

HIV policies in Australian prisons: a structured review assessing compliance with international guidelines

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Summary

Globally, people living with the Human Immunodeficiency Virus (HIV) are over-represented in incarcerated populations. The current study aimed to provide a national (Australian) snapshot of current HIV prison policies against the United Nations' (UN) 15 key HIV interventions for prisons. Publicly available policies, reports, and data were obtained, and interviews were conducted with prison health staff in five of eight Australian jurisdictions. We rated whether policies were compliant, partially compliant, or not compliant to the UN interventions and assigned an overall grade (A to E, where A = most compliant and E = least compliant) for each jurisdiction. Three jurisdictions received a B grade, three received a C grade, and two were not assessed due to insufficient data. In all jurisdictions HIV policies fell short of full compliance to most UN interventions. Prison-based needle and syringe programs and initiatives beyond education to reduce HIV transmission from body modification procedures (eg, tattooing) were absent in all jurisdictions. No condom programme existed in one jurisdiction and access issues were reported in others. Opioid substitution therapy, and peer-education access varied across and within most jurisdictions. Findings indicate that more action is required to meet the UN recommended interventions for HIV prevention in prisons.

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Introduction

Globally, 4.6% of incarcerated people are estimated to be living with HIV compared to 0.7% of the general population.¹ Substantial regional variations exist in HIV prevalence in both community and incarcerated populations, with East and Southern Africa having the highest burden and Middle East and North Africa the lowest. Proportionally, more incarcerated women in the Asia Pacific region are reported to be living with HIV compared with incarcerated men.¹ The 'true' HIV prevalence in incarcerated populations remains unknown due to testing coverage issues and stigma.

While prison systems in each of Australia's eight jurisdictions are similar, they legally and administratively remain separate. Prison health care services across jurisdictions are provided under four broadly distinct governance arrangements: a 'between public-public' model where health services are provided by a government department of health agency inside prisons run by a department of justice; a 'within public-public' model where both custodial and health services are provided by a department of justice; a 'private-private' model where a private entity provides

both custodial and health services under a contract with a department of justice; and a 'public-private' model where a private entity or entities provide health services under a contract with a government department of justice which also runs the prison.^{2,3} Overall, private entities that provide health services have their own health service policies and procedures, however, they are required to align to government custodial and health policies within their respective jurisdiction. However, the degree to which alignment occurs remains unclear under existing performance monitoring arrangements.^{2,3}

Approximately 43 000 people were incarcerated in Australian prisons at the time of this study.⁴ Aboriginal and Torres Strait Islander peoples (hereon referred to as 'Indigenous'), are significantly over-represented, accounting for in 2021–22, 32% of incarcerated persons nationally,⁵ but only 3.2% of the general population.⁶ Imprisonment rates of Indigenous people vary across Australian jurisdictions from 731 per 100 000 (vs. 112 per 100 000 non-Indigenous) in Tasmania to 3569 per 100 000 (vs. 181 per 100 000 non-Indigenous) in Western Australia.⁵ Previous studies suggest that the Australian incarcerated population HIV prevalence rate could be between 0.0% and 0.6% (Table 1)^{7–11} which is low compared to global estimates but may be up to four times that of the general community (0.14%).^{1,12} Since

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Study author	Data collection year	Method	Jurisdiction	HIV prevalence	Strengths and limitations
Watkins et al., 2009 ⁷	2005, 2006, 2007	Electronic medical file audit. Sampled 8% of adults admitted to prison from 1.01.2005 and discharged between 01.01.2007 and 31.12.2007.	Western Australia	0.6%	A proportion of electronic files were excluded as they were incomplete. Could introduce selection bias and under-report issues of follow up care.
National Centre in HIV Epidemiology and Clinical Research, 2010 ⁸	2005, 2006, 2007, 2008, 2009 ^a	Notification data retrieved from each state and territory public health authority.	Australia	0.2% 2005 0.2% 2006 0.3% 2007 0.3% 2008 0.5% 2009	Dataset likely to be representative of people entering prison with HIV.
Mina, 2011 ⁹	2008	Data retrieved from New South Wales Inmate Health Survey, 2008. Stratified sample of 30 randomly selected.	New South Wales	0.1%	High response rate (85.4%). Women and Indigenous Australians were over-represented.
Reekie, 2014 ¹⁰	2004, 2007, 2010	Obtained data from the NPEBBVS ^b (questionnaire and biological markers).	New South Wales, Western Australia, Queensland, Tasmania	0.4% Overall 0.4% PWID 0.3% non-PWID	Age-adjusted. Statistical analysis of only the states which participated in 2004, 2007, and 2010 surveys.
Butler and Simpson, 2017 ¹¹	2004, 2007, 2010, 2013, 2016	NPEBBVS ^b survey of prison entrants. Data collected included biological markers.	Australia	<1.0% 2004 <1.0% 2007 0.0% 2010 0.0% 2013 0.0% 2016	Surveyed prison entrants only. No follow up serological data obtained.

^aReporting of notification data was discontinued after 2009. ^bNPEBBVS = The National Prison Entrants Bloodborne Virus Survey.

Table 1: HIV prevalence among people in Australian prisons reported in studies published between 2000 and 2019.

2009, HIV diagnosis rates have typically been higher in the Indigenous general population than in the Australian-born non-Indigenous general population.¹²

HIV transmission risk factors in incarcerated populations include sharing amateur tattoo equipment and hair clippers, condomless sex, violence that can cause bleeding, penile implantation practice, and sharing injecting drug use equipment.^{12,13} Up to 55% of people in Australian prisons have a history of injecting drugs,^{13,14} with up to two-thirds of people who inject drugs (PWID) reporting doing so whilst in prison.^{13,15} The Sexual Health and Attitudes of Australian Prisoners (SHAAP) survey found that 7.1% of a sample of 2018 people in New South Wales and Queensland prisons reported sexual contact with other people in prison, of which most (79.2%) did so for pleasure, and are more likely to be diagnosed with a sexually transmissible infection (STI) than the general population.¹⁶

Although people in custodial settings are identified as a 'priority population' in Australian government HIV Strategies,¹⁷⁻¹⁹ national surveillance reporting of HIV in prisons ceased in 2009, and there is no national oversight or standardisation of HIV screening, treatment, and prevention programmes. In the absence of state-initiated surveillance, the triennial National Prison Entrants' Bloodborne Virus Survey (NPEBBVS) has provided key national collaboration relating to hepatitis C virus (HCV), hepatitis B virus (HBV), and HIV surveillance in prisons.¹¹ The last NPEBBVS was conducted in 2016 and has since evolved into the annual AusHep survey, however, its implementation is pending.²⁰

