



## HIV and related infections in prisoners 4

### HIV, prisoners, and human rights

Leonard S Rubenstein, Joseph J Amon, Megan McLemore, Patrick Eba, Kate Dolan, Rick Lines, Chris Beyrer

Worldwide, a disproportionate burden of HIV, tuberculosis, and hepatitis is present among current and former prisoners. This problem results from laws, policies, and policing practices that unjustly and discriminatorily detain individuals and fail to ensure continuity of prevention, care, and treatment upon detention, throughout imprisonment, and upon release. These government actions, and the failure to ensure humane prison conditions, constitute violations of human rights to be free of discrimination and cruel and inhuman treatment, to due process of law, and to health. Although interventions to prevent and treat HIV, tuberculosis, hepatitis, and drug dependence have proven successful in prisons and are required by international law, they commonly are not available. Prison health services are often not governed by ministries responsible for national public health programmes, and prison officials are often unwilling to implement effective prevention measures such as needle exchange, condom distribution, and opioid substitution therapy in custodial settings, often based on mistaken ideas about their incompatibility with prison security. In nearly all countries, prisoners face stigma and social marginalisation upon release and frequently are unable to access health and social support services. Reforms in criminal law, policing practices, and justice systems to reduce imprisonment, reforms in the organisation and management of prisons and their health services, and greater investment of resources are needed.

#### Introduction

The criminalisation of drug use and of some sexual behaviours, discrimination against racial and ethnic minorities, and lack of access to protections of due process for socioeconomically disadvantaged groups lead to unjust incarceration, increase the risk of HIV, tuberculosis, and hepatitis infection, and interrupt access to prevention and treatment. Both incarceration and the fear of arrest and harassment by police can prevent individuals from seeking or accessing prevention, harm reduction interventions, testing, and treatment. Consequently, in nearly every country in the world, criminalised populations and prisoners face higher burdens of HIV infection and lower levels of access to treatment than do non-incarcerated individuals.<sup>1</sup>

Prisoners are often held in overcrowded, unsanitary, stressful, and violent conditions, which are ripe for the spread of communicable diseases. Access to prevention and treatment programmes are often non-existent or severely underfunded. According to WHO, "Ill-health thrives in settings of poverty, conflict, discrimination and disinterest. Prison is an environment that concentrates precisely these issues."<sup>2</sup> Continuity of treatment during imprisonment and upon release is rare.

These practices violate human rights, which are founded on the dignity of all human beings. International and regional treaties, and many national constitutions and laws, mandate that governments respect, protect, and fulfil human rights, among them the rights to life and to the highest attainable standard of physical and mental health. Among other requirements of human rights law, countries are also obligated to respect bodily integrity and privacy, protect individuals from discrimination, guarantee due process of law in criminal justice, and refrain from cruel and inhuman treatment (table 1).

To realise the right to health, governments must eliminate barriers to prevention and treatment of ill health and the determinants of health and ensure the equitable provision of services sufficient to meet population needs.<sup>4</sup> In resource-limited settings countries can bring about the right to health progressively, but are required to draw on maximum available resources to

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#### Key messages

- Criminalisation of drug use and sexual behaviour, discrimination against racial and ethnic minorities in policing and health services, and the lack of due process for socioeconomically disadvantaged groups lead to unjust incarceration, increase the risk of HIV, tuberculosis, and hepatitis C (HCV) infection, and interrupt access to prevention and treatment.
- Worldwide, incarcerated people endure pervasive violations of their human rights, including gross overcrowding, unsanitary conditions of living, and sexual and other forms of violence. These conditions and a lack of access to prevention interventions promote the transmission of HIV, tuberculosis, and HCV.
- Prisoners living with HIV, tuberculosis, or HCV are often subject to discrimination within prisons and to violations of rights of privacy and confidentiality, and lack access to appropriate medical care.
- Prevention and treatment of HIV, tuberculosis, and hepatitis in prisons are effective, but interventions such as the distribution of condoms and clean needles, voluntary HIV testing, and treatment are often impeded by inadequate resource commitments, discrimination, and restrictive prison rules or policies. Despite the high number of drug users in prisons, treatment for drug dependency is also often lacking.
- Linkages to medical care, housing, and social supports are inadequate for released prisoners.
- In the global response to HIV, tuberculosis, and hepatitis in prisons, the burden of disease can be reduced by law, policing, and criminal justice reforms that prevent unjust incarceration and extended pretrial detention. These steps can be combined with increased resources and political commitments to ensure adequate conditions of confinement and availability of medical care in prisons. Strong and effective linkages to care upon release are also urgently needed.

	Content	Key guidance	Example of jurisprudence
A right to medical care	Persons deprived of liberty have the right to access the health services available in the country without discrimination based on their legal situation	Mandela Rules (rules 24–35) UN principles of medical ethics (principle 1) European prison rules (article 40.3) European CPT standards Principles and best practices on the protection of persons deprived of liberty in the Americas (principle 10)	<i>Van Biljon and Others vs The Minister of Correctional Services</i> (Cape of Good Hope Provincial Division, South Africa, 1997): prisoners on ART at the time of incarceration have a right to continued medication <i>EN and Others vs The Government of the RSA and Others</i> (Durban and Local Coast Division, South Africa, 2006): prisoners have a right to ART <i>Odafe and Others vs Attorney-General and Others</i> (High Court of Nigeria, 2004): failure to provide HIV treatment violates African Charter on Human and Peoples' Rights
A right to timely medical attention	Individuals in detention have the right to access timely medical attention. Medical care for individuals deprived of liberty is only compliant with international law if it is available when needed	Mandela Rules (rules 24–35) Body of principles for the protection of all persons under any form of detention or imprisonment (principle 24) European CPT Principles and best practices on the protection of persons deprived of liberty in the Americas (principles 9, 10)	<i>Khudobin vs Russia</i> (ECHR, 2006): failure to provide timely medical assistance and independent examination of prisoner with mental illness and HIV amounts to degrading treatment
A right to preventive health	Individuals deprived of liberty must be provided with measures to prevent the transmission of disease	Mandela Rules (rules 24–35) UN rules for the protection of juveniles deprived of their liberty (paragraph 49) CPT standards (paragraphs 52–63)	<i>Concluding Observations on Moldova</i> (UN Human Rights Committee, 2002): failure to address rapid spread of disease could be violation of right to liberty and security of the person <i>Concluding Observations on Moldova</i> (UN Committee on Economic, Social and Cultural Rights, 2003): state must ensure availability of tuberculosis medicines and adequate sanitary conditions in prisons <i>Pantea vs Romania</i> (ECHR, 2005): authorities must take practical preventive measures to protect the physical integrity and the health of prisoners <i>Staykov vs Bulgaria</i> (ECHR, 2006): denial of prevention and treatment for tuberculosis amounts to inhuman and degrading treatment
A right to mental health care	Individuals deprived of liberty have a right to access psychiatric and mental health services. Given the unique vulnerability of persons with mental illness in detention, the State's positive obligations to ensure their humane treatment, and to protect their wellbeing, are heightened	Mandela Rules (rules 24–35) European prison rules (article 47) European CPT standards Principles and best practices on the protection of persons deprived of liberty in the Americas (principle 3)	<i>Sahadath vs Trinidad and Tobago</i> (UN Human Rights Committee, 2002): government has obligation to provide appropriate psychiatric care <i>Herczegfalvy vs Austria</i> (ECHR, 1992) and <i>Victor Rosario Congo v Ecuador</i> (Inter-American Court 1999): a prisoner's mental illness heightens government obligation to ensure prisoner wellbeing
A right to a professional standard of care	Individuals deprived of liberty have a right to a professional standard of health service provided by qualified medical personnel	Mandela Rules (rules 24–35) European prison rules (article 41.1) UN principles of medical ethics (principle 1) European CPT standards Principles and best practices on the protection of persons deprived of liberty in the Americas (principle 10)	<i>Testa vs Croatia</i> (ECHR, 2007): lack of medical attention to chronic hepatitis C infection and inadequate prison conditions violates rights to dignity and to be free from humiliation
A right to informed consent and to refuse treatment	Individuals deprived of liberty have a right to consent and a right to refuse treatment. These rights are subject to some specific limitations, subject to due process of law	Mandela Rules (rule 32) UN body of principles for the protection of all persons under any form of detention or imprisonment (principle 25) UN rules for the protection of juveniles deprived of their liberty (paragraph 55) UN Committee on Economic, Social and Cultural Rights (general comment 14: right to be free from non-consensual medical treatment) CPT standards (paragraphs 46–49) Principles and best practices on the protection of persons deprived of liberty in the Americas (principle 10) European CPT standards	<i>C vs Minister of Correctional Services</i> (South Africa, 1996): HIV testing without consent is a violation of rights
A right to adequate living space	Persons deprived of liberty have the right to an amount of living space sufficient to safeguard their health	Mandela Rules (rules 12–17) European CPT standards Principles and best practices on the protection of persons deprived of liberty in the Americas (principle 12)	<i>Concluding Observations, Georgia</i> (UN Human Rights Committee, 1997): crowding increases spread of infectious disease and alarming mortality rate <i>Concluding Observations, Mongolia</i> (UN Human Rights Committee, 2000): lack of adequate spaces damages prisoners' health
A right to hygienic living conditions	The failure of the State to provide proper toilet or washing facilities, or clean living conditions, can contribute to a violation of international law	Mandela Rules (rules 12–17) European CPT standards (paragraph 53) Principles and best practices on the protection of persons deprived of liberty in the Americas (principle 12)	<i>Pedro Orlando Ubaque vs Director, National Model Prison</i> (Colombia, 1994): lack of sanitary and environmental conditions violates rights to health and life of prisoner with HIV <i>Malawi African Association and Others vs Mauritania</i> (African Commission on Human and Peoples Rights 2000): inadequate hygiene is a violation of prisoners' rights

(Table 1 continues on next page)

Content	Key guidance	Example of jurisprudence	
(Continued from previous page)			
A right to food and water	The failure to provide safe and adequate food and drinking water contributes to violations of international law in all human rights systems	Mandela Rules (rule 22) European CPT standards Principles and best practices on the protection of persons deprived of liberty in the Americas (principle 11)	<i>Malawi African Association and Others vs Mauritania</i> (African Commission on Human and Peoples Rights 2000): failure to provide sufficient food is a violation of right to health <i>Alver vs Estonia</i> (ECHR, 2005): prisoners have a right to food
Inadequate health care or denial of medical treatment as inhumane treatment or torture	In some circumstances, an inadequate level of health care or the denial of health care can lead to situations that are tantamount to inhuman and degrading treatment or torture	Mandela Rules (rules 32) CPT standards (paragraph 30)	<i>Khudobin vs Russia</i> (ECHR, 2006): absence of qualified and timely medical assistance and refusal to allow an independent medical examination created such a strong feeling of insecurity that, with inmate's physical suffering, amounts to degrading treatment <i>Odafe and Others vