of cost. This issue has not been addressed adequately in the evaluations of the three major prison therapeutic community projects in the States: the Kyle New Vision

programme in Texas (Hiller, Knight, & Simpson, 1999); the KEY-CREST programme at Delaware (Inciardi, Lockwood & Martin, 1994); and the Amity programme at Donovan prison in San Diego (Wexler et al., 1999).

In the Kyle New Vision programme in Texas, a large number of offenders did not complete treatment, and these people had reconviction rates comparable to non participants (Eisenberg & Fabelo, 1996; Hiller, Knight, & Simpson, 1999). The group who completed only the prison programme appeared to do better than the control group at the 13-23 month follow up, although the difference was not statistically significant (36% reconvicted against 42% of the control group). Neither group did as well as the prisoners who completed the 'half-way house' programme in addition to the prison therapeutic community (30%) (Hiller, Knight, & Simpson, 1999).

In the Delaware project, the evaluation also focused on the therapeutic community in prison and a "transitional" therapeutic community outside of prison (Martin, Butzin, & Inciardi, 1995). Six months after release, a control group, who had not participated in any form of treatment, was compared to groups who had participated in the therapeutic community in prison only, the transitional therapeutic community only, or both therapeutic communities. Both groups who attended the transitional therapeutic community had significantly lower rates of drug use and reconvictions, but the reductions among those who had only attended the prison therapeutic community were modest, and statistically significant only when adjusted for baseline differences (Martin, Butzin, & Inciardi, 1995). In Wexler and colleagues' (1999) study of the Amity prison therapeutic community in San Diego, the reconviction rates of both drop-outs and those who had completed the prison-based programme were within 2 percentage points of the control group; only those who also attended a transitional therapeutic community after release showed substantial gains.

The fact that the two evaluations which included a group attending only a 'half-way house' programme found that this group did as well as those who had intensive treatment in both prison and the community raises the possibility that limiting provision to a

transitional therapeutic community would be more cost effective than providing a multistage structure. This issue was not addressed by either research team.

In the US, prison therapeutic communities are generally viewed as a success for people with substance problems (Wexler, 1995). Because researchers have been allowed to exclude prisoners who drop out, however, it could be argued that a misleading picture has been given of the effectiveness of this intensive form of treatment. In the UK, there has been little interest in evaluating prison therapeutic communities, with the possible exception of HMP Grendon, which specialises in people with personality disorders. The work of the Grendon therapeutic community has been evaluated over a seven year period and shown to result in a marginally lower reconviction rate (Taylor, 2000). Although Wormwood Scrubs and other British prisons have considerable experience in running therapeutic communities for prisoners with substance problems, there has not been any sustained research to address the question of effectiveness. The Prison Service has already decided to expand the provision of therapeutic communities for prisoners with substance problems, however, and this should present the opportunity for a thorough outcome evaluation to be conducted. If US research is taken into account, at least one prison programme should be linked to a transitional therapeutic community, possibly in the form of a prison-based day release scheme, together with a structured aftercare programme.

In order to facilitate comparisons with prior research, the evaluation should include: a control group, which receives only brief advice in the course of a pre-release scheme plus aftercare provided by the probation service, or by a community-based drugs agency; a group which experiences both prison and community-based treatment; a group which only attends the prison therapeutic community, plus aftercare; and a group which only experiences the transitional therapeutic community. Full economic costings should be undertaken, to enable policy makers to answer the question of whether the marginal costs of providing the prison therapeutic community are justified by the additional benefits in terms of reductions in reconviction rates and other outcome measures. Given the longstanding criticisms of reliance on reconviction rates as a criterion of success, a range

of outcome measures, including frequency of drug problems and health care costs, should be adopted.

7. CURRENT TREATMENT REGIMES

Although a survey of UK prison treatment for alcohol dependence was undertaken in 1989, and found provision to be haphazard and not centrally coordinated (McMurrin & Baldwin, 1989), there has been no equivalent census of drug services in British prisons. In the year 2000, the provision of drug services was reported to be uneven, both in terms of the type of programme offered and the number of places available, and some prisons were said to lack proper detoxification facilities, but there is no specific information on current provision (Burrows et al., 2000).

Between 1995 and 1997, the Prison Service piloted 21 treatment programmes in 19 establishments (Gravett, 2000: 131). These programmes were evaluated by private consultants PDM Consulting Ltd in 1998. PDM Consulting's recommendations were managerial rather than clinical, and in their focus on issues of process, like coordination, were of a predictable nature. They advocated improved coordination with Area Drug Coordinators, the NHS, probation and social services and other agencies, for example, and the continual improvement of existing treatment programmes.

Despite the Prison Service's acceptance of the latter recommendation, and its commitment to the provision of effective services for prisoners with drug problems (Gravett, 2000), there has been little evaluation of those services. Although there has been research on the effectiveness of prison-based treatment programmes in the US (see below), there are no published, methodologically rigorous evaluations of the effectiveness of drug services in UK prisons. The only data on treatment outcomes that is available was collected in the context of examining prison throughcare, and it should be noted that the prisoners' experience pre-dates the introduction of the CARAT initiative by the Prison Service in 1999, which may have resulted in significant improvements to services (Burrows et al., 2000).

Although Burrows and colleagues did not set out to examine the evidence for treatment effectiveness, their study is worth examining in detail because of the absence of specific outcome evaluation research in British prisons. One limitation is that their study relied on self-report data, though in some cases this was supplemented by questionnaires sent to probation officers. In addition, focus groups with prisoners and ex-prisoners were conducted in a small number of establishments. Another limitation is that the authors relied on a 3-4 month follow up, though provision was made for a later study of reconviction rates. A 4 month follow up will give a more favorable picture of treatment outcomes than follow ups conducted at either one or two year intervals, and would not normally be accepted as valid in the evaluation of alcohol or drug treatment services (Costello, 1980).

The authors succeeded in tracking 112 ex-prisoners out of an initial sample of 170 who were released between October 1998 and January 1999. This represents an acceptable response rate of 66 per cent. The study was not intended to be used to examine the effectiveness of specific treatment approaches, as the sample included prisoners from 17 different prison service establishments (15 prisons, 2 Young Offender Institutions), who received a variety of different interventions. It provides some feedback on different interventions, as ex-prisoners were asked their views on whether the treatment they received had been helpful, but the numbers in most groups are so small that no significance can be attached to the results, as the authors themselves acknowledge.

The principal motivation for prisoners seeking treatment was reported to be abstinence (44%).

But 23 per cent wanted to continue to use drugs while keeping their drug use under control and a further 20 per cent wanted to reduce the harm that they could cause themselves and those close to them. The remaining 13 per cent gave a variety of other reasons or simply did not give a specific reason for seeking treatment.

(Burrows *et al.*, 2000: 24)

It is not uncommon for clients to have differing motivation like this, and most community-based drugs agencies would negotiate the goals of intervention with the client. In the prison system, however, the focus of all treatment programmes is on abstinence from drugs (Burrows *et al.*, 2000). Other goals, like harm reduction, do not seem to be considered legitimate. This may be due to anxiety about colluding with law breaking, an issue with which the probation service attempted to come to terms in the 1980s. There is a clear need for this *de facto* policy to be reconsidered, as most of evidence for the effectiveness of drug treatment in the criminal justice system relates to interventions aimed at harm reduction, like methadone maintenance.

Ninety per cent of ex-prisoners reported that their treatment had helped them, although half of these only considered it helped them ‘a little’ (Burrows *et al.*, 2000: vi). Given that the goal of intervention was abstinence, the overall success rate was not impressive: four months after release, 14% said they had stopped taking drugs. Of those still using, the number taking heroin daily fell by 21 percentage points (from 66% of the sample to 45%) and their spending on illicit drugs had more than halved, to about £275 per week. Although this is a definite gain, it is worth emphasising that the follow up took place 3-4 months after release, and the likelihood is that there would be a higher relapse rate by the one and two year stages.

These are poor results, probably due to the fact that the interventions sampled ranged from those with little evidence of effectiveness, like educational programmes, to those with good evidence, like Motivational Interviewing. It is likely that the average success rate would be lowered by a number of poor performers. Moreover, the survey found prisoner aftercare to be sporadic or worse, with about half of the sample homeless, and only 16% in employment, four months after leaving prison (Burrows *et al.*, 2000). This is regrettable, because in the absence of social support few treatment programmes have been found to be successful. The neglect of prison aftercare by the probation service is surprising, in some ways, given that its crucial role in supporting a change in problem drug use has been known for over 30 years (Vaillant, 1966; Inciardi *et al.*, 1997). The

probation service has no statutory obligation to provide throughcare and aftercare for prisoners serving sentences of less than 12 months, however, which will include many of the offenders serving sentences for drug-related acquisitive crimes. Also, the priority for throughcare is given to clients posing an identifiable risk, interpreted as 'danger to the public' (Burrows et al., 2000). Relapse into drug use is not usually seen as a danger to the public. A recent joint development between the prison and probation service, OASys, aims to provide a more strategic and systematic basis for assessing prisoner's risks and needs.

Such research is not without its problems. The evaluation of drug treatment programmes in prison is even more difficult than in the community. In addition to the difficulties encountered in all evaluations of drugs treatment, such as disagreement about treatment goals and about the measurement of outcomes, must be added some problems that are intrinsic to the prison system. For example, court appearances, prison transfers, security considerations, maximizing the use of cell space and staff shortages may make it difficult to control movement into and out of prison-based treatment programmes (Lurigio & Swartz, 1994). In addition, client data may be difficult to obtain in some prisons, because record keeping for research purposes is given a lower priority. Also, aftercare may be perfunctory, which would undermine the success of the prison treatment programme; and, unless long-term follow-up can be assured, the evaluation of outcomes will be problematic. Yet contact with researchers may be unwelcome to ex-prisoners. Many of those who have tried to track ex-prisoners have been unable to contact more than a third of their initial sample, although Burrows and colleagues (2000) have shown that, with persistence, a response rate in excess of two thirds can be achieved.