HIV interventions for prisons

To support governments to install effective HIV/AIDS responses in prisons, in 2013 the United Nations' Office of Drugs and Crime (UNODC), the World Health Organization (WHO), the International Labour Organization, and the Joint United Nations Programme on HIV and AIDS (UNAIDS) (hereon 'UN') developed a 'comprehensive package' comprising 15 HIV interventions.²¹ Details for some of these interventions were updated in 2020 to reflect international developments in standard minimum rules for prisons and new HIV guidelines.²² While the UN states that each intervention alone is useful in addressing HIV, implementing all 15 interventions will have the most impact.²²

A paucity of peer-reviewed literature exists on policy uptake by governments regarding UN HIV interventions for prisons. We could not locate any published literature or study that have assessed the extent to which the 15 interventions have been implemented in each of Australia's eight prison jurisdictions, which all operate independently from one another. Confidentiality associated with, and disruptions to, antiretroviral therapy (ART) have been identified as barriers to appropriate HIV care in Australian prisons.²³ The WHO first endorsed prison-based needle and syringe programs (NSPs) in 1993 and reinstated this endorsement following a 2014 evidence review.²⁴ However, fear of bloodborne viruses (BBVs), and concerns for prison order and the safety of correctional staff have historically prevented the implementation of prevention services such as NSPs, condoms, and dental dams.²⁵

Research examining the perspectives of people living with HIV in prison is lacking. In one US study involving 42 cis men and trans women living with HIV recently released from prison, 60% reported missing doses or treatment interruption because of non-disclosure of their HIV status to prison authorities, delayed prescribing, intermittent dosing, out-of-stock medications, and medications confiscation.²⁶ We were unable to locate any similar Australia-based studies.

The UN comprehensive package presents an opportunity for governments to have their greatest impact in reducing current and prospective HIV related burden, which is likely to have flow on effects to address other BBVs and STIs. This study aimed to provide a national (Australian) compliance snapshot of HIV prevention, treatment, and care policies for people in prison in each Australian jurisdiction against the UN 15 key interventions. This compliance review identifies HIV care and prevention measures requiring improvement in the Australian prison context and may provide inspiration for other countries to undertake a similar exercise.

Methods

Design and procedure

The study comprised of two stages: (i) collecting HIV related policy information using publicly available policies, reports, and data and key informants (present paper); and (ii) conducting stakeholder in-depth interviews (forthcoming paper). Requests were made to the key informants to provide the number of people living with HIV in prison. Data were obtained between July 2019 and August 2020 by two authors (BG, PS).

Publicly available policies, reports, and data

HIV related policy information was collected from reports, policies, and peer-reviewed literature. Google Scholar, Google, and government health and justice department websites were searched. Additionally, we searched Informit, PubMed, MedLine, EMBASE and Google Scholar for articles and reports published between database establishment and before the research commenced (25 March 2019) and updated the search before drafting the current manuscript (25 October 2022). Search terms included: (Austral* or "New South Wales" or Queensland or Tasmania or Victoria or "South Australia" or "Western Australia" or "Northern Territory" or "Australian Capital Territory") AND (prison* or jail* or gaol* or correction* or "corrective service*" or custod* or justice or judicial or "closed setting" or incarcerated or inmate* or felon or remandee or convict) AND (HIV or "Human Immunodeficiency Virus" or AIDs or "Acquired Immunodeficiency Syndrome"). Results of all search methods were transferred to EndNote for management. Once 125 duplicates were removed, 422 articles were screened (by BG) resulting in 31 relevant articles.

Key informant interviews

Five structured 'elite' interviews with key informants were conducted. Key informants were selected based on their knowledge about BBV/HIV related prison policies adopted by their respective jurisdiction. Elite interviews refer to interviewing individuals who hold a position that has afforded them with unique knowledge, power and/or information from typically a public policy or political perspective.²⁷ Interviews were conducted by telephone. Prison health service directors in each jurisdiction were approached about the study and provided an appropriate delegate, to participate as a key informant. Key informants were employed by the government health or justice agencies responsible for prison health care administration in their respective jurisdiction.

Information was sought from key informants on whether a policy or procedure was currently in place that complied to a UN intervention or intervention attribute. Crude HIV prevalence rates were derived by asking key informants the number of people in prison in the previous 12 months (2018–19) who are living with HIV. Two informants had extracts of this data available from administrative records and provided this information during the interview, while one retrieved this information from administrative records after the interview and reported back to the research team. Two participants interviewed for stage two of the study provided estimates based on recall of recent viewing of administrative records, thus there is a risk of recall bias with NSW and ACT estimates.

A structured interview template was created by one of the authors (BG) which featured a list of the 15 UN interventions and their attributes. Interviews were not audio recorded. Rather, information on intervention compliance was recorded in the interview template as "Yes", "No" or "Yes/No", and followed by a prompt to elicit further information (eg, "What does this involve?"). Additional information was written in the template under "notes" and assisted in assessing intervention compliance and reporting examples of practices or views expressed by key informants in the results section.

Listed attributes of each intervention were derived in two ways. First, by drawing from the description of each intervention in the UN Comprehensive Package Policy Brief,²¹ and second, by consideration of any substantive advances in HIV guidance since the 2013 Policy Brief was published [eg, we added pre-exposure prophylaxis (PrEP), as an attribute as the original 'Exposure prophylaxis' intervention only included post-exposure prophylaxis (PEP)]. Subsequent to this, the UNODC published a Technical Brief Update in 2020 of the 15 key interventions which notably included PrEP, and overdose prevention and management as part of the prison-based NSP intervention.²² A second author (PS) reviewed this template by also drawing from

intervention descriptions in the Policy Brief and advances in HIV guidelines.

In reporting the results, in some instances, further detail is provided to a finding of whether a UN intervention or invention attribute existed in a jurisdiction (or not), in terms of examples of practices or views reported by key informants. Such reports are mostly anecdotal and subjective and thus, consistent with other qualitative approaches, we make no claim that such reports are representative of the respective jurisdiction.

Policy compliance assessment

To provide a comparative snapshot of UN intervention compliance per jurisdiction, a traffic light ordinal rating system was used. This system communicates through colour the extent to which each policy or procedure aligns with a UN intervention or an attribute of an intervention. A green cell indicates that a jurisdiction has a policy or procedure that is compliant with a recommended intervention or intervention attribute. A red cell indicates that a jurisdiction does not have such a policy or procedure for the recommended intervention or intervention attribute. An orange cell indicates variable or partial policy or procedural compliance of a UN intervention or intervention attribute. A grey cell indicates that information could not be located or confirmed regarding this intervention or intervention attribute. Using information recorded on the structured interview template, one of the authors (BG) determined the degree of policy compliance with the UN intervention attributes using the traffic light rating system. An attribute received a green colour (full compliance) if “Yes” was recorded in the template, a red colour (not compliant) if “No” was recorded in the template, and an orange colour (partial/variant compliance) if “Yes/No” was recorded. Additional information written in the template following key informant prompting were reviewed to finalise colour ratings. A second author (PS) independently completed the same process. Any rating discrepancies were discussed among the research team before finalising a rating.

An overall grade for each jurisdiction was then calculated using a three-step process. Step 1 involved assigning the ordinal values of 0, 1 or 2 to the traffic light rating of each intervention attribute. That is, a red cell (not compliant) was assigned a “0” score, an orange cell (partial/variant compliance) was assigned a score of “1”, and a green cell (full compliance) was assigned a “2”. Step 2 involved calculating an aggregated percentage score for each intervention. This was achieved by dividing the sum of all intervention attribute values by the sum of the maximum possible value each attribute could receive. Attributes assigned “unknown” were considered in this calculation by subtracting their maximum possible values from the maximum possible value each attribute could receive. The resultant score was then multiplied by 100 to give a percentage score. In

Step 3, a final score for each jurisdiction was calculated and then converted into a grade (A to E, where A = most compliant and E = least compliant). This was achieved by first summing all intervention aggregated scores (derived from Step 2 before converting scores into a percentage) then dividing this total score by the total possible intervention aggregated scores, which is 15. If an intervention was marked as unknown, then this was excluded from the total possible intervention aggregated score. The resultant score was then multiplied by 100 to give a percentage score and then assigned a grade based on the following percentage ranges: A (90%–100%); B (75%–89%); C (50%–74%); D (25%–49%); E (0%–24%).

Crude estimates of HIV prevalence were derived by asking interviewees the number of people in prison in the previous 12 months (2018–19) who are living with HIV, if known. For the denominator, ideally this should be the number of people in prison tested for HIV in 2018–19. As this was not able to be determined, and consistent with the denominator used by the US Bureau of Justice to calculate rates of those living with HIV in US prisons,²⁸ the denominator used was the total number of incarcerated persons per jurisdiction on census date of 30 June 2018.⁴ We also calculated a second estimate of HIV prevalence using a more conservative approach by using prison reception numbers as a denominator.²⁹

Ethics approvals

Approvals were obtained from the University of New South Wales Human Research Ethics Committee (HC190150) and the Corrections Victoria Research Committee (CD/19/710718).

Results

Sources of data used to assess level of compliance with UN recommended interventions and the crude rate of people living with HIV in prison in 2018–19 for each of the eight Australian jurisdictions are presented in [Table 2](#). Information on policies and the number of incarcerated people living with HIV was collected from five key informants from Queensland, Victoria, South Australia, Western Australia, and Tasmania. These key informants were clinical/nursing directors or public health/BBV specialists. The key informant from Victoria provided policy information only and not HIV numbers. No key informants from NSW, ACT and Northern Territory prison health services were interviewed. This was because processes for obtaining Northern Territory, ACT and New South Wales (NSW) institutional approval were protracted and such approvals were not received for these jurisdictions with sufficient time for inclusion in the study. Instead, two participants interviewed for stage two provided policy information and estimates of the number of people in prison living with HIV for NSW and the ACT. The amount of publicly available

Intervention ²¹	Jurisdiction							
	Queensland	Victoria	South Australia	Tasmania	New South Wales	Western Australia	Northern Territory	Australian Capital Territory
1. Education, including peer-based programmes	KI, PA ³⁰⁻³²	KI	KI	KI	PA, O	KI	PA ³³	PA, O
2. Condom programmes	KI	KI	KI	KI ³⁴	PA, O	KI	U	PA, O
3. Prevention of sexual violence	KI	KI	KI	KI	O	KI	U	O
4. Drug dependence treatment, including opioid substitution therapy	KI, PA ³⁵	KI	KI	KI	PA ³⁶	KI	PA ³⁶	PA ³⁶
5. Needle and syringe programmes	KI	KI	KI	KI	O	KI	O	O
6. Prevention of transmission through medical or dental services	KI	KI	KI	KI	O	KI	O	O
7. Prevention of transmission through tattooing, piercing, and other skin penetration forms	KI	KI	KI	KI	O	KI	U	O
8. Post-exposure prophylaxis (PEP) and Pre-Exposure Prophylaxis (PrEP) ^a	KI	KI	KI	KI	PA, O	KI	U	O
9. HIV testing and counselling	KI	KI	KI	KI	PA, O	KI, PA ³⁹	U	O
10. HIV treatment, care, and support	KI	KI	KI	KI	PA, O	KI	U	O
11. Prevention, diagnosis, and treatment of tuberculosis	KI	KI	KI	KI	PA, O	KI	U	O
12. Prevention of mother-to-child transmission of HIV	KI	KI	KI	KI	O	KI	U	O
13. Prevention and treatment of sexually transmitted infections	KI	KI	KI	KI	O	KI	U	O
14. Vaccination, diagnosis, and treatment of viral hepatitis	KI	KI	KI	KI	PA, O	KI	PA ³⁶	PA, O
15. Protecting staff from occupational hazards	KI	KI	KI	KI	PA, O	KI	U	O
Crude rate of people living with HIV in prison in 2018–19	KI	U	KI	U	O	KI	U	O

KI: Key informant, PA: Publicly available information, O: Other. Two participants interviewed for stage two of the study provided policy information. ^aPrEP was not included in the comprehensive package at the time of its publication in 2013. Due to emerging evidence since publication, PrEP was added to this key intervention for this study.

Table 2: Sources of data used to assess level of compliance with each UN recommended HIV intervention for prisons and the crude rate of people living with HIV in prison in 2018–19 by Australian jurisdiction.

literature varied between jurisdictions. For example, while most prison health service policies and procedures for NSW are published online, we could not locate any policies, procedures, or details on health services for prisons in the Northern Territory. Due to a paucity of publicly available information and absence of key informant interviews, we could not allocate a final policy compliance score for the ACT and Northern Territory.

The national crude estimate of the number of incarcerated people living with HIV in Australia, (based on Queensland, South Australia, New South Wales, Australia Capital Territory and Western Australia numbers only) was 0.23–0.24% in 2018–19. When using total prison receptions as a denominator, this estimate fell to 0.15–0.16% (Table 3). Considerable variability was observed across surveyed jurisdictions regarding having policies in place that were compliant with the UNs’ 15 key interventions. Table 4 and Fig. 1 present the overall graded level of compliance by jurisdiction. Three jurisdictions (Victoria, NSW, and WA) received a B grade, three (Queensland, South Australia, and Tasmania) received a C grade, and two (ACT and the Northern Territory) were not graded due to insufficient data.

