



## *High-risk injecting drug use after release from prison*

*Associate Professor Stuart Kinner\**

**POLICY BRIEF N° 6: December , 2012**

### **Key messages**

- More than half of prisoners in Australia have a history of injecting drug use (IDU).
  - Although IDU is less common in prison, many of those with a history of IDU rapidly return to injecting after release from custody. The net effect of incarceration on IDU is marginal at best.
  - IDU in ex-prisoners is associated with a markedly increased risk of death, an increased risk of recidivism (reoffending), and a range of poor health outcomes that impact on public health.
  - Opiate substitution therapy (OST) initiated in prison and continued post-release is an effective way of reducing drug use, drug overdose, the spread of infection and recidivism; however retention in treatment is essential to achieving these outcomes.
  - With appropriate training the provision of naloxone, an overdose reversal drug, to the peers and family of a person who injects drugs at the point of release is likely to prevent overdose deaths.
- Prevention strategies including educating soon-to-be-released prisoners about the risks of overdose post-release are appropriate as part of a broader harm minimisation strategy.
  - Transitional interventions that commence in prison and continue post-release, that are responsive to the individual needs of the prisoner, and include a focus on facilitating engagement with appropriate community services, can reduce drug use and improve health outcomes in ex-prisoners. This will also benefit public health and improve public amenity.
  - To date, no transitional interventions for prisoners in Australia have been rigorously evaluated and remarkably little is known about the behaviours and health outcomes of those with a history of IDU after release from prison. In order to inform evidence-based (effective) policies, further research is urgently required

\* Stuart Kinner is a Principal Research Fellow in Justice Health within the Centre for Health Policy, Programs and Economics at the School of Population Health, University of Melbourne.

## ***What is the issue?***

Many people who inject drugs (PWID) engage in low-level criminal activity to support their drug use and many experience incarceration at least once in their lifetime. Among PWID, criminal activity is a marker for poor health and treatment need: those who engage in crime are typically younger and more disadvantaged, exhibit riskier patterns of drug use, have poorer mental health and experience more drug-related harm including blood-borne viral infection.<sup>1</sup>

Fifty-five percent of prison entrants in Australia have a history of IDU and 34% report injecting in the month before incarceration.<sup>2</sup> Despite intensive efforts to restrict the flow of drugs into prisons, around half of PWID continue to inject drugs in custody.<sup>3</sup> In the absence of clean syringes and other evidence-based infection-control measures, IDU in prison is inherently high-risk and instances of people acquiring hepatitis C in prison have been documented in multiple Australian jurisdictions.<sup>4, 5</sup> Given the high turnover of prisoners, these preventable infections pose a risk to public as well as prisoner health.

In Australia, little is known about what happens to prisoners once they return to the community, and it is thus difficult to formulate evidence-based policies to respond to IDU and related harm in ex-prisoners. What is clear is that a disproportionate number of ex-prisoners die soon after release from custody, often due to drug overdose,<sup>6</sup> and that the majority return to custody at some time in their life, most within two years. IDU is a key risk factor for both fatal overdose<sup>7</sup> and recidivism<sup>8</sup> in this population.

For many recently released prisoners, life on the outside is chaotic with poverty, homelessness and the reemergence of physical and mental health problems hampering efforts to 'reintegrate'.<sup>9</sup> Among those with a history of IDU, release from prison also precipitates a period of acute risk behaviour associated with the spread of infectious disease,<sup>10</sup> reduced adherence to treatment,<sup>11</sup> and elevated risk of drug-related harms including nonfatal drug overdose.<sup>12</sup>

## ***What steps can be taken to address the issue?***

There is good evidence that opiate substitution treatment (OST) in prison reduces recidivism, mortality and hepatitis C incidence post-release.<sup>13</sup> Importantly, the effect of in-prison OST appears to be largely mediated by post-release OST – in other words, those receiving OST in prison are more likely to receive OST post-release, and it is primarily this link to post-release OST rather than in-prison OST per se that produces the observed benefits.<sup>13</sup> Consistent with this, a recent US study found that compared with in-prison counselling only, counselling plus OST initiated either in prison or post-release was associated with reduced drug use and increased retention in community drug treatment.<sup>14</sup> Provision of OST for opiate-dependent prisoners both in custody and post-release is therefore likely to have measurable public health and criminal justice benefits, however these benefits depend crucially on retention in treatment.<sup>15</sup>

Interventions that either prevent overdoses from occurring or reduce the harm associated with (nonfatal) overdose are central to reducing drug-related harm in this population. Among ex-prisoners, those at greatest risk of fatal overdose have a history of drug use and nonfatal overdose before prison, evidence of mental illness in prison and poor social support networks post-release. Those who have been imprisoned and released on multiple occasions are at even greater risk. Perhaps reflecting the protective effects of opiate tolerance, one UK study found that drug use in prison was associated with a lower risk of fatal overdose post-release.<sup>16</sup> Fewer studies have examined nonfatal overdose in ex-prisoners, however one Canadian study found that polydrug use, binge drug use, public injecting and past nonfatal overdose were all independent risk factors for nonfatal overdose, while post-release OST was protective against nonfatal overdose.<sup>12</sup>

The World Health Organisation (WHO) has proposed a number of strategies to prevent drug-related death in recently released prisoners including OST both in-custody and post-release, and education for prisoners, prison staff and support workers on the prevention of drug use and overdose post-release.<sup>17</sup> Although there is little evidence that education alone reduces drug use or related harm in this setting, education is appropriate as part of a broader harm minimisation strategy.