A further caveat is that the results obtained from evaluating prison-based treatment cannot be compared directly with community-based interventions, because the prognosis for the two client groups is different. Prisoners are more likely to have lower socio-economic status, to have problems of greater severity and to be less motivated to change their behaviour than help-seeking clients in the community (Guyon et al., 1999). In other words, they are more likely to be

pre-contemplative, in Prochaska and DiClemente's (1986) terms, and will not have been actively considering changing their behaviour before imprisonment. These factors are all associated with a lower rate of success.

Gaes et al (1999) highlighted a number of methodological flaws in their meta-analyses of prison-based research. One problem is found in studies comparing the outcomes for prisoners that received treatment and who received post-release community supervision orders, and untreated prisoners who had shorter supervision periods following release. By comparing the treatment group with a control group that receives less support, results are biased in favour of finding a treatment effect. Similar methodological flaws can be found in the work of Hubbard et al. (1997) and Martin and Player (2000), who compared prisoners who completed a programme, with those who were on waiting lists, or had dropped out. This will bias the results, as those who drop out of treatment may be more likely to relapse.

Gaes and colleagues also found evidence of selection bias. Some procedures only choose particular prisoners for a programme, whilst other procedures influence who remains on a programme. Another difficulty in comparing programmes is that the programme content is rarely described in detail to outsiders (Gaes et al., 1999).

In addition, prison is not always a supportive environment for those who wish to abstain from drug use. The availability of drugs in prison, boredom, the experience of confinement, which is known to lead to maladaptive behaviour among the vulnerable, and the absence of psychosocial resources that are known to promote lifestyle change, like social support, are all negative factors (Swann & James, 1998). Prisons are reported to differ quite markedly, however, in terms of regime characteristics, leading to large variations in levels of boredom and disaffection, and in the availability of illicit drugs to prisoners. In 1998, for example, the rate of positive random drug testing varied, in dispersal prisons, from 1.2% at Wakefield to 17.7% at Frankland; in Category B prisons it ranged from 1.3% at Albany to 30.7% at Lowdham Grange; and in Category C prisons from 0.7% at Blantyre House to 41.9% at Featherstone (Gravett, 2000: 59).

These differences may be due to divergence in meeting targets for the use of mandatory drug testing (Edgar & O'Donnell, 1998), the geographic location of the prison, the number and deployment of drug detection dogs and CCTV, proactive search programmes, the security status of prisoners, and the vigilance of staff, as well as the priority given to drug policies within the prison (Gravett, 2000). Increasingly, prisons are providing voluntary testing units or drug-free wings for those who agree not to use drugs. Participation in a drug free wing is subject to a voluntary agreement, known as a Prisoner Compact, and can be linked to the prison's Incentive and Earned Privileges scheme. The evidence from Australia is that the establishment of drug free wings makes a significant difference to reducing the use of drugs in prison (Incorvaia & Kirby, 1997).

There is a suggestion from the US that restrictive prison regimes with very formal prisoner-staff relations have *less* control over drug trafficking in prison than less restrictive regimes with more informal prisoner -staff relations (Stevens, 1997). If this is so, it probably reflects the fact that there are many features of prison life that make a difference to the welfare of prisoners, and that well run prisons get generally better results than less well run prisons. For this reason, one of the objectives of the Prison Service (1998) strategy *Tackling Drugs in Prison* is the development of constructive regimes for all prisoners.

Summary There is an urgent need to conduct independent, systematic and careful evaluations of drug services in prison. Like all prison-based research, such evaluation will have its difficulties, not least because variations in prison regimes complicate the assessment of prison-based treatment. It is difficult to isolate the success of a therapeutic unit from the effect of the prison regime, and the experimental design will need to take account of these special circumstances. The success of a therapeutic unit is also contingent on the quality of aftercare, which is largely outside of the control of the prison authorities.

8. CONCLUSION

The Prison Service is committed to introducing effective services for those prisoners who have problems with illicit drug use. Although formal treatment appears to have a relatively minor role in helping people with drug problems, this strategy is rational, in economic terms, because the benefits from reductions in offending behaviour and improvements in health status will outweigh the costs of treatment to the Prison Service. Intervention has the potential of improving prison security, as well as the health and social functioning of prisoners, and it can enhance the achievement of key Prison Service aims and objectives, such as the rehabilitation of offenders.

Despite the commitment to evidence-based practice, there is a dearth of independent, systematic and careful evaluations of drug services in UK prisons. Many of the treatment programmes provided under contract by non-statutory drugs agencies are not supported by strong evidence of effectiveness. The evidence is strongest for interventions based on behavioural principles, particularly if this is understood to include Motivational Interviewing. There is also support for the introduction of methadone maintenance programmes within prison, provided these are integrated with psychological treatments and linked to ongoing care in the community, so that prisoners are referred to methadone maintenance programmes on release.

The greatest threat to the success of prison-based treatment comes from the failure of throughcare and aftercare arrangements, which are partly beyond the control of the prison authorities. Consideration should be given to ways of integrating care in prison and on release, possibly using the American example of a multistage structure of day release and halfway houses. There is an urgent need for prisons in England and Wales to become involved in outcome evaluation, however, so that any such initiatives can be properly scrutinised, in line with the Prison Service objective of continual improvement of services.

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