Education

All surveyed jurisdictions provided some form of education to people in prison on BBVs which include HIV.^{30–34} The UN package recommends that education efforts should be supplemented by peer-education programmes.

Although most jurisdictions had an external community-based organisation (eg, NSW, Western Australia, Queensland, and South Australia hepatitis organisations) delivering education and resources on BBV prevention, and Victoria had peer-workers who work alongside an alcohol and other drug programme, key informants reported no specific formalised HIV positive peer-led education programmes in place. However, HIV community-based organisations were at times involved in other ways such as in Queensland where efforts had been made to link those living with HIV in prison with peer services, and at times community organisation representatives are present in telehealth conferences. Additionally, the frequency and reach of education delivered by community organisations varied across jurisdictions. For example, the WA-based ‘Health in Prison Health Outta Prison’ (HIP HOP) Programme run by Hepatitis WA is a compulsory programme for all people entering prison, compared to NSW where Hepatitis NSW in 2018–19 delivered education and health promotion events in 14 of 39 NSW prisons.³²

Condom programmes

Condom vending machines were in NSW, Victoria, Western Australia, and Tasmania prisons. The extent to which they feature in every prison and are functional and stocked is unknown. A 2017 Custodial Inspection of Tasmania prisons found that condoms were not available to people in the maximum-security precinct and some

Jurisdiction	No. in prison living with HIV	Total number of people in prison on census date (2018) ^a	Total number of prison receptions (2018–19) ^b	Crude rate (%) using census date population number as denominator	Crude rate (%) using prison reception population number as denominator
Queensland	20	8840	13 607	0.23	0.15
South Australia	5	2991	5606	0.16	0.09
New South Wales	30	13 740	19 435	0.21	0.15
Australian Capital Territory	1–5	492	823	0.20–1.01	0.12–0.61
Western Australia	20	6865	9787	0.29	0.20
Victoria	d	d	d	d	d
Tasmania	d	d	d	d	d
Northern Territory	d	d	d	d	d
Total ^c	76–80	32 928	49 258	0.23–0.24	0.15–0.16

^aData represents the total number of people in prison on the census date of 30 June 2018. ^bData represents the total number of prison receptions from 1 July 2018 to 30 June 2018. ^cTotal number and national estimate based on Queensland, South Australia, NSW, ACT and WA data only. ^dData not provided or obtained.

Table 3: Estimate of the number and crude rate of people living with HIV in prison in 2018–19 by Australian jurisdiction.

machines were either empty or broken.⁴¹ Jurisdictions such as Western Australia provide condoms at discharge from prison as part of ‘exit kits’. In South Australia condoms were not available nor accessible in all prisons.⁴² Previously, Queensland had trialed a condom programme, but no current program exists. A 2021 media report suggests that Queensland are again considering piloting a condom programme at one prison.⁴³

Dental dams were accessible to people in women’s prisons in most jurisdictions surveyed,^{31,34} but not accessible to people in men’s prisons. Condoms were mostly unavailable to those in women’s prisons. One NSW-based study found that sex toys posed an STI transmission risk for women in prison and recommended that condoms be provided.⁴⁴

Prevention of sexual violence

Most of those interviewed indicated that their respective jurisdictions had specific policies or procedures to reduce sexual violence in prison. NSW has a policy on separately housing vulnerable individuals, Western Australia has a ‘Support and Monitoring’ programme which provides additional monitoring, and/or a carer ‘buddy’ system, and Victoria were currently examining tools that can be used to identify potential perpetrators. Previous NSW and Queensland-based research has shown that trans and gender diverse people and gay and bisexual men in men’s prisons are most at risk of sexual violence while incarcerated.^{45,46} NSW, Queensland, ACT, Victoria, Tasmania, and Western Australia have specific policies aimed at enhancing the safety of trans and gender diverse people in prison.⁴⁷

Drug dependency treatment

All jurisdictions surveyed except for Queensland had policies on opioid substitution therapy (OST) initiation and maintenance programmes in place in prisons.³⁶ As of June 2021, Queensland were conducting a trial of

OST initiation and maintenance in five of its 14 prisons, with policies reported to be in place for a staggered implementation of OST in all Queensland prisons.³⁵

Needle and syringe programmes

No jurisdiction surveyed provided access to sterile drug injecting equipment.

Sterile medical equipment

All prison medical, gynaecological, and dental service providers had policies and procedures regarding infection-control and safe-injection protocols.

Tattooing and body piercing

Education programmes include information about the risks of sharing tattoo and body piercing equipment. No jurisdiction had interventions that provided sterile equipment for these practices in prison.

Post- and pre-exposure prophylaxis

All jurisdictions where information could be collected offer access to PEP and PrEP medications.³¹ Several noted they are developing or have developed initiatives to enhance initiation access. Western Australia had introduced GP training on PrEP, and Queensland was examining nurse assisted initiatives to improve access. Queensland prisons require staff to call an ambulance to take the person to an emergency department where assessment and PEP can be provided.

HIV testing and counselling

All jurisdictions have voluntary HIV testing. However, there are exceptions. For example, in 2020, Western Australia introduced mandatory HIV testing laws, making it compulsory to test an incarcerated person, “if the chief executive officer suspects on reasonable grounds that there has been a transfer of bodily fluid from a prisoner to a prison officer”.³⁹ NSW has introduced a similar law.³⁷

