

The potential benefits of a needle and syringe program in Australian prisons

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Unsafe injecting practices are associated with a substantial risk of bloodborne virus infections, most notably hepatitis C, and of injection-related injuries and infections. Needle and syringe programs are cost-effective interventions that reduce bloodborne virus spread in community settings.¹⁻⁴ Needle and syringe programs are also likely to reduce the risk of injection-related injuries and infections, including phlebitis, cellulitis, osteomyelitis, and endocarditis. The World Health Organization recommends the distribution of 200 needles and syringes per person who injects drugs per year as a harm reduction strategy.^{5,6}

Australia has a proud history of providing people who inject drugs with safe injecting equipment; it is one of the few countries with high needle and syringe coverage in the community. However, this coverage excludes prisons, although the proportion of people who inject drugs is larger and the prevalence of needle sharing higher than in the general community;⁷ 13% of people discharged from prison report sharing injecting equipment in prison, and 22% of young people leaving prison (18–24 years) report receiving tattoos or body piercing while in prison.⁸ Although Australia has committed to the United Nations Standard Minimum Rules for the Treatment of Prisoners, which require health care in prisons equivalent to that in the community,⁹ there have been no regulated prison needle and syringe programs in Australia. Prison-based needle and syringe programs currently operate in eleven countries.¹⁰ Expert bodies, including the Australian Medical Association and the Australasian Society for Infectious Diseases, as well as research and community organisations, support undertaking a prison needle and syringe program trial.¹¹ The available evidence indicates that it would be feasible and effective, leading to reduced needle and syringe sharing and re-use without an increase in occupational risk for staff members.¹² No cost-effectiveness analyses of prison needle and syringe programs in Australia have previously been reported.

In this issue of the *MJA*, Houdroge and colleagues report using a stochastic compartmental model for a cost-benefit analysis of a prison needle and syringe program in Australia.¹³ They found that introducing and expanding a program that covered 50% of people who inject drugs in Australian prisons by 2030 would significantly reduce the incidence of new hepatitis C virus infections and hospitalisations with injection-related bacterial and fungal infections; further, for each dollar spent on the program, about \$2.60 in health care costs were saved. The strength of the study lies in the model design, constructed by an investigator group with expertise in both economic modelling and public health interventions in Australian correctional facilities. The limitations are those inherent to modelling exercises: although the authors tested the assumptions of their model in detailed sensitivity analyses, their findings may not be generalisable to all prisons, which vary by security level and the proportion of people who inject drugs. Overall, the study is

an important contribution to the evidence base regarding the potential of prison needle and syringe programs in Australia.

Prison needle and syringe programs will assist the elimination of hepatitis C in Australia. The prevalence and incidence of hepatitis C in prisons is higher than in the general community. Following the introduction of highly effective, well tolerated direct-acting antiviral (DAA) treatment for hepatitis C in 2016, Australia endorsed the goal of eliminating hepatitis C as a public health threat by 2030,¹⁴ in line with WHO targets. People in custodial facilities are a priority population for hepatitis C elimination; 3414 of 8077 people (42%) who received DAA treatment for hepatitis C in Australia during 2023 received it in prison.¹⁵ Effective prison programs in most states and territories are focused on screening, diagnosis, and treatment, including treatment as prevention by interrupting forward transmission,¹⁶ but re-infection rates remain unacceptably high. Recent experience at a Queensland correctional facility highlighted the limitations of a hepatitis C treatment program not supported by effective harm reduction. In 2018, rapid expansion of DAA therapy for male prisoners living with hepatitis C achieved micro-elimination,¹⁷ but 250 new and repeat hepatitis virus infections were notified over the following sixteen months.¹⁸ Injecting drug use was identified as the leading transmission factor. Better harm reduction strategies in prisons are clearly needed to support elimination efforts.

Needle and syringe programs are evidence-based best practice interventions that reduce the harm associated with needle sharing, including bloodborne virus transmission and injection-related injuries and infections. Such programs have been widely implemented in the community in Australia, but not in prisons. As Australia works to eliminate hepatitis C, it is time to re-think the role of prison needle and syringe programs. An Australian prison-based needle and syringe program would require careful coordination and planning, and the engagement of organisations concerned with hepatitis elimination and people who inject drugs, prison officers, clinicians, academics, policymakers, and the community. Implementation should be accompanied by rigorous process and outcome evaluations to support iterative program expansion. The successful development and implementation of a prison-based needle and syringe program in Australia would be an important advance for harm reduction in correctional facilities. We strongly support a trial of such a program on both medical and human rights grounds.

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