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Injection drug use, HIV/AIDS and incarceration: evidence from the Vancouver Injection Drug Users Study

The reliance on law enforcement as the dominant drug policy approach has resulted in record incarceration rates in many countries. Human rights advocates and public health researchers have argued that the risks of HIV transmission resulting from injection drug use within Canadian prisons must be addressed. Despite a decade of advocacy and some progress made, this remains an urgent public health crisis.¹ In light of these concerns, researchers working with the Vancouver Injection Drug Users Study (VIDUS) have undertaken a series of studies specific to injection drug use and HIV/AIDS in prisons. This article summarizes the body of evidence generated via VIDUS, discusses briefly the related human rights implications, and concludes with recommendations for action.

Throughout North America, policy-makers have primarily responded to the HIV epidemic among injection drug users by allocating resources to criminal justice interventions. In Canada, an Auditor General's report in 2001 estimated that of the \$454 million spent annually on illicit drug control efforts, \$426 million (93.8 percent) was devoted to police enforcement and incarceration.²

While it is known that inmates typically inject illicit drugs less frequently than drug users in the community,^{3,4} studies have demonstrated that injections occurring in prisons are often carried out in a high-risk

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fashion.^{5,6} Risk behaviours, such as syringe sharing, are known to occur,^{7,8,9,10,11,12} and have resulted in outbreaks of hepatitis C (HCV) and HIV infection among injecting inmates in Scotland, Australia, Lithuania and Russia.^{13,14,15,16,17,18}

The Vancouver Injection Drug Users Study (VIDUS)

Vancouver, one of Canada's largest urban centres, gained international attention following the emergence of an HIV epidemic documented among local injection drug users in the mid-1990s.^{19,20} VIDUS was initiated in response to this epidemic. VIDUS is an ongoing open prospective cohort that began in 1996 and that has enrolled over 1500 injection drug users.²¹ At baseline and semi-annually, participants provide blood samples for diagnostic testing and complete an interviewer-administered questionnaire.

Data is gathered on demographics, drug use, incarceration, health, sexual activity and risk behaviours. The majority of VIDUS research participants have been to prison. At the time of their baseline interview, over 1000 participants reported being incarcerated since they first began injecting drugs,²² representing approximately 76 percent of the cohort. Close to one-third of this group, 351 people, reported that they had injected drugs while incarcerated.

Incarceration and HIV infection

Some of the first evidence demonstrating an association between incarceration and HIV infection among VIDUS participants was revealed in a paper by Tyndall et al. published in 2003.²³ Although this study focused on the strong dose-dependent association between cocaine injection and HIV infection, incarceration was found to be associated with HIV infection in an analysis that considered the effect of other known risk factors for HIV infection. Specifically, the study found that individuals who had recently been incarcerated were 2.7 times more likely to become HIV-positive than those who had not been to jail or prison.²⁴ However, this association was not fully evaluated in the study.

The association between HIV infection and incarceration noted in the Tyndall et al. study did raise significant concern. In a subsequent editorial, Holly Hagan conducted an external evaluation of attributable risks, and concluded that 21 percent of the HIV infections among injection drug users in Vancouver were likely acquired in prison.²⁵ While these findings were of great concern, they do not conclusively connect rising rates of blood-borne diseases among inmates to HIV risk behaviour and subsequent blood-borne disease transmission occurring within prisons, because the selection of infected

individuals out of the community may be an alternate explanation.

Incarceration and high risk syringe sharing

In order to further explore the association between HIV infection and incarceration, Wood et al.,²⁶ using data obtained via VIDUS, conducted additional longitudinal analyses examining syringe sharing in prisons. Specifically, the authors performed analyses of syringe lending by HIV-infected injection drug users and syringe borrowing by HIV-negative users.

The study provided evidence to support the conclusion that HIV may be spreading among injection drug users within the prison setting.

Among 318 HIV-positive VIDUS participants, having been incarcerated in the six months prior to each interview remained associated with syringe lending during this period.²⁷ Similarly, among 1157 HIV-negative VIDUS participants, having been incarcerated in the six months prior to each interview remained associated with reporting syringe borrowing during this period.²⁸

This study suggested that the earlier finding of Tyndall et al. cannot be easily explained by selection biases. Further, it provided evidence to support the conclusion that HIV may be spreading among injection drug users within the prison setting, since it was found that behaviours that can directly contribute to HIV infection were strongly associated with reporting incarceration during follow-up.

Experiences injecting drugs in prisons: qualitative evidence

A qualitative study conducted by Small et al., through VIDUS, provides further indication that syringe sharing within prisons is a significant public health concern.²⁹ The HIV risks experienced by former inmates were explored through 26 in-depth interviews conducted with VIDUS participants recently released from provincial and federal institutions. This work provides an understanding of the social context of the correctional environment and the injection-related HIV risks that exist.

This study confirmed accounts from as early as 1994 that injection drug use in prisons routinely involves syringe sharing.^{30,31} It also confirmed the previous reports that injecting within the prison environment is characterized by a pattern of syringe sharing among large networks composed of numerous individuals:

I've known syringes that have gone through 30-40 people's hands. I swear to God. They have been used by that many different people.³²

Let's think about the diseases that go around. I mean, I'm watching 15 guys fix off of one syringe. How do you know out of 15 guys you're shar-

ing with, are you saying that none of them have it [HIV]?³³

Further, the comments by individuals involved in this study suggested that policies within prisons contribute to the risks related to injecting in prison, since inmates are denied access to sterile syringes by correctional policies, and face disciplinary action if found in possession of needles:

It's a nightmare. Equipment like syringes are in very, very short supply. You see syringes that have literally been around for months and months, if not years.... I am sure that many, many cases of HIV were transmitted because of those practices ... sharing. Everybody shares.³⁴

This study also found that that the scarcity of syringes may also prompt HIV-positive inmates to hide their HIV status because such disclosure could greatly limit their access to the small number of syringes circulating within prisons:

I picked it up in the institute. Guys don't say they're positive on the inside because they don't want the guys to say, "well you're not using the fuckin' rig because you're HIV positive." I've run into so many guys [outside] that have sat there and said, "well I've been positive for 6 years." And I look at them and say, "well you told me you were fuckin' [HIV] negative in '98!" But... if everybody knows the guys is positive, I mean... they're not gonna let him use the syringe, right?³⁵

This study indicated that policies that limit access to syringes in prison serve to drive syringe sharing among inmates and increase risks for HIV and HCV infection. It should also be noted that study participants asserted

that the distribution of bleach is an incomplete solution because injecting is a prohibited behaviour within prisons and, therefore, lengthy decontamination procedures involving bleach are generally not undertaken by inmates in this environment. Other studies and evaluations of bleach programs in prisons reached the same conclusion.^{36,37}

Policies that limit access to syringes in prison serve to drive syringe sharing among inmates and increase risks for HIV and HCV infection.

Incarceration and the discontinuation of HAART among injection drug users

VIDUS researchers have also sought to evaluate the provision of highly active antiretroviral therapy (HAART) in prisons. It is well known that HAART has produced reductions in both AIDS-related morbidity and mortality among HIV-positive individuals who receive treatment.^{38,39} However, the optimism generated by this new approach has been tempered by concerns about inequitable access to HAART and low levels of adherence to these complex regimens.^{40,41}

Among those known to have low rates of access and adherence to HAART, and consequently poor HIV/AIDS-related health outcomes, are injection drug users.⁴² HIV-positive injection drug users have been found

to have lower uptake of antiretroviral therapy compared to other HIV-positive persons in Canada, the United States and Europe,^{43, 44, 45, 46, 47} and consequently higher rates of AIDS-related morbidity and mortality.⁴⁸

Also of concern are findings indicating that as many as 50 percent of injection drug users who initiate HAART discontinue therapy against medical advice.^{49, 50} These rates of discontinuation indicate potentially adverse outcomes for individual and public health due to the heightened risk for loss of virologic control and subsequent viral rebound,⁵¹ as well as the development of drug resistance and the transmission of resistant virus to others.^{52, 53}

In light of the ongoing problems associated with HAART discontinuation, Kerr et al. examined factors associated with discontinuation of HAART among 160 HIV-positive VIDUS participants.⁵⁴ In this analysis, incarceration was the strongest predictor of HAART discontinuation after consideration of all other competing factors, including intensity of drug use.⁵⁵

Among individuals who were taking HIV medications, those who had been incarcerated were 4.8 times more likely to discontinue HAART than those who had not been to prison. Although this study was limited by the fact that authors were unable to determine whether HAART had been discontinued prior to, during or following incarceration, it is important to note that 44 percent of participants who had discontinued HAART reported being in jail as the primary reason for discontinuing HAART.

Legal and human rights implications

Numerous international instruments address the rights of prisoners in the

context of the HIV epidemic, including the right to health.^{56, 57} Some of these instruments are laws, while others are international rules, standards or guidelines. It is important to distinguish between these types of instruments, since each has different implications for governments. International laws establish legal obligations binding on states that are signatories to an instrument, or on members of the body that enacted the instrument. Rules, standards and guidelines do not have the force of law and thus are not binding on governments.

Few international laws deal specifically or explicitly with the conditions of imprisonment, although both the *Universal Declaration of Human Rights* (1948)⁵⁸ and the *European Convention on Human Rights* (1950)⁵⁹ prohibit cruel, inhuman or degrading treatment or punishment. As well, the *International Covenant on Civil and Political Rights* (1966)⁶⁰ sets forth the right of persons deprived of their liberty to be treated with dignity and with respect for the inherent dignity of the human person (article 10[1]). Commenting on the effect of the *Covenant*, the Human Rights Committee (1989) stated that

the humane treatment and respect for the dignity of all persons deprived of their liberty is a basic standard of universal application which cannot depend entirely on material resources (Article 7)

and that

ultimate responsibility for the observance of this principle rests with the state as regards all institutions where persons are held against their will (prisons, hospitals, detention camps, correctional institutions).⁶¹

Although not legally binding on states, rules, guidelines and standards are nonetheless important because they express the moral and philosophical standards that should guide national administrators and courts, and often do so with a great deal of specificity. The international community has generally accepted that a set of minimum standards should apply to imprisonment, according to which prisoners retain all civil rights that are not taken away expressly or by necessary implication as a result of the loss of liberty flowing from imprisonment.

The right to health imposes a duty upon states to promote and protect the health of individuals and the community.

Access to HIV prevention, treatment and harm reduction programs implicates the right to health, given the evidence of their effectiveness at preventing severe harms associated with drug dependency, and injection drug use in particular. Numerous declarations and covenants provide that all people have a right to the highest attainable level of physical and mental health.⁶²

The right to health imposes a duty upon states to promote and protect the health of individuals and the community, including a duty to ensure quality health care. The right to health in international law should be understood in the context of the broad concept of health set forth in

the World Health Organization (WHO) constitution, which defines health as a “state of complete physical, mental and social well-being and not merely the absence of disease or infirmity.”⁶³

Like all other persons, prisoners are entitled to enjoy the highest attainable standard of health, as guaranteed under international law. Key international instruments reveal a general consensus that the standard of health care provided to prisoners must be comparable to that available in the general community. In the context of HIV/AIDS, comparable health services would include providing prisoners the means to protect themselves from exposure to HIV and other forms of drug-related harm.