Intervention	Attribute	Jurisdiction							
		Queensland	Victoria	South Australia	Tasmania	New South Wales	Western Australia	Northern Territory	Australian Capital Territory
1. Information & education	a. Information and education programme available	2	2	1	U	2	2	U	U
	b. Supplemented by peer-education programmes	1	1	1	U	1	1	U	U
	Intervention score (% compliance)	75%	75%	50%	U	75%	75%	U	U
2. Condom programmes	a. Condom programme	0	2	1	1	2	2	U	U
	b. Lubricant provided	0	2	1	1	2	2	U	U
	c. Condoms for women in prison	0	0	0	2	0	0	U	U
	d. Dental dams for women in prison	0	2	0	2	2	2	U	U
	e. Discreetly accessible without having to request them	0	2	0	2	2	2	U	U
	Intervention score (% compliance)	0%	80%	20%	80%	80%	80%	U	U
3. Sexual violence prevention	a. Prevention measures to report and address sexual violence	2	2	U	U	2	2	U	U
	Intervention score (% compliance)	2	100%	U	U	100%	100%	U	U
4. Drug dependency treatment	a. OST available	1	2	2	2	2	2	U	U
	b. Can continue community-initiated OST	1	2	2	2	2	2	U	U
	c. Can initiate OST in prison	1	2	2	0	2	2	U	U
	Intervention score (% compliance)	50%	100%	100%	67%	100%	100%	U	U
5. Needle & syringe programmes	a. Needle and syringe programme available	0	0	0	0	0	0	0	0
	b. Bleach or disinfectant available	0	2	0	0	2	0	0	2
	Intervention score (% compliance)	0%	50%	0%	0%	2	0%	0%	50%
6. Sterile medical equipment	a. Sterile medical and dental equipment available	2	2	2	2	2	2	2	2
	Intervention score (% compliance)	100%	100%	100%	100%	100%	100%	100%	100%
7. Tattooing & piercing	a. Interventions to reduce sharing of body piercing and tattooing equipment	0	0	0	0	U	0	U	U
	Intervention score (% compliance)	0%	0%	0%	0%	U	0%	U	U
8. Exposure prophylaxis	a. PEP available	2	2	2	U	2	2	U	U
	b. PrEP available	2	2	2	U	2	2	U	U
	Intervention score (% compliance)	100%	100%	100%	U	100%	100%	U	U
9. HIV testing & counselling	a. Testing is voluntary	2	2	2	2	2	2	U	2
	b. All people are offered testing at reception to prison	1	1	2	2	1	2	U	U
	c. Testing based on risk-stratification	2	2	0	0	2	2	U	U
	d. Opportunistic testing during incarceration	0	2	0	0	U	2	U	U
	e. Persons can self-refer for testing	2	2	2	2	U	2	U	U
	f. Mechanism of self-referral directly to health staff for testing	0	1	2	0	U	2	U	U
	g. Pre-test information available	1	2	0	1	U	2	U	U
	h. Post-test counselling available/undertaken	2	2	2	2	U	2	U	U
	i. Access to HIV status restricted to healthcare staff	1	1	1	1	1	1		1
	Intervention score (% compliance)	61%	83%	50%	56%	75%	94%	U	75%
10. HIV treatment, care, & support	a. Treatment regimens are community equivalent	2	2	2	2	2	2	U	U
	b. Keep-on-person, self-dispense of medications available	1	1	2	1	2	1	U	U
	c. Access to specialist care and tertiary care	2	2	2	0	2	2	U	U
	d. Telemedicine available	2	2	2	1	2	2	U	U
	e. Continuity of care and discharge planning	2	2	2	2	2	2	U	U
	f. Linkage to external community/peer organisation	2	0	0	2	U	1	U	U
	Intervention score (% compliance)	92%	75%	83%	67%	100%	83%	U	U
11. Prevention & treatment of tuberculosis	a. Prevention, diagnosis, and treatment of tuberculosis exists	U	2	U	U	2	2	U	U
	Intervention score (% compliance)	U	100%	U	U	100%	100%	U	U
12. Prevention vertical transmission	a. Prevention of mother to child policy/practice exists	2	U	2	U	2	2	U	U
	Intervention score (% compliance)	100%	U	100%	U	100%	100%	U	U
13. Prevention & treatment of STIs	a. STI screening undertaken concurrently	2	2	2	2	2	2	U	U
	Intervention score (% compliance)	100%	100%	100%	100%	100%	100%	U	U
14. Vaccination & treatment of hepatitis	a. Hepatitis A vaccination to those at risk	U	2	2	2	2	2	U	U
	b. Hepatitis B vaccination for all people in prison	2	2	2	2	2	2	U	U
	c. Hepatitis B and C treatments	2	2	2	2	2	2	2	2
	Intervention score (% compliance)	100%	100%	100%	100%	100%	100%	100%	100%
15. Occupational protection for staff	a. Personal protective equipment and education	2	2	2	2	2	2	U	U
	b. Free staff vaccination	2	1	0	2	0	2	U	U
	Intervention score (% compliance)	100%	75%	50%	100%	50%	100%	U	U
	Total score (sum of intervention scores)	9-78	11-38	8-53	6-69	12-30	12-33	U	U
	Final score (total score/maximum possible score)	70%	81%	66%	67%	88%	82%	U	U
	GRADE	C	B	C	C	B	B	U	U

U = Unknown. Not assessed due to missing or insufficient data.

Table 4: Level of compliance with UN recommended HIV interventions for prisons by Australian jurisdiction.

Tasmania, Western Australia, and South Australia offer all people entering prison testing for HIV. Queensland, Victoria, NSW, and Western Australia employ a risk-stratification testing approach. This approach typically uses a set of criteria to either identify high-risk individuals for HIV testing or exclude low-risk people from a HIV test. Forms are used for this to assess sexual health and drug use history and risk. For example, in NSW an 'Early Detection Mini Assessment' form is used to identify patients who belong to a high-risk

population and patients who identify high risk behaviours for BBVs and/or STIs.³⁰

All surveyed jurisdictions had self-referral mechanisms which for Queensland and Tasmania were paper based and required the request to be given to a custodial officer.³¹ As well as paper-based forms, Victoria and South Australia had introduced electronic forms submitted directly to health staff to address potential stigma. Victoria and Western Australia offered opportunistic testing during incarceration, which typically

