

Behind Bars: HIV Risk-Taking Behaviour of Sydney Male Drug Injectors While in Prison

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It is now almost ten years since the clinical phenomenon of AIDS was first recognised. In that time, the causal agent, Human Immunodeficiency Virus (HIV), has been identified and enormous progress has been made in defining both the nature of the epidemic and the responses required for prevention of cases and management of persons infected.

In Western Europe, the epidemic of AIDS cases began in homosexual/bisexual men. In the last few years, the pattern of presenting cases has changed so that now, in Europe as a whole, AIDS cases associated with drug injecting are more common than any other risk category. A similar development has occurred in the north-east of the United States. In the last few years, epidemics of HIV infection in drug injectors have been reported in Poland in Eastern Europe, Thailand, Myanmar (formerly Burma), China and India in Asia, and Brazil and Argentina in South America. Almost 80 per cent of 177 drug injectors attending a treatment centre in Yangon (formerly Rangoon) in 1990 were infected. A range of preventive strategies has been developed to reduce the spread of HIV in injecting drug users (IDUs). Considerable progress in implementing many of these strategies has been achieved in a number of countries. Australia's record in HIV prevention among IDUs (with the notable exception of incarcerated IDUs) is very impressive by international standards.

It has recently been estimated that 40-50 per cent of male and female IDUs in contact with treatment services or research projects may spend considerable periods of their lives in prisons. It is important, therefore, to find out whether confinement in prison changes the risk of HIV infection for IDUs. This paper reports preliminary results of a continuing study of drug injectors in several cities throughout Australia. The study has been supported by a Commonwealth AIDS Research Grant.

The research commenced with a pilot study in 1988. In 1989 respondents were recruited in Brisbane, Armidale and Tamworth, Sydney, Canberra, Melbourne, and Perth. This paper will be confined to an analysis of results from the Sydney respondents.

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Methods

A detailed description of the method employed in this study has been submitted for publication and will not be repeated here. In summary, respondents were attracted by a variety of inexpensive forms of local advertising. Respondents were paid \$20 for an anonymous interview lasting about one hour. Interviews were conducted in private by one of a panel of trained and supervised research interviewers who had extensive personal or professional experience in the area. Measures were taken to ensure that subjects were not interviewed on more than one occasion. Interviews took place in Surry Hills, an inner-city suburb of Sydney.

The interview questionnaire contained a core component completed by all respondents and a series of modules. The 'prison' module took approximately ten minutes to complete. At the conclusion of the interview, respondents were asked to provide a drop of blood taken from a finger tip by a small lancet and absorbed on to a strip of blotting paper which was forwarded to the national HIV reference laboratory at Fairfield Hospital for HIV antibody testing.

One thousand two hundred and forty-five injecting drug users were interviewed of whom 908 were males. This paper concerns male respondents since there is an increased risk of HIV transmission within prison both by male sexual activity as well as sharing injection equipment. Four hundred and three males (44.4 per cent) admitted to having previously been in prison. Of these, 209 (23.0 per cent of all respondents) had spent more than one month in prison and completed the prison module.

Results

The duration of imprisonment ranged from one to 122 months with a mean of 16.1 months. Slightly more than one-third (37.4 per cent) had spent less than one year in prison. The demographic characteristics of the respondents who had been in prison were generally similar to those who had not been in prison. The mean age of respondents was 26.9 years. The male drug injectors who had been in prison and were the subjects of this study in general had received less formal education and were more likely to be unemployed than the drug injectors who had not been in prison.

Respondents had been released from prison for a little over two years on average at the time of interview and thus the mean time of prison experience was 1987.

Drug use in prison

One hundred and fifty-five of the 209 respondents (74.2 per cent) reported having injected drugs at least once while in prison with heroin being the major drug reported (77.4 per cent of injectors) followed by amphetamines (31 per cent). Seventy-eight per cent of the subjects who reported injecting heroin while in prison, did so on five or less occasions per week. By comparing the answers to many questions, it is likely that the frequency of injection is usually much less than once a week. The distribution of frequency of injections per week was similar for all of the substances injected. It is interesting to note that 10 per cent of the respondents who injected heroin in prison reported injecting on sixteen or more occasions per week.

Reported sharing of injection equipment in prison

Of the 155 subjects who admitted to injecting in prison, only 100 (66.5 per cent) provided data on the frequency of sharing of injection equipment in prison with 75 (75 per cent) reporting sharing. Twenty-two per cent of respondents indicated that they always went first when sharing. However, 89 per cent indicated that on every occasion they cleaned shared needles and syringes before injecting. The cleaning methods included alcohol (10 per cent), boiling water (7 per cent), hot water (19 per cent), bleach (26 per cent), tap water (36 per cent), and miscellaneous methods (6 per cent). Alcohol, boiling water and bleach are likely to have killed HIV. The other methods are doubtful. Forty-seven per cent of the sample described access to bleach as 'quite hard' to 'impossible'.

In response to a question regarding whether they had ever accepted needles and syringes from known HIV positive drug injectors in prison, two out of forty-eight admitted that they had done so, 78 per cent denied having done so, while 19 per cent indicated that they never shared. Of the eight HIV-infected respondents, seven had injected in prison, and six reported sharing injection equipment. Their HIV status while in prison was not determined.

The respondents were then asked how frequently they shared injection equipment in the first few weeks after leaving prison. Twenty-seven per cent reported that they shared injection equipment in that period 'everytime' to 'occasionally'. A further 15 per cent said that they shared but 'not often' while 58 per cent indicated that they never shared in the few weeks after leaving prison.

Reported sexual behaviour in prison

Thirteen per cent of respondents reported having had sex with a man while in prison. Five per cent reported having been anally raped while in prison. Forty per cent of the sexually active men, reported that they had had anal intercourse while in prison. Of these men 50 per cent said they were always the insertive partner, 29 per cent the receptive partner and the remaining 21 per cent engaged in both practices. Only one subject reported that insertive anal intercourse had always been performed using condoms while three respondents indicated that receptive anal intercourse always occurred using condoms. Eighty-three per cent of 157 subjects reported that condoms were 'quite hard', 'difficult' or 'impossible' to obtain while in prison whereas 18 per cent indicated that they were 'easy' or 'not hard' to obtain. Four per cent of the respondents admitted to having had anal sex with a known HIV carrier.

One hundred and seventy-five respondents gave information on their sexual practices outside prison; 3 per cent reported only having sex with other men outside prison, 4 per cent mostly with other men while an additional 5 per cent sometimes had sex with other men outside prisons. Overall, 12 per cent of the respondents reported having sex with other men outside prison 'always' to 'sometimes'.

The respondents were also asked about the information they received about AIDS while in prison. Forty-three per cent of respondents said that they had not received any AIDS information while in prison. However, of those who had received information in prison, 59 per cent considered that this information was either 'good' or 'very good'.

Thirty per cent of the sample reported having received drug treatment in prison which included: methadone maintenance, methadone withdrawal, detoxification, counselling and 'other'. Methadone maintenance was the most common form of treatment received with 37 per cent of those who reported receiving treatment having participated in a programme while in prison. Of the 137 respondents who had not received any treatment, 51 (37 per cent) had wanted to receive treatment for their drug problems while in prison.

Further analyses of the data indicate some significant differences between those who injected in prison and those who did not. Respondents who did not inject in prison had, on

average, been released more recently (19 months) compared to those who had injected in prison (28 months). This raises the hopeful possibility that risk taking behaviour in prison may be declining. Respondents who had injected in prison had: on average started drug injecting earlier (17.1 years) than those who had not injected in prison (18.8 years); had a larger number of sharing partners on average (3.9) outside prison than those who had not injected in prison (0.6); and had also accepted used injection equipment more often (28 per cent) while outside prison than respondents who had never injected in prison (15.5 per cent).

Comparisons of respondents who had spent less than a year in prison with those who had spent more than a year showed no differences in the frequency of injecting the four major drugs, sharing, cleaning, obtaining bleach, accepting equipment from prisoners known to be infected, having sex with another male prisoner or anal intercourse.

Discussion

The respondents in this study had on average been injecting for ten years with more than 10 per cent of this time spent behind bars. If conditions in prisons are such that the spread of HIV among incarcerated IDUs is facilitated, the excellent work on prevention of spread outside prisons could in time be overcome.

Taken overall, the results of this study suggest that a disturbingly high level of HIV risk behaviour occurs in prisons. These data also raise the possibility that the level of high-risk behaviour may be declining and this possibility should be investigated by further study. The frequency of drug injection in prison is less than would be expected of a heavily dependent group of drug users outside prison. But injection equipment is frequently shared, inadequately cleaned, and probably shared with a larger number of partners in prison. It is likely that the risk per injection is higher inside than outside prison. Anal intercourse probably occurs less frequently inside prison than outside and men who practise homosexual behaviour inside prison also do so outside prison. But the relative unavailability of condoms inside prison suggests that there is a higher proportion of unprotected sexual activity in prisons than outside. Furthermore, the prevalence of anal rape in prisons is disturbingly high but we do not have comparable data on the prevalence of anal rape outside prison.

Before these conclusions can be further considered some qualifications are necessary. Firstly, only 209 of the 403 male drug injectors who had been in prison answered the prison module. Secondly, the subjects in this study were interviewed in 1989 and had been out of prison on average for a little over two years. Therefore, the prison experience which respondents described was predominantly between 1985 and 1987. This may have introduced a recall bias. Thirdly, the reliability and validity of this data is unknown and not easily tested. However, the reliability and validity of data in other studies of IDUs is surprisingly high. Furthermore, it may be that conditions in prisons have changed since these respondents were in prison.

