



Lost Opportunities? Prison Needle and Syringe Exchange Schemes

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ABSTRACT *Community needle and syringe exchange schemes (CNSES) have become an established part of harm reduction strategies in the UK. However, prison needle and syringe exchange schemes (PNSES) have not been afforded the same attention. This article explores some of the pertinent issues that surround PNSES debates. The focus is on the UK, although it draws on international sources as the issues presented transcend international borders. To represent the range of considerations that surround PNSES debates the following six questions will be addressed: Are PNSES unrealistic and unpopular? Do PNSES conflict with the duties and principles of the prison service and its staff? Do PNSES affect levels of drug use and drug injection in prison? Would PNSES affect levels of infections? Will drug injectors use PNSES? Will PNSES affect safety and security? The article concludes with a call for a much fuller debate on the issue of PNSES.*

Introduction

The provision of sterile injecting equipment to drug injectors through community needle and syringe exchange schemes (CNSES) can help to reduce the prevalence of injecting equipment sharing, which can result in the spread of infections. CNSES have become an acceptable and integral part of risk reduction strategies throughout many countries in the world. There are exceptions such as the USA where CNSES are restricted largely due to differences in political opinions on the role of harm reduction strategies (Henman *et al.*, 1998).

In the UK, CNSES were established in 1987 when a pilot of the schemes and an evaluation were introduced (Stimson *et al.*, 1988). Since then needle and syringe exchange schemes have expanded and are available in a wide range of community settings including drug services, pharmacies, mobile projects and through outreach workers. Developments to CNSES have been identified (Stimson *et al.*, 1991) but one area of provision that is strikingly absent is prison needle and syringe exchange schemes (PNSES).

Harm reduction and drug prevention are important both inside and outside of prison (Uchtenhagen, 1997). The World Health Organization (1993) and Council of Europe (1995) recommend that harm reduction measures inside of prison should be equivalent to those provided in the wider community. However, it does not necessarily follow that interventions that were appropriate outside of prison will be appropriate and effective inside of prison (Advisory Council on the

Misuse of Drugs, 1996; British Medical Association, 1997; Turnbull *et al.*, 1996) as there are gulfs between these two settings, notably in health care provision for drug users (Task Force to Review Services for Drug Misusers, 1996).

Very few countries operate PNSES. Sterile needles and syringes for drug injection were provided in 1988 by a medical officer at the female prison of Hindelbank in Switzerland. However, a prison inspector discovered this practice and prohibited its continuation (Paget, 1998). Further acts of 'medical disobedience' (Nelles & Harding, 1995) occurred in Switzerland during 1992 when a medical officer working within the male prison of Oberschöngrün began distributing sterile needles and syringes (Nelles & Harding, 1995; Paget, 1998). In 1994 the Swiss government established a pilot PNSES in Hindelbank prison (Nelles & Fuhrer, 1995; Nelles *et al.*, 1997, 1998; Paget, 1998). Since then PNSES have expanded to other prisons in Switzerland but are not available in all prisons (Nelles, 1997; Paget, 1998). Portuguese prisons began distributing needles and syringes in 1995 (Gaspar de Almeida & Encarnacao, 1998) and in 1996 two prisons in Northern Germany were involved in a two-year pilot of the schemes (Meyenberg *et al.*, 1997).

In Switzerland, needles and syringes were first distributed by medical officers in face-to-face contacts on a strict one-for-one basis (Nelles & Harding, 1995). The subsequent pilots in Switzerland (Nelles & Fuhrer, 1995; Nelles *et al.*, 1997, 1998) and also in Germany (Meyenberg *et al.*, 1997) have used automatic dispensers to exchange one sterile set of injecting equipment for one used set. Whilst some countries including Canada (Hankins, 1998) are beginning to consider piloting PNSES, most countries do not formally provide sterile needles and syringes for drug injection inside of prison (Jürgens, 1996).

A number of political, ethical and practical considerations are raised by supplying drug injectors with sterile needles and syringes in the community (Loue *et al.*, 1995; O'Brien, 1989). Similarly, PNSES are controversial and noted by Nelles *et al.* (1997, p. 41) as 'highly disputed everywhere'. The PNSES debate generally centres on a number of main issues, many of which are similar to those rehearsed on CNSES, which have wider resonance with debates on the supply of condoms in prisons (Cregan *et al.*, 1996). The questions addressed in this article are by no means exhaustive but are selected to represent the range of general and specific issues that surround PNSES debates. The following six questions will be considered: (1) Are PNSES unrealistic and unpopular? (2) Do PNSES conflict with the duties and principles of the prison service and its staff? (3) Do PNSES affect levels of drug use and drug injection in prison? (4) Would PNSES affect levels of infections? (5) Will drug injectors use PNSES? (6) Will PNSES affect safety and security? The focus is on UK policy development and draws on international sources to achieve this. However, the issues explored will have wider resonance internationally.