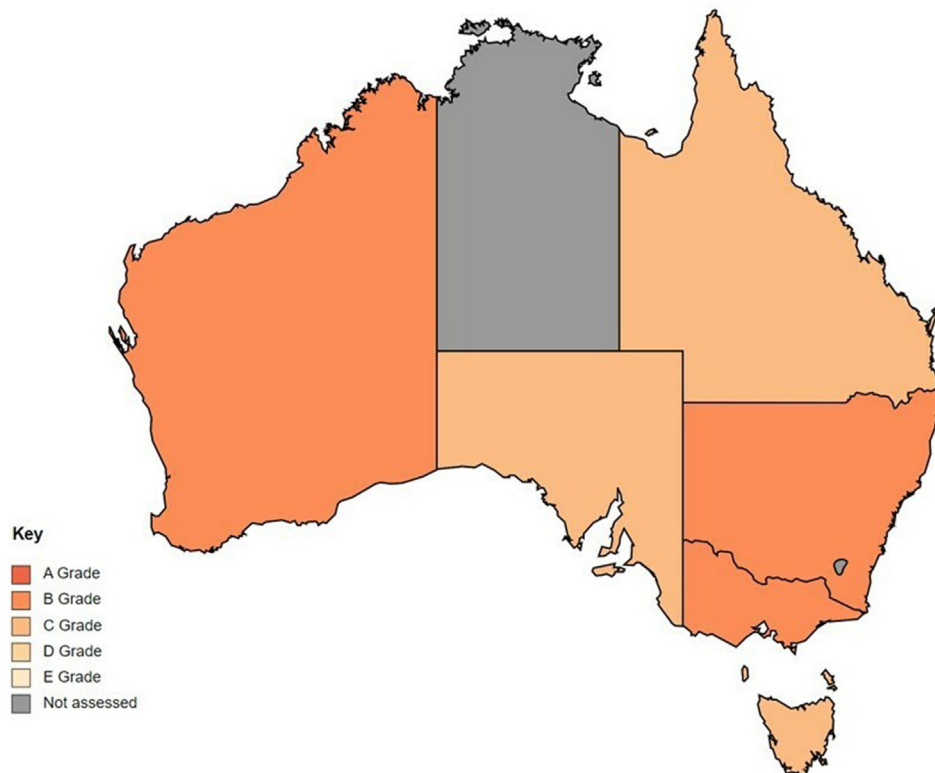


Fig. 1: Graded level of compliance with UN recommended HIV interventions for prisons by Australian jurisdiction.

involves a clinician offering a patient a BBV/HIV test while they are attending a clinic for another health issue. South Australia had an electronic referral mechanism.

All surveyed jurisdictions had post-test counselling, yet the provision of pre-test counselling varied across jurisdictions.³¹ While Victoria has pre-test counselling, pre-test counselling was viewed by one key informant to vary between clinicians in Tasmania, who questioned its viability given the emotional and psychological state of prison entrants. South Australia did not have pre-testing counselling and the Queensland key informant was unsure of its existence in their jurisdiction.

Privacy of patient health information can be complex in a prison setting. In surveyed jurisdictions, health staff release de-identified or re-identifiable HIV data to custodial authorities with and without the individual's consent. This is done either on a regular basis such as NSW policy where a monthly list of re-identifiable patient data is provided to the Office of the Commissioner and the Assistant Commissioner of Custodial Corrections,³⁸ or as occurs in Victoria, South Australia and Western Australia, on a 'need to know' basis when it is assessed to be in the interest of the patient's welfare or for the safety of others or the 'good

order' and security of the prison. As an example of the latter, health staff in Western Australia may share de-identified information with the prison's General Manager on a 'case-by-case' basis. Such a position requires determining the types of risks or events that would warrant sharing confidential information without patient consent such as when an incarcerated patient is not HIV treatment compliant and is known to be sharing injecting drug equipment.

HIV treatment, care, and support

All surveyed jurisdictions had policies outlining community equivalent HIV treatment regimens and access to specialist care in prison or community (eg, sexual health/immunology services) or tertiary care in the community.³¹ Remote consultations by means of telecommunications technology, or telemedicine, is used by prison health services in surveyed jurisdictions to link patients to medical specialists in the community.

Incarcerated people are often unable to keep any medications in their possession ('keep-on-person') but are instead dispensed medications by prison health staff through 'medication rounds' or a 'pill parade'. Medication rounds occur in all prisons as few as twice a day, whereby a line of individuals is directly supervised taking their respective medications.⁴⁸ A

medication round represents a Directly Observed administration of Treatment (DOT) modality and gives a high level of certainty that the medication has been taken. Treatment modality varied across and within jurisdictions with South Australia and NSW allowing keep-on-person medication for all people living with HIV unless capacity for treatment adherence was assessed as low. Victoria, Queensland, Tasmania, and Western Australia indicated that keep-on-person dispensing was restricted to lower security prisons or units. All surveyed jurisdictions reported having discharge planning in place to foster continuity of care.³¹ Linking incarcerated individuals to external community organisations varied. Two key informants spoke of how visiting HIV peer-led, or community-based organisations risks disclosing the individual's HIV status to custodial staff and other incarcerated persons.

Prevention, diagnosis, and treatment of tuberculosis

All surveyed jurisdictions had policies and procedures in place for the prevention and treatment of tuberculosis.⁴⁰

Prevention vertical transmission

Access to prevention of mother-to-child HIV transmission interventions in line with national guidelines were provided in Queensland, South Australia, NSW, and Western Australia. Intervention access for Tasmania and Victoria is unknown.

Prevention and treatment of sexually transmitted infections

All surveyed jurisdictions had testing and treatment protocols in place for STIs.

Vaccination, diagnosis, and treatment of viral hepatitis

Access to hepatitis B vaccination and treatment is provided in all jurisdictions surveyed, as is hepatitis C treatment. Hepatitis assessment and treatment models (ie, nurse-, GP-, or specialist-led) and whether services are provided internally or through external providers vary across jurisdictions.³⁶ Access to hepatitis A vaccination to those assessed at risk is provided in all jurisdictions where data was available.

Protecting staff from occupational hazards

Staff in all jurisdictions have access to protective equipment, such as gloves and mouth-to-mouth resuscitation masks.⁴⁰ Free access to HBV vaccination for staff varied across jurisdictions with free vaccines provided to staff by custodial or prison health services in Tasmania, Queensland, and Western Australia, and for most health staff in Victoria. No free vaccines were provided in NSW or South Australia.

Discussion

This study aimed to provide a snapshot of current HIV screening, treatment, and prevention policies for people in prison in each Australian jurisdiction and assess prison policy compliance with the UN 15 key HIV interventions. The study also aimed to establish the number and crude rate of people in prison currently living with HIV as reported by participants and publicly available reports. The crude rate was determined to be 0.23–0.24% or 0.15–0.16% if using prison receptions as a denominator. This estimate sits within the range of prevalence estimates reported in previous Australian studies (0.0%–0.6%)^{7–11} and suggests that the prevalence of HIV in Australian prisons is low compared to prisons in other high-income jurisdictions such as the United States (1.2%)²⁸ and France (1.2%)⁴⁹ where HIV screening approaches also vary between jurisdictions. However, this crude rate should be treated with a degree of caution. Due to stigma, disclosure issues, and the varied approaches to HIV screening, this estimate on one level is likely to be conservative.¹⁸ Further, we could not utilise a denominator based on the number who had been tested in prison for HIV in 2018–19 as this data was not readily available from administrative records. Thus, our denominators are not ideal. However, by using two denominators—one based on the number of persons held in prisons on the night of 30 June 2018 (as used for the US estimate), and a second more conservative approach based on a higher number of prison receptions in 2018–19—we have provided an estimate range which may increase confidence in the estimates being closer towards the true HIV rate.