WHO also endorses training the families and peers of at-risk prisoners in first aid including the administration of naloxone, an overdose reversal drug used routinely by paramedics. There is growing evidence that with appropriate training, naloxone can be safely administered by peers and is effective in reversing overdoses, almost certainly saving lives.<sup>18</sup> However, naloxone is only effective if the overdose victim used opioids, and if the medication is administered by a bystander early and with at least basic knowledge of its use.

In addition to targeted strategies, there is emerging evidence from the US that broad-based 're-entry' or transitional interventions can reduce adverse health outcomes including HIV risk behaviours and risky substance use, and improve access to appropriate health care. Effective programs are responsive to the individual's needs, commence in custody and continue post-release, and often include a focus on facilitating access to appropriate community services. Programs delivered in a 'one size fits all' manner, and those without a post-release component, may actually do more harm than good. Although correctional authorities in all Australian jurisdictions have adopted a 'throughcare' policy framework that includes some form of transitional support,<sup>19</sup> none of these programs has been subjected to rigorous evaluation and it is thus impossible to identify demonstrably effective Australian programs. However, preliminary findings from a large randomised controlled trial in Queensland suggest that, like the US findings, the same principles are applicable in Australia.<sup>20</sup>

## References

1. Kinner SA, George J, Campbell G, Degenhardt L. Crime, drugs and distress: Patterns of drug use and harm among criminally involved injecting drug users in Australia. *Australian and New Zealand Journal of Public Health*. 2009;33(3):223-7.
2. AIHW. The health of Australia's prisoners 2010. Canberra: Australian Institute of Health and Welfare, 2011 Contract No.: Cat. no. PHE 149.
3. Kinner SA, Jenkinson R, Gouillou M, Milloy M-J. High-risk drug-use practices among a large sample of Australian prisoners. *Drug Alcohol Depend*. 2012.
4. Dolan K, Teutsch S, Scheuer N, Levy M, Rawlinson W, Kaldor J, et al. Incidence and risk for acute hepatitis C infection during imprisonment in Australia. *Eur J Epidemiol*. 2010.
5. Miller ER, Bi P, Ryan P. Hepatitis C virus infection in South Australian prisoners: seroprevalence, seroconversion, and risk factors. *Int J Infect Dis*. 2008;13(2):201-8.
6. Kinner SA, Preen D, Kariminia A, Butler T, Andrews J, Stoové M, et al. Counting the cost: Estimating of the number of deaths among recently released prisoners in Australia. *Medical Journal of Australia*. 2011;195(2):64-8.
7. Darke S, Hall W. Heroin overdose: Research and evidence-based intervention. *Journal of Urban Health: Bulletin of the New York Academy of Medicine*. 2003;80(2):189-200.
8. Anders H, Mats B. Risk factors for criminal recidivism -- a prospective follow-up study in prisoners with substance abuse. *BMC Psychiatry*. 2012;12:111.
9. Baldry E, McConnell D, Maplestone P, Peeters M. Ex-prisoners and accommodation: What bearing do different forms of housing have on social reintegration? Final report. Melbourne: Australian Housing and Urban Research Institute, 2003 August 2003. Report No.
10. Milloy M-JS, Buxton J, Wood E, Li K, Montaner JSG, Kerr T. Elevated HIV risk behaviour among recently incarcerated injection drug users in a Canadian setting: A longitudinal analysis. *BMC Public Health*. 2009;9(1):156.

## References

11. Milloy MJ, Kerr T, Buxton J, Rhodes T, Guillemi S, Hogg R, et al. Dose-response Effect of Incarceration Events on Nonadherence to HIV Antiretroviral Therapy Among Injection Drug Users. *Journal of Infectious Diseases*. 2011;203(9):1215-21.
12. Kinner SA, Milloy M-J, Wood E, Qi J, Zhang R, Kerr T. Incidence and risk factors for non-fatal overdose among a cohort of recently incarcerated illicit drug users. *Addict Behav*. 2012;37(6):691-6.
13. Larney S, Toson B, Burns L, Dolan K. Effect of prison-based opioid substitution treatment and post-release retention in treatment on risk of re-incarceration. *Addiction*. 2012;107(2):372-80.
14. Kinlock TW, Gordon MS, Schwartz RP, Fitzgerald TT, O'Grady KE. A randomized clinical trial of methadone maintenance for prisoners: Results at 12 months postrelease. *Journal of Substance Abuse Treatment*. 2009;37:277-85.
15. Dolan KA, Shearer J, White B, Zhou J, Kaldor J, Wodak AD. Four-year follow-up of imprisoned male heroin users and methadone treatment: mortality, re-incarceration and hepatitis C infection. *Addiction*. 2005;100(6):820-8.
16. Singleton N, Pendry E, Taylor C, Farrell M, Marsden J. Drug-related mortality among newly released offenders. Findings. London: UK Home Office, 2003 187.
17. WHO. Prevention of acute drug-related mortality in prison populations during the immediate post-release period. Copenhagen: World Health Organisation; 2010.
18. Lenton SR, Dietze PM, Degenhardt L, Darke S, Butler TG. Naloxone for administration by peers in cases of heroin overdose. *Medical Journal of Australia*. 2009;191(8):469.
19. Borzycki M. Interventions for prisoners returning to the community. Canberra: Attorney General's Department, 2005 Feb. Report No.
20. Kinner SA, Lennox N, Alati R, Boyle F, Quinn B, Longo M. Low-intensity service brokerage increases contact with health care in recently released prisoners: A randomised controlled trial. in preparation.