Are PNSES Unrealistic and Unpopular?

The fact that few PNSES operate around the world has been used to suggest that they are unpopular (Eyland, 1996; Goldberg, 1997; Goldberg *et al.*, 1998). In Australia, for example, Eyland (1996, p. 59) asserts that 'it is clear that prison authorities around the world share the NSW [New South Wales] view that such a program is of questionable value'. In response to this however, Dolan *et al.* (1996a, p. 59) argue that this 'is to ignore the resistance most prison authorities have to

HIV prevention measures in prisons'. The study that sparked this particular debate between Eyland (1996) and Dolan *et al.* (1996a) was the result of a feasibility study of PNSES in Australia (Dolan *et al.*, 1995; Rutter *et al.*, 1995). They found that former prison residents generally regarded PNSES as a popular idea. Not only was it considered as an important means to reduce risk behaviours and infection spread but would also help to reduce other risks that surround drug injecting and prison drug markets. In this study, however, professionals' views of PNSES were mixed. In particular, a prison officers' union was against the idea, as one prison officer, for example, commented 'In my gaol I have 200 members who are totally and unequivocally opposed. If it's ever implemented, I will take my people out' (Rutter *et al.*, 1995, p. 24).

Whilst there is evidence to suggest that prison authorities and prison officers are opposed to PNSES it would not appear that this represents all views. For example, a needs assessment in an English prison by Huby & Hamer (1994) found prison residents and staff support the idea of PNSES and residents reported being prepared to use a scheme if implemented. The introduction of PNSES has been generally well received by staff and residents in Swiss (Nelles & Fuhrer, 1995; Nelles *et al.*, 1998) and German (Meyenberg *et al.*, 1997) prisons. For example, during the piloting of the schemes in Germany, staff considered PNSES as part of the prisons' daily routines. Staff believed that the PNSES enabled drug injectors to talk more freely and honestly about their drug use—topics considered taboo before the introduction of PNSES—thus helping to facilitate drugs education and prevention (Meyenberg *et al.*, 1997).

Do PNSES Conflict with the Duties and Principles of the Prison Service and its Staff?

It has been argued that PNSES would send symbolic messages to prison residents, visitors and staff that drug use in prison is acceptable (Advisory Council on the Misuse of Drugs, 1993, 1996; AIDS Advisory Committee, 1995; Goldberg, 1997; Goldberg *et al.*, 1998). For example, the AIDS Advisory Committee (1995, p. 30) suggest:

[S]uch an approach would be fraught with difficulty and would fit uneasily with the duty of prison authorities and staff to detect the smuggling of drugs into prison and to prevent drug misuse during custody. The conflict between encouraging prisoners to use an exchange scheme and detecting illicit drug use would have no easy resolution.

Inherent contradictions involving PNSES are compounded by mandatory drug-testing policies in UK prisons as the Advisory Council on the Misuse of Drugs (1996, p. 103) point out:

It is very difficult to see how possession of a syringe could be condoned when both possession of injecting equipment and testing positive for drugs are disciplinary offences. Moreover, there are very great legal as well as practical problems in setting them up in an era of mandatory drug testing.

As King & McDermott (1995) suggest, mandatory drug testing was a disappointing policy because it responded to drug use as a criminal rather than a medical health issue. Whilst this is unsurprising, the criminalization of drug use in prison

has been a notable failure (Frommel, 1997). However, in Germany urine testing to detect illicit drugs was undertaken alongside PNSES (Meyenberg *et al.*, 1997). It was found that whilst prison residents were concerned that drug control measures including urine testing would increase, no changes in drug control practices were identified as a result of PNSES.

The Prison Service's (1995, 1998) intent to restrict the supply and use of drugs through control and drug detection measures may be considered diametrically opposed to PNSES and harm reduction more generally. By introducing PNSES, prison authorities may be seen to collude with the use of drugs, thereby throwing doubt on procedures that aim to stifle drug distribution networks. It is argued that PNSES would send messages that drug use is acceptable and, in effect, decriminalized inside of prison (Goldberg, 1997).

Long-established discourses on discipline, control and punishment within prison undermine health care interventions (Sim, 1990, 1994). Opposing perspectives can impede pragmatic approaches to harm reduction measures inside prisons. As Nelles *et al.* (1997, p. 41) point out:

This might be due to the fact that, particularly in prison, narcotic laws prohibiting drugs on the one hand and health care claiming harm reduction on the other hand are more likely interpreted to contradict each other, thus resulting in a dilemma of none acting.