As reported previously, a degree of recall bias may also be present in NSW and ACT estimates. These challenges underscore the need for national standardisation of data collection in relation to HIV testing. Nevertheless, a low HIV prevalence is likely to be associated with effective HIV prevention in the general community stemming from community mobilisation and engagement which was followed by support from governments, including funding of non-government organisations, political endorsement of NSPs, and media campaigns.⁵⁰

Although most of the UNs' recommended interventions were reported to be available in some capacity, there was variation between and within Australian jurisdictions. This 'patchy' compliance is consistent with many other countries. In a review of HIV interventions for key populations in 65 low- and middle-income countries, only 30 countries (46.2%) identified people in prison as a key population, 21 (70.0%) of which provided condoms in prison, seven (10.8%) included lubricant access, 12 (40.0%) included OST access, and only five (16.7%) included prison-based NSPs.⁵¹

Our desktop review of policies and reports, as well as in-person interviews with key staff, revealed which

current policies are in place regarding HIV prevention. They did not reveal the extent such policies are implemented. All or most jurisdictions surveyed reported policies and procedures for measures associated with UN Intervention 3—*sexual violence prevention*, 4—*drug dependency treatment*, 6—*sterile medical equipment*, 8—*post- and pre-exposure prophylaxis*, 11—*prevention, diagnosis, and treatment of tuberculosis*, 12—*prevention of vertical transmission*, 13—*prevention and treatment of sexually transmitted infections* and 14—*vaccination, diagnosis, and treatment of viral hepatitis*. Variability of access between and within jurisdictions of some intervention attributes such as HCV treatment, and OST initiation was reported, which is consistent with previous jurisdictional reporting of OST characteristics and the proportion of people with chronic HCV infections who have been treated in prison.³⁶

Regarding Intervention 8—*exposure prophylaxis*, health promotion materials to inform people in prison of PrEP was absent with access relying on self-referral or, as in Western Australia, individual risk-stratification assessments by health practitioners. A small number of United States' prison-based studies support PrEP screening via individual consultations with medical practitioners to mitigate stigma and privacy concerns associated with disclosure of high-risk HIV transmission behaviours [eg, injecting drug use (IDU) and condomless sex in prison].^{52,53} According to these studies, knowledge of PrEP among study samples was found to be low but willingness to use once made aware of it was high, suggesting relying on self-referral alone may be inadequate. Participants in one study favoured external community-based organisations involvement in delivering PrEP services.⁵²

Although policies and procedures for Intervention 10—*HIV treatment, care and support* were reported to align with community standards in all surveyed jurisdictions, attributes such as keep-on-person medication and linkages to external community/peer organisations varied between and within jurisdictions. An individual's capacity for treatment adherence and prison security level classification issues were cited by some participants to explain why some prisons or jurisdictions practiced dispensing through medication rounds over keep-on-person medication. The modality of treatment administration in prison is reported to affect treatment adherence.⁵⁴ In a systematic review of 'adherence to antiretroviral therapy among HIV-infected prisoner' among studies conducted in the United States (n = 4), Spain (n = 4), Canada (n = 1), Greece (n = 1), and Kenya (n = 1), the proportion of incarcerated people with adequate ($\geq 95\%$) ART adherence was 54.6%, which was lower than other key populations living with HIV, such as PWID (60%), women sex workers (76%), and adolescents (62%). Another systematic review on adherence found that

minimal social support, low self-efficiency, and depressive symptoms were factors found to affect adherence in prison.⁵⁵ Institutional-related factors included insufficiency and/or poor quality of food, difficulty in accessing care, and limited privacy during medication 'pick-ups' and use. As a keep-on-person medication approach affords a person more privacy when taking medication, as opposed to the collective practice of medication rounds, this modality is likely to increase treatment adherence for most.

HIV related stigma and existing in-reach services by hepatitis C community organisations were factors reported by participants to interpret limited in-reach by HIV peer services. However, involvement of HIV peer-led organisations in private individual consultations and case conferencing was reported in some jurisdictions. This addresses the potential for in-reach peer services inadvertently disclosing a person's HIV, sexuality and/or IDU status to others.

Substantive variation between jurisdictions was found for attributes within Intervention 9 – *HIV testing and counselling*, including risk-stratification and opportunistic testing, self-referral mechanisms, and pre-test counselling indicating a lack of national consistency with community standards and UN recommendations. Intervention 9 attribute 'access to patient HIV status is restricted to health staff' is conditional in all surveyed jurisdictions. HIV status may be disclosed to prison managers if health staff consider it warranted to ensure the safety and well-being of others and applying to such disclosure the same considerations and principles as those in the community. Corrective Services NSW (CSNSW) policy instructs the prison health services to provide a monthly list of re-identifiable patient data to the Office of the Commissioner and the Assistant Commissioner of Custodial Corrections of individuals who tested positive for HIV.³⁸ The policy states that the Assistant Commissioner "may disclose the results of such a test to a person who is considered to require the information to provide for the welfare of the inmate concerned, or the good management of the correctional centre in which the inmate is housed".³⁸ NSW prison health service 'Guidelines on the use and disclosure of inmate/patient medical records and other health information' (2018, 2022) states that under Regulation 290 of the NSW *Crimes (Administration of Sentences) Act* disclosure of health information to CSNSW without consent is permitted if the patient "has, or appears to have, a serious infectious disease" that is listed under Schedule 2 of the NSW *Public Health Act 2010*.^{56,57} In November 2018, "Acquired Immune Deficiency Syndrome (AIDS)" was removed from the Schedule 2 list.⁵⁷

Most jurisdictions had attributes related to Intervention 2—*condom programmes*. Although all jurisdictions surveyed, except for Queensland, provide condoms, access and discretionary access differed

across and within jurisdictions. Discreet access to condoms, femidoms and dental dams in women's prisons was poor for most jurisdictions. In 1996, NSW was the first jurisdiction to introduce free condom vending machines to all its prisons following a class action by incarcerated persons.⁵⁸ Key informants in some jurisdictions acknowledged staff can harbour fears that access to condoms will increase consensual and non-consensual sex in prison, as well as be seen to condoning same-sex sex. The SHAAP survey revealed that the proportion of people reporting anal sex in prison was equally low in NSW (3.3%, condoms available) and Queensland (3.6%; $p = 0.8$, condoms not available) and a much higher proportion of people who engaged in anal sex in NSW prisons (56.8%) than Queensland prisons (3.1%; $p < 0.0001$) reported they had used a condom. Sexual coercion rates were similar in both prison systems (2.4% for NSW, 2.9% for Queensland; $p = 0.5$), leading the authors to conclude that they 'found no evidence that condom provision to prisoners increased consensual or non-consensual sexual activity in prison' and that 'if available, condoms were much more likely to be used during anal sex'.⁵⁹ Although dental dams in women's prisons were reported to be available in most jurisdictions surveyed, condoms were not. In the SHAAP study, women reported that dental dams were not widely used, leading the authors to suggest that condoms and latex gloves may have more use for women in prison, as condoms could be used as a barrier on shared dildos and sex toys, while latex gloves could be used to protect cut and grazed hands from vaginal and menstrual fluids.⁴⁴