Recommendations on HIV/AIDS in prisons developed by the international community and national governments consistently support “equivalence of treatment” of prisoners,^{64, 65} stress the importance of prevention of transmission of HIV in prisons, and suggest that prevention measures – including sterile syringes – be provided to prisoners. For example, Principle 9 of the *Basic Principles for the Treatment of Prisoners* states that “Prisoners shall have access to the health services available in the country without discrimination on the grounds of their legal situation.”⁶⁶ As well, the 1993 *WHO Guidelines on HIV Infection and AIDS in Prisons* state that “[i]n countries where clean syringes and needles are made available to injecting drug users in the community, consideration should be given to providing clean injecting equipment during detention and on release.”⁶⁷

Discussion

A growing body of research derived from VIDUS points to risks associ-

ated with injection drug use within prisons in British Columbia. In particular, these studies suggest that incarceration is associated with an increased likelihood of becoming HIV-positive, high-risk syringe sharing, and sub-optimal treatment of HIV-infection.

This body of evidence reinforces conclusions from elsewhere that there is a pressing need to implement and evaluate additional HIV prevention measures, such as prison-based needle exchange, in Canadian prisons, and points to the need for additional research and programs that seek to ensure optimal treatment of HIV among incarcerated injection drug users. Obviously, with respect to the latter, community diversion programs for non-violent drug offenders, rather than prison sentences, must be urgently evaluated for both HIV-negative and -positive users.

In recent years, public health researchers have increasingly recognized the role of environmental factors in influencing HIV risks among injection drug users.^{68, 69} The risks experienced by users are influenced by many factors including: the legality and availability of sterile injection equipment, law enforcement practices, drug market dynamics, the type of drugs consumed, specific injection practices employed and the availability of adequate addiction treatment.^{70, 71, 72}

The risk environment that exists within correctional institutions is far different than that experienced in the wider community, because it is characterized by policies that completely restrict access to sterile syringes and serve to promote high syringe sharing within large social networks. Recognizing the impact of law and policy upon the health of inmates highlights the potential of structural

interventions, such as policy reform, to modify these environmental conditions.⁷³ For example, the introduction of prison-based needle exchange would impact the risk environment within prisons by increasing the availability of sterile injection equipment and improving the ability of injection drug users to protect themselves from HIV.

This approach is consistent with the best available evidence, as well as international and national laws and guidelines. Numerous expert opinions have recommended that prison-based needle exchange be implemented in Canada, and evidence pertaining to syringe distribution programs among inmates has demonstrated positive impacts of these programs.^{74, 75, 76}

Evaluations of prison-based needle exchanges show a decline in syringe sharing, as well as no new cases of HIV or HCV among individuals participating in the programs.

Evaluations of prison-based needle exchanges have shown a decline in syringe sharing, as well as an absence of new cases of HIV or HCV among individuals participating in the programs. Staff attitudes towards prison-based needle exchange were reported to be positive, and needles were not used as weapons against guards or fellow inmates as originally feared.^{77, 78}

The negative impact of incarceration on HIV treatment for injection drug users has also been documented in other Canadian studies.⁷⁹ Although further study is needed to better understand the association between incarceration and discontinuation of HIV treatment, existing studies nevertheless indicate that renewed efforts are needed to enhance the quality of care for HIV-positive injection drug users who become incarcerated.

A rights-based analysis indicates that governments have an obligation to honour the principle of equivalence, which states that prisoners are entitled to same level of health care that is provided in the community. Further, prison administrators are obligated to honour international human rights laws and guidelines which require that the health of prisoners be fully protected. Access to HIV prevention, treatment and harm reduction programs implicates the right to health, given the evidence of their effectiveness in promoting health and preventing severe harms associated with injection drug use. The failure to provide these measures, as well as the practice of punishing those addicted to drugs, perpetuates the discrimination and stigmatization of a group of highly vulnerable members of society.

Conclusion

A growing body of research derived from VIDUS reveals the ongoing and unaddressed problems related to injection drug use and HIV/AIDS in Canadian prisons. These studies have demonstrated a strong connection between incarceration, syringe sharing, HIV infection and sub-optimal treatment of HIV/AIDS. This body of evidence reinforces previous calls for renewed efforts to modify

the conditions existing in prison environments in order to address the problems of injection drug use and HIV/AIDS among incarcerated injection drug users. In addition, community diversion programs for non-violent drug offenders, rather than ineffective prison sentences, must be urgently evaluated for both HIV-negative and positive users.

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