Critics of PNSES point to the contradictory position in which PNSES would place the prison service and its staff. How can prison officers involved with security, control and discipline—especially with regards to drug taking—be put in a position where they encourage the uptake of harm reduction measures, namely PNSES? However, these dilemmas appear to be resolved when harm reduction measures other than PNSES are considered within prisons. A crucial consideration when implementing harm reduction strategies is who will administer them. Harm reduction measures are essentially health care-orientated tasks and both proponents and opponents of PNSES generally agree that qualified staff should undertake these interventions; usually, although not exclusively, trained health care workers. Prison officers still have a role to play in PNSES, notably encouraging residents who inject drugs to participate, and to tolerate the operation of the schemes.

In the UK, some harm reduction measures will be tolerated and supported more than others. For example, the rejection of PNSES is usually framed within support for other harm reduction measures including the provision of chemicals to help decontaminate unsterile injecting equipment (Advisory Council on the Misuse of Drugs, 1993, 1996; AIDS Advisory Committee, 1995; Goldberg 1997; Goldberg *et al.*, 1998). Where these harm reduction measures are favoured over PNSES practical solutions to minimize the perceived contradictions between different approaches are suggested. For example, the AIDS Advisory Committee (1995) note that the provision of decontaminants raises similar issues to PNSES and suggests that these are provided in the form of a 'health and safety' pack. The AIDS Advisory Committee (1995, p. 31) suggest:

The packs would be issued by health care, not discipline staff, and instructions would explain that replacement contents could be obtained on (confidential) application to the health care centre.

What prison service staff are expected to tolerate in connection with conflicting principles and duties is ultimately a political decision (Brewer & Derrickson, 1992). However, these political decisions have consequences, notably the spread of infection within prisons and the wider communities that prisons serve. HIV and AIDS prevention can be impeded (Wasserfallen *et al.*, 1997) or improved by political will. Gore & Bird (1993, p. 147) argue that limiting the spread of infection inside of prison must come first from politicians and legal reforms:

A prison sentence, prohibiting access to clean needles for injectors, may become a death sentence. If politicians had the humanity to grant prisoners the same rights to reduce their risk of HIV infection as the rest of the population then prison services could help inmates to stop endangering each other, and they could deliver those rights without risking disorder in the prisons. Practical initiatives are impeded for lack of political will and legal reform.

These changes require an acceptance of the levels of drug injection inside of prison regardless of whether it will be condoned. As Hart (1990, p. 138) notes, the introduction of CNSES over a decade ago was ‘an example of government stomaching one “evil”—distribution of needles and syringes to drug injectors—in order to obviate others’.

Do PNSES Affect Levels of Drug Use and Drug Injection in Prison?

PNSES would undoubtedly alter informal prison drug markets. At present, injecting equipment has a ‘marketable’ value inside of prison and typically can be lent in return for drugs (Turnbull *et al.*, 1996). PNSES could minimize the trading of injecting equipment that can result in unsafe sharing practices, together with the risks associated with the operation of injecting equipment markets inside of prison. For example, a participant who had spent time in prison, reported in Rutter *et al.* (1995, p. 23), commented ‘You wouldn’t get people [relatives or visitors] risking their visits to drop clean syringes at the side of the gate’. However, critics of PNSES argue to the contrary and Goldberg (1997, p. 226), for example, suggests that PNSES would lead to prison residents, visitors and staff taking a more active role in the operation of prison drug markets:

The ingenious means through which drugs are smuggled into prison would likely become even more ingenious and there would be the danger of intense drug trafficking. Pressure on relatives, friends and others to ‘deliver the goods’ would increase, as would the severe consequences of failure. An unequivocal message indicating that drug use was acceptable in prison would be perceived by staff, and a prison officer who, hitherto, would have been motivated to eliminate drug use might become involved in drug racketeering.

The Advisory Council on the Misuse of Drugs (1993) suggests that the introduction of PNSES would result in drug users, who had previously smoked drugs including heroin, turning to injection as a method of drug administration. However, there are already considerable numbers of drug injectors inside prisons, some of whom inject drugs, usually with shared injecting equipment (see Table 1). In Scotland, for example, there is some evidence to suggest that people begin to inject drugs for the first time inside of prison (Bird *et al.*, 1995;

Table 1. Selected UK studies of self-reported drug injection inside prisons

Study	Location	Year	Sample	Injectors in prison	Injected in prison	Shared in prison
Dolan <i>et al.</i> (1990)	Britain	1988	183 ^a	139	32	24
Kennedy <i>et al.</i> (1991)	Glasgow	1990	81 ^a	56	14	6
Dye & Isaacs (1991)	Edinburgh	1990	123 ^b	43	29	22
Covell <i>et al.</i> (1993)	Glasgow	1990	503 ^a	262	41	30
Turnbull <i>et al.</i> (1991)	England	1990	452 ^a	168	45	32
Taylor <i>et al.</i> (1995)	Perth	1993	227 ^b	76	33	32
Turnbull <i>et al.</i> (1996)	England	1993	44 ^a	44	16	9
Bellis <i>et al.</i> (1997)	Liverpool	1996	921 ^b	260	36	20

^aSample recruited in the community.

^bSample recruited in prison.

Gore *et al.*, 1995; Taylor *et al.*, 1995) and, therefore, PNSES could help people to establish safer injecting practices. This is especially important given that previous behaviours play an important influence on drug-injecting practices (McKeganey & Barnard, 1992).

In Switzerland, Nelles *et al.* (1997, 1998) found that drug users were still able to locate drugs after the introduction of PNSES and as such the schemes do not prevent drug use. However, Nelles *et al.* (1997, 1998) found that drug use did not appear to rise and PNSES did not appear to influence drug-taking patterns, notably switching people to heroin or cocaine use. People who report using drugs had used them before spending time in prison. Nelles *et al.* (1997) note that uptake of the sterile needles and syringes was closely related to availability and the use of drugs; PNSES participation increased the week after residents had received their monthly wages suggestive of increased amount of drug acquisition. Similarly in Germany, Meyenberg *et al.* (1997) found that PNSES did not appear to encourage people to use drugs.

A low rate of drug injecting inside of prison is one good reason for not providing sterile injecting equipment. A Dutch study of drug-injecting risk behaviours in prisons by Van Haastrecht *et al.* (1998) found that drugs were widely available and used in prisons but there were low (3%) levels of drug injecting with no-one reporting sharing needles and syringes. They conclude that providing drug-injecting equipment may increase the amount of drug injecting inside of prison and may be 'counterproductive from a public health viewpoint' (p. 1423). The authors note that where prison residents have private cells they are less likely to circulate injecting equipment than where two or more people share a cell.

Would PNSES Affect Levels of Infections?

A number of studies that have examined risk behaviours and levels of infections in prison have recommended the introduction of PNSES; for example in France (Rotily *et al.*, 1994), Australia (Dolan *et al.*, 1996c), Canada (Dufour *et al.*, 1996) and Greece (Malliori *et al.*, 1998).

Eyland (1996, p. 59) argues that levels of infections are low and stable in New South Wales prisons and attributes this to the success of prison service interventions. Goldberg (1997, p. 225) argues that inside of prison there is evidence of

minimal transmission of HIV, some transmission of hepatitis B, and considerable chance of hepatitis C transmission in prison. However, the fact that 'there is little proof that transmissions are occurring' (p. 225) is one reason why Goldberg (1997) and others, including the Advisory Council on the Misuse of Drugs (1993), argue against PNSES. In contrast, Crofts *et al.* (1995, p. 288), for example, recommend that harm reduction strategies should be introduced urgently 'without awaiting such final clarification'. In addition, Dolan *et al.* (1996b) argue that low levels of infection inside of prison are due to community HIV prevention rather than to any prison efforts. Mahon (1997, p. 2) develops this point by arguing that the absence of harm reduction inside of prison will 'undercut community-based programmes by creating a gap in prisoner harm reduction practices'.

Studies have found that when the feasibility of PNSES has been assessed in relation to reducing infection transmissions within prison, both staff and residents believe that risk behaviours and infections could be reduced (Huby & Hamer, 1994; Meyenberg *et al.*, 1997). However, as with CNSES (Klee *et al.*, 1991), PNSES do not eliminate drug-injecting risk behaviours that can lead to the spread of infections. For example, Meyenberg *et al.* (1997) found that injecting equipment remained an object of trade in the men's prisons because not all drug injectors, in this case people being prescribed methadone, could participate in the PNSES and as a result injecting equipment continued to be traded and shared. In Switzerland, Nelles *et al.* (1998) found that reports of sharing injecting equipment reduced and was reported by very few people after the introduction of the PNSES. Thus whilst PNSES do not eliminate the sharing of injecting equipment it can reduce the number of people who take these risks. The reasons why people share injecting equipment are mixed and complex and the availability of sterile injecting equipment has been identified as an important influence on drug-injecting risk behaviours in the community (McKeganey & Barnard, 1992; Stimson *et al.*, 1988). The introduction of CNSES in the UK achieved this outside of prisons over a decade ago.

In the Swiss pilot PNSES at Hindelbank prison it was found that no new infections with HIV, hepatitis B or hepatitis C were detected (Nelles & Fuhrer, 1995; Nelles *et al.*, 1998). Although given the timing of these tests, within 5 months of each other, it has been noted that the results should be treated with caution (Nelles & Fuhrer, 1995). It is important to recognize that, at present, there is very little evidence from which to assess the potential contribution PNSES can make on the reduction of infection in prison. To do so requires a thorough assessment of the prevalence of drug injecting, the prevalence of associated risk behaviour, and the prevalence of infection followed by the introduction and evaluation of PNSES.

Will Drug Injectors Use PNSES?

A needs assessment in one English prison by Huby & Hamer (1994) found that residents reported being prepared to collect sterile needles and syringes from prison authorities if provided under the right circumstances. They note that individuals would need to feel confident in the schemes and that unrestricted use would be needed for them to work most effectively.

In Germany, Meyenberg *et al.* (1997) note that anonymity of PNSES participants was important and residents were concerned that participating in PNSES would have a negative effect on their relationships with staff. Women in

particular wanted automatic dispensers to be privately located where the exchange could not be observed. The automatic dispensers were considered to provide more privacy than face-to-face distribution by staff. However, this must be offset against the associated counselling and support, necessary components to encouraging safer drug-injecting practices, which could be offered if contact was made with harm reduction professionals. This study reported that preconceived worries with the effects of the PNSES on prison-staff relationships were unfounded.

Will PNSES Affect Safety and Security?

A deliberate stabbing of a prison officer by a HIV-infected resident with a needle and syringe containing blood was reported by Jones (1991). Young (1996) argues that HIV has become criminalized through the potential for blood-filled syringes to be used as a threatening weapon towards others. These concerns have been used to argue that the increased availability of needles and syringes will also increase the likelihood that they are used as weapons against prison residents, visitors and staff (Advisory Council on the Misuse of Drugs, 1993, 1996; Darke *et al.*, 1998; Goldberg, 1997). For example, a prison officer reported in Rutter *et al.* (1995, p. 16) asked, 'what's to stop him from walking up behind anyone even another prisoner and jabbing em?'. Dolan *et al.* (1995) suggest that PNSES should operate on a strict one-for-one basis and only exchanging the syringe barrel and not the needle will enable the risks of HIV transmission to be reduced. However, this latter suggestion may undermine the effectiveness of PNSES in reducing other injection-related harms outwith the spread of infections including, for example, tissue damage. In addition, the introduction of PNSES would send symbolic messages that harm reduction measures inside of prison are considered important and are taken seriously by the prison service. To introduce PNSES in half measures would serve to undermine the principles of harm reduction.

In view of concerns about safety, evidence from both Switzerland (Nelles *et al.*, 1997, 1998) and Germany (Meyenberg *et al.*, 1997) found that injecting equipment had not been misused as weapons since the introduction of PNSES. Some prison staff reported by Meyenberg *et al.* (1997) help to put these issues in perspective. They note that whilst some staff were worried that injecting equipment could be used as weapons, this could happen with injecting equipment previously in circulation within the prison. Relationships between prison staff and residents were dominated by mistrust and precaution and this was maintained following the introduction of PNSES. Prison staff noted that it was important to work on the staff-prisoner relationship to prevent any threatening situations occurring and not just within the context of PNSES. Violence within UK prisons tends to involve a lot more than a needle and syringe (Scraton *et al.*, 1991; Woolf & Tumin, 1991).

An important safety issue in the operation of both CNSES and PNSES concerns the ways in which used equipment is disposed of. Outside of prison, injecting equipment may be disposed of unsafely (Neale, 1998) and similarly PNSES could potentially increase rather than reduce the risks of infections (Huby & Hamer, 1994). However, in Switzerland Nelles *et al.* (1997) found no problems were incurred by discarded injecting equipment. In addition, Rihs-Middel (cited in Rutter *et al.*, 1995, p. 8) suggests that the Swiss PNSES may have decreased the

possibilities of injury through the permitted storage of injecting equipment in the toilet areas of cells. Similarly, Meyenberg *et al.* (1997) found that prison staff believed that the introduction of PNCSES made injecting equipment more easy to control.

Conclusions

The current position in many countries, including the UK, on PNCSES means that valuable opportunities to reduce the harms from drug injecting are lost. Wide-ranging political, practical and ethical issues are raised by PNCSES, some of which have been discussed in this article. Relatively little evidence is available from which to assess fully the feasibility of PNCSES or the impact they can have on harm reduction within prisons. It is a political anomaly that certain measures are tolerated more than others despite there being very little information available to inform harm reduction debates within prisons. In the wider community these schemes are not without their problems and critics have rightly warned of the difficulties that surround PNCSES.

Ideological and practical problems also beset PNCSES. Ideological difficulties arise from the conflict of interests between the duty of prisons to control drug use and their health care duties, which include reducing the spread of infections. These ideological conflicts should be located within prison health care debates more generally. For example, Sim (1990) argues that historically prison health care was shaped by discourses on less eligibility (health care in prison being set at a lower standard than outside prison), which operated because of an overriding emphasis on control and punishment. These discourses continue to influence prison health care (Sim, 1994). Thus, meeting the health care needs of drug injectors in prison should be located within the wider policy changes that are necessary to improving prison health care (Hughes, *in press*).