No Australian jurisdiction had policies or interventions that involved skin penetration: *needle and syringe programmes* (Intervention 5) and *sterile tattoo and body piercing equipment* (Intervention 7). In lieu of NSPs, bleach or other disinfectants and education are relied on as harm reduction tools in prison, despite studies showing limited efficacy of bleach in sterilising syringes, and that very few people in prison cleaning syringes according to recommended syringe-cleaning guidelines.⁶⁰

There is limited knowledge about sterile body piercing and tattooing strategies in prisons and best practice models for implementation. Although there have been safer tattooing interventions introduced in prisons in Canada,⁶¹ Spain,⁶² and Luxemburg,⁶³ no evaluation has been published in peer-reviewed journals. Despite evaluations of prison-based NSPs showing declines in injecting equipment sharing, reductions in overdose incidents, deaths and BBV transmission, no reports of syringe weaponisation, as well as increases in staff safety because accidental injuries from hidden needles during cell searches decreased,^{64,65} only nine countries operate at least one prison-based NSP.⁶⁶ No Australian jurisdiction provides prison-based NSPs. This is concerning given the that Australian studies

report between 27% and 65% of PWID prior to prison report doing so whilst in prison^{15,67,68} As part of their 2020–21 Drug and Alcohol Action Plan Queensland Corrective Services recently committed to giving "consideration of a needle exchange program" (Initiative 3.2).³⁵ The South Australian Prisoner Blood Borne Virus Prevention Action Plan 2017–2020 South Australia has also demonstrated some commitment to exploring options for reducing needle sharing and needle reuse in prisons.⁴² The ACT government policy to introduce an NSP into one prison has stalled for a decade due to opposition by prison officers and the Community and Public Sector Union.⁶⁹

A limitation concerns the compliance scoring for intervention 5 *drug dependency treatment*. Key informants did not speak of evidence-based treatments beyond OST such as for methamphetamine dependency, nor were they prompted to do so. Consequently, compliance scores for this intervention may be inflated. Additionally, a potential or perceived study limitation is the small sample size and thus data may not be representative of a respective jurisdiction. Regarding this, we targeted elite informants in strategic positions in relation to their occupational experience and knowledge of prison BBV/HIV policies. As such, and because five of the eight Australian jurisdictions provided informants to interview, the sample frame was relatively small. Studies that use elite interviews are often based on small numbers. This is because there is a limited sampling frame of elites—those in the upper echelon, or key strategic positions, of organisations.²⁷ As our study is primarily a policy audit to determine whether a policy or procedure exists or not in a jurisdiction, questions regarding whether the existence of a jurisdictional policy is representative of the jurisdiction are superfluous, as the policy applies to the entire jurisdiction. The question of representativeness may be relevant if our study wanted to assess views on whether, the extent, and how a policy or procedure is implemented by staff. However, our study did not aim to assess whether policies are implemented or effective. Instead, if such a view was expressed by a participant, we used it to add detail or insight into the policy. We cannot make claims to representatives of such reports. However, we see value in future research investigating additional non-elite perspectives from, for example, front line nursing staff who facilitate HIV prevention, treatment, and care on a day-to-day basis.

Future research and conclusion

Estimates of HIV prevalence in Australian prisons has remained low since the beginning of the HIV epidemic, compared to estimates of prison systems in other countries. Australian correctional systems, in a sense, have benefited from earlier and persistent community-

based and public health interventions aimed at those in the wider community most at risk of HIV transmission. However, HIV policies and procedures across all jurisdictions fell short of compliance to the majority of UN recommended HIV interventions. Initiatives beyond education to reduce sharing body piercing and tattoo equipment and NSPs were absent in all jurisdictions. There were no condom programmes in one jurisdiction and reports of condom access issues in others. Access to bleach or disinfectant, OST, and peer-education were patchy across and within most jurisdictions. Patient privacy in relation to medication round dispensing and health staff sharing patient HIV information are also issues requiring further investigation and improvement.

Guidance by UN agencies on HIV interventions for prisons is an evolving space. Since data were collected for the present review, the 2020 Technical Brief Update²² and the 2021 Consolidated guidelines on HIV, viral hepatitis and STI prevention, diagnosis, treatment and care for key populations⁷⁰ were published and include additional intervention attributes that reflect developments in prison minimum rules, HIV guidance and a focus on structural enablers. As such, future assessments of UN policy uptakes should incorporate this evolving guidance.

An area of particular importance is stigma, which permeated our data in relation to testing coverage, staff attitudes, and HIV disclosure. Although it is welcoming to see that the 2020 Technical Brief Update has included recommendations for staff sensitisation training and education programs for incarcerated populations, such recommendations are framed as “other” recommendations.²² Given the myriad of challenges HIV-related stigma can create in prisons, we contend that addressing stigma should be a “key” rather than “other” intervention. We note, however, that the 2021 Consolidated guidelines on HIV, viral hepatitis and STI prevention, diagnosis, treatment, and care for key populations has included addressing stigma as a core structural enabler to increase access to health services.⁷⁰ Crucially, future research must also focus on the voices of people living with HIV in prison, particularly in relation to intervention accessibility and quality. Finally, future research is warranted to examine the socio-political and policy/legislative barriers and opportunities locally and abroad regarding implementing UN recommended interventions. Cross-jurisdictional comparative analyses and social movement analyses of historical events in relation to HIV care and prevention in the community might provide insights into progressing HIV prison policies today. Authors of a 1991 review of HIV policies in Australian prisons stated that ‘effective HIV prevention is impossible in a political climate where crime, crime prevention and prisons policies are regarded by politicians of all persuasions as the raw material for election slogans’, and perceived electoral gain.⁷¹ ‘Tough on crime’ measures have

increased the size of incarcerated populations and ‘corresponding prison health infrastructure and services have not been increased proportionally’, including preventative health care.⁷² Public health and harm reduction specialists advocate that the ‘first task in addressing HIV and related infectious diseases among those incarcerated is to reduce the numbers of people in prison and detention for substance use, sex work, and other non-violent offences’.⁷³

Contributors

PLS and BG drafted the manuscript, helped conceive of the study, participated in the design of the study, and conducted data collection. TB helped conceive of the study, participated in the design of the study, and helped draft the manuscript. LW helped draft and edit the manuscript.

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Data sharing statement

The authors are open to sharing additional study data including qualitative data.

Editor note

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Declaration of interests

All authors (PS, BG, LW, TB) report no conflicts of interest.

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