It should be emphasised that this report describes preliminary analysis and interpretation of the data. Statistical analysis and conclusions will be presented elsewhere.

A small proportion of former prisoners reported that they had injected sixteen or more times per week. This suggests that some prisoners seem to have a far greater access to drugs in prison than the majority of drug injectors. Unfortunately, some of the questions did not allow for data on very low frequencies of activity to be collected. The number of episodes of drug injecting in prison is far less frequent in prison than outside. Between one in four and one in five IDUs who inject in prison, will never share in prison. The possibility that this proportion would be even higher today should be investigated in further research. It is encouraging that such a high proportion of drug injectors attempted to clean their injection equipment in prison two to four years ago. This suggests high levels of awareness about AIDS among prisoners in 1985 to 1987 despite the relative scarcity of AIDS education in prisons, and despite the unavailability of adequate cleaning materials. The fact that such a high proportion tried to clean their injecting equipment despite the scarcity of sterilising agents suggests that IDUs are anxious to reduce the hazards of drug injecting while in prison.

The respondents who participated in the riskiest activities in prison generally participated in these same activities to an ever greater extent outside prison. This study was conducted at a time when HIV seroprevalence was probably lower than it is today. If the activities reported in this study have not changed, but the level of HIV seroprevalence has increased, the alarming possibility arises that prisons could well become 'incubators' for HIV transmission. Although there is some evidence that the aggregate number of episodes of risk taking may be less within than outside prison, each risk taking episode is likely to be more hazardous in prison than outside prison.

The data from this study presents a dilemma to policy makers. One possible response is to attempt to further decrease the number of episodes of drug injecting and anal intercourse in prison. This carries the risk that the proportion of episodes of high-risk injecting or sexual activity could increase. For example, trying to reduce the availability of injection equipment may inadvertently increase the likelihood of sharing. Attempting to decrease any male to male sexual activity may result in an increase in quick, probably unprotected penetrative intercourse to minimise detection. A second approach is to recognise that there are major difficulties in further reducing or eliminating drug injecting or anal intercourse in prisons but possibly fewer in attempting to decrease the rate of sharing and unprotected sexual intercourse. Although there may be advantages and disadvantages in both approaches, and risks in both approaches, the ultimate approach adopted should reflect a commitment to public health first and foremost. What is required from a public health standpoint is to reduce the proportion of prisoners who participate in unsafe injecting or sexual behaviour, to reduce the number of episodes per participating prisoner, and to reduce the degree of risk per episode of high-risk behaviour. That is, the risk is a product of the proportion of prisoners engaging in high-risk activity multiplied by the frequency of high-risk behaviour and the hazardousness of each high-risk episode. As an added concern, there is a risk that zealous efforts to reduce or eliminate drug injecting or sexual behaviour in prisons may increase the risk of a prison riot with the possibility of injury, loss of life, damage, and immense suffering.

The results of this study provide little direction for resolving these dilemmas but do provide some indications where far greater activity could be rewarded. Although it may have been acceptable in 1986 to 1988 that 45 per cent of respondents had not received AIDS information in prison, this should be unacceptable in 1990. It is also unacceptable that many of those who had wanted to receive treatment for drug-related problems had not received such treatment while in prison.

The provision of condoms in prisons would seem to offer several advantages. Firstly, it offers a real possibility of decreasing HIV transmission in prisons. Secondly, it offers the possibility that with a less intolerant attitude towards consensual anal intercourse in prisons, a safer outlet for libido might be established and the apparently high incidence of anal rape decreased.

From a public health viewpoint, it is difficult to understand how bleach could not be readily provided in prisons when data indicates the prevalence of drug injecting and needle-sharing is substantial. We hope that data obtained from prisoners being released from New South Wales gaols this year would be different, indicating a lower risk to public health. Finally, the most disturbing results of this study suggest that a considerable proportion of IDUs in prison will still obtain illicit drugs and injection equipment in prison. Some will not be deterred by risks of HIV infection and continue to inject drugs in prison with little concern for the welfare of others or themselves. Far greater thought must be given to the range of possible strategies to reduce HIV transmission in prisons including the ready availability of bleach and condoms and the possibility that a strict one-for-one needle and syringe exchange system could be allowed to operate even if only on a carefully studied pilot trial basis.

The results of this study are preliminary. More work is needed to fill in important details. However, the data in this study indicate that drugs were available in New South Wales prisons in the late 1980s. They were being injected. Substantial sharing occurred with limited opportunity for obtaining sterile equipment or decontaminating used equipment even

though almost nine in every ten respondents showed an encouraging readiness to try to protect themselves and others. This study suggests that many prisoners are risking more than a sentence when they go to prison with implications following their release for their friends and lovers. In time, this will have implications for the broader community as well.