This article has also discussed a number of practical considerations that surround PNCSES debates. These practical problems are often considered insurmountable by those who argue against PNCSES. However, in countries where the practical costs and benefits of PNCSES have been considered, their impact has been found to make a positive contribution to harm reduction within prisons. In Switzerland, for example, Nelles *et al.* (1997, p. 47) argue that operating PNCSES 'do not provide any arguments against the continuation of the distribution of sterile syringes'.

PNCSES ultimately constitute a political issue that is highly symbolic. The discourses that have led to drug injectors being denied a formal supply of the means to inject drugs more safely send particular signals, which, at present, demonstrate how drug injectors are considered with little regard.

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References

- ADVISORY COUNCIL ON THE MISUSE OF DRUGS (1993). *AIDS and Drug Misuse Update*. London: Department of Health.
- ADVISORY COUNCIL ON THE MISUSE OF DRUGS (1996). *Drug Misusers and the Criminal Justice System. Part III: drug misusers and the prison system—an integrated approach*. London: HMSO.
- AIDS ADVISORY COMMITTEE (1995). *The Review of HIV and AIDS in Prison*. London: Prison Service.
- BELLIS, M.A., WEILD, A.R., BEECHING, N.J., MUTTON, K.J. & SYED, Q. (1997). Prevalence of HIV and injecting drug use in men entering Liverpool prison. *British Medical Journal*, 315, pp. 30–31.
- BIRD, A.G., GORE, S.M., CAMERON, S., ROSS, A.J. & GOLDBERG, D.J. (1995). Anonymous HIV surveillance with risk factor elicitation at Scotland's largest prison, Barlinnie. *AIDS*, 9, pp. 801–8.
- BREWER, T.F. & DERRICKSON, J. (1992). AIDS in prison: a review of epidemiology and preventive policy. *AIDS*, 6, pp. 623–28.
- BRITISH MEDICAL ASSOCIATION (1997). *The Misuse of Drugs*. Amsterdam: Harwood Academic Publishers.
- COUNCIL OF EUROPE (1995). *Prison and Criminological Aspects of the Control of Transmissible Diseases Including Aids and Related Health Problems in Prisons: recommendation No. R (93) 6 and explanatory report*. Strasbourg: Council of Europe Press.
- COVELL, R.G., FRISCHER, M., TAYLOR, A., GOLDBERG, D., GREEN, S., MCKEGANEY, N. & BLOOR, M. (1993). Prison experience of injecting drug users in Glasgow. *Drug and Alcohol Dependence*, 32, pp. 9–14.
- CREGAN, J., KIPPAX, S. & CRAWFORD, J. (1996). Sex, contagion, control: prison officers vs condoms in New South Wales gaols. *Australian and New Zealand Journal of Criminology*, 29, pp. 227–46.
- CROFTS, N., STEWART, T., HEARNE, P., YI PING, X., BRESCHKIN, A.M. & LOCARNINI, S.A. (1995). Spread of bloodborne viruses among Australian prison entrants. *British Medical Journal*, 310, pp. 285–88.
- DARKE, S., KAYE, S. & FINLAY-JONES, R. (1998). Drug use and injection risk-taking among prison methadone maintenance patients. *Addiction*, 93, pp. 1169–75.
- DOLAN, K.A., DONOGHOE, M.C. & STIMSON, G.V. (1990). Drug injecting and syringe sharing in custody and in the community: an exploratory survey of HIV risk behaviour. *Howard Journal of Criminal Justice*, 29, pp. 177–86.
- DOLAN, K., WODAK, A. & PENNY, R. (1995). AIDS behind bars: preventing HIV spread among incarcerated drug injectors. *AIDS*, 9, pp. 825–32.
- DOLAN, K.A., WODAK, A.D. & RUTTER, S.A. (1996a). Is a syringe exchange feasible in a prison setting? Reply (letter). *Medical Journal of Australia*, 165, p. 59.
- DOLAN, K.A., RUTTER, S.A., WODAK, A.D., HALL, W.D., MAHER, L.S. & DIXON, D.C. (1996b). Is a syringe exchange feasible in a prison setting? (letter). *Medical Journal of Australia*, 164, p. 508.
- DOLAN, K., WODAK, A., HALL, W., GAUGHWIN, M. & RAE, F. (1996c). HIV risk behaviour of IDUs before, during and after imprisonment in New South Wales. *Addiction Research*, 4, pp. 151–60.
- DUFOUR, A., ALARY, M., POULIN, C., ALLARD, F., NOËL, L., TROTTIER, G., LÉPINE, D. & HANKINS, C. (1996). Prevalence and risk behaviours for HIV infection among inmates of a provincial prison in Quebec City. *AIDS*, 10, pp. 1009–15.
- DYE, S. & ISAACS, C. (1991). Intravenous drug misuse among prison inmates: implications for spread of HIV. *British Medical Journal*, 302, p. 1506.
- EYLAND, S.J. (1996). Is a syringe exchange feasible in a prison setting? (letter). *Medical Journal of Australia*, 165, p. 59.
- FROMMEL, M. (1997). Ban on drugs or health care: the dilemma of a repressive drug policy. *International Journal of Drug Policy*, 8, pp. 18–21.
- GASPAR DE ALMEIDA, J.M. & ENCARNACAO, R. (1998). Building a drug treatment system in postrevolutionary Portugal. In H. KLINGEMANN & G. HUNT (Eds), *Drug Treatment Systems in an International Perspective: drugs, demons, and delinquents* (pp. 217–22). London: Sage.
- GOLDBERG, D. (1997). The case against: it isn't time to provide prisoners with clean needles and syringes. *International Journal of Risk, Security and Crime Prevention*, 2, pp. 223–28.
- GOLDBERG, D., TAYLOR, A., MCGREGOR, J., DAVIS, B., WRENCH, J. & GRUER, L. (1998). A lasting public health response to an outbreak of HIV infection in a Scottish prison? *International Journal of STD and AIDS*, 9, pp. 25–30.
- GORE, S.M. & BIRD, A.G. (1993). No escape: HIV transmission in jail. *British Medical Journal*, 307, pp. 147–48.
- GORE, S.M., BIRD, A.G. & ROSS, A. (1995). Prison rites: starting to inject inside. *British Medical Journal*, 311, pp. 1135–36.
- HANKINS, C.A. (1998). Syringe exchange in Canada: good but not good enough to stem the HIV tide. *Substance Use and Misuse*, 33, pp. 1129–46.

- HART, G. (1990). Needle exchange in historical context: responses to the 'drugs problem'. In P. AGGLETON, P. DAVIES & G. HART (Eds), *AIDS: individual, cultural and policy dimensions* (pp. 133–42). Hampshire: Falmer Press.
- HENMAN, A.R., PAONE, D., DES JARLAIS, D.C., KOCHERS, L.M. & FRIEDMAN, S.R. (1998). From ideology to logistics: the organizational aspects of syringe exchange in a period of institutional consolidation. *Substance Use and Misuse*, 33, pp. 1213–30.
- HUBY, M. & HAMER, S. (1994). *HIV, Sexual Health and Drugs Misuse: assessment of need in H M Prison Everthorpe*. United Health: Unpublished.
- HUGHES, R. (2000). Health, place and British prisons. *Health and Place*, 6.
- JONES, P.D. (1991). HIV transmission by stabbing despite zidovudine prophylaxis (letter). *Lancet*, 338, p. 884.
- JÜRGENS, R. (1996). *HIV/AIDS in Prisons: final report*. Montréal: Canadian HIV/AIDS Legal Network and Canadian AIDS Society.
- KENNEDY, D.H., NAIR, G., ELLIOT, L. & DITTON, J. (1991). Drug misuse and sharing of needles in Scottish prisons. *British Medical Journal*, 302, p. 1507.
- KING, R.D. & McDERMOTT, K. (1995). *The State of Our Prisons*. Oxford: Oxford University Press.
- KLEE, H., FAUGIER, J., HAYES, C. & MORRIS, J. (1991). The sharing of injecting equipment among drug users attending prescribing clinics and those using needle-exchanges. *British Journal of Addiction*, 86, pp. 217–23.
- LOUE, S., LURIE, P. & LLOYD, L.S. (1995). Ethical issues raised by needle exchange programs. *Journal of Law Medicine and Ethics*, 23, pp. 382–88.
- MAHON, N. (1997). Prisoners and the harm reduction movement. *International Journal of Drug Policy*, 8, pp. 1–2.
- MALLIORI, M., SYPSA, V., PSICHOGIOU, M., TOULOUMI, G., SKOUTELSI, A., TASSOPOULOS, N., HATZAKIS, A. & STAFANIS, C. (1998). A survey of bloodborne viruses and associated risk behaviours in Greek prisons. *Addiction*, 93, pp. 243–51.
- McKEGANEY, N. & BARNARD, M. (1992). *AIDS, Drugs and Sexual Risk: lives in the balance*. Buckingham: Open University Press.
- MEYENBERG, R., STÖVER, H., JACOB, J., & POSPESCHILL, M. (1997). *Infektionsprophylaxe im Niedersächsischen Justizvollzug*. Oldenburg: BIS-Verlag.
- NEALE, J. (1998). Reducing risks: drug users' views of accessing and disposing of injecting equipment. *Addiction Research*, 6, pp. 147–63.
- NELLES, J. (1997). The contradictory position of HIV prevention in prison: Swiss experiences. *International Journal of Drug Policy*, 8, pp. 2–4.
- NELLES, J. & FUHRER, A. (1995). *Drugs and HIV Prevention at the Hindelbank Penitentiary: abridged report of the evaluation results of the pilot project*. Bern: Swiss Federal Office of Public Health.
- NELLES, J. & HARDING, T. (1995). Preventing HIV transmission in prison: a tale of medical disobedience and Swiss pragmatism. *Lancet*, 346, pp. 1507–08.
- NELLES, J., BERNASCONI, S., DOBLER-MIKOLA, A. & KAUFMAN, B. (1997). Provision of syringes and prescription of heroin in prison: the Swiss experience in the prisons of Hindelbank and Oberschöngrün. *International Journal of Drug Policy*, 8, pp. 40–52.
- NELLES, J., FUHER, A., HIRSBRUNNER, H.P. & HARDING, T.W. (1998). Provision of syringes: the cutting edge of harm reduction in prison? *British Medical Journal*, 317, pp. 270–73.
- O'BRIEN, M. (1989). Needle exchange programs: ethical and policy issues. *AIDS and Public Policy Journal*, 4, pp. 75–82.
- PAGET, D.Z. (1998). *Needle Distribution in the Swiss Prison Setting: a breakthrough?* Swiss Federal Office of Public Health: Unpublished.
- PRISON SERVICE (1995). *Drug Misuse in Prison*. London: Prison Service.
- PRISON SERVICE (1998). *Tackling Drugs in Prison: the Prison Service Drug Strategy*. London: Prison Service.
- ROTILY, M., GALINIER-PUJOL, A., OBADIA, Y., MOATTI, J.-P., TOUBIANA, P., VERNAY-VAISSE, C. & GASTAUT, J.-A. (1994). HIV testing, HIV infection and associated risk factors among inmates in south-eastern French prisons. *AIDS*, 8, pp. 1341–44.
- RUTTER, S., DOLAN, K., WODAK, A., HALL, W., MAHER, L. & DIXON, D. (1995). *Is Syringe Exchange Feasible in a Prison Setting? An Exploratory Study of the Issues* (Technical Report Number 25). Sydney: National Drug and Alcohol Research Centre.
- SCRATON, P., SIM, J. & SKIDMORE, P. (1991). *Prisons Under Protest*. Buckingham: Open University Press.
- SIM, J. (1990). *Medical Power in Prisons: the prison medical service in England 1774–1989*. Buckingham: Open University Press.
- SIM, J. (1994). Prison medicine and social justice. *Prison Service Journal*, 95, pp. 30–38.

- STIMSON, G.V., DOLAN, K.A., DONOGHOE, M.C. & LART, R.C. (1988). *Injecting Equipment Exchange Schemes: final report*. London: Monitoring Research Group.
- STIMSON, G., LART, R., DOLAN, K. & DONOGHOE, M. (1991). The future of syringe exchange in the public health prevention of HIV infection. In P. AGGLETON, G. HART & P. DAVIES (Eds), *AIDS: responses, interventions and care* (pp. 225–32). London: Falmer Press.
- TASK FORCE TO REVIEW SERVICES FOR DRUG MISUSERS (1996). *Report of an Independent Review of Drug Treatment in England*. London: Department of Health.
- TAYLOR, A., GOLDBERG, D.J., EMSLIE, J., WRENCH, J., GRUER, L., CAMERON, S., BLACK, J., DAVIS, B., MCGREGOR, J., FOLLETT, E., HARVEY, J., BASSON, J. & MCGAVIGAN, J. (1995). Outbreak of HIV infection in a Scottish prison. *British Medical Journal*, 310, pp. 289–92.
- TURNBULL, P.J., DOLAN, K.A. & STIMSON, G.V. (1991). *Prison, HIV and AIDS: risks and experiences in custodial care*. Horsham: AVERT.
- TURNBULL, P.J., POWER, R. & STIMSON, G.V. (1996). “Just using old works’’: injecting risk behaviour in prison. *Drug and Alcohol Review*, 15, pp. 251–60.
- ÜCHTENHAGEN, A. (1997). Drug prevention outside and inside prison walls. *International Journal of Drug Policy*, 8, pp. 56–61.
- VAN HAASTRECHT, H.J.A., BAX, J.S. & VAN DEN HOEK, A.(J).A.R. (1998). High rates of drug use, but low rates of HIV risk behaviours among injecting drug users during incarceration in Dutch prisons. *Addiction*, 93, pp. 1417–25.
- WASSERFALLEN, F., PAGET, D.Z. & BAUER, P.G. (1997). AIDS prevention strategies: an overview. *International Journal of Drug Policy*, 8, pp. 62–66.
- WORLD HEALTH ORGANIZATION (1993). *World Health Organization Guidelines on HIV Infections and AIDS in Prison*. Geneva: World Health Organization.
- YOUNG, A. (1996). *Imagining Crime: textual outlaws and criminal conversations*. London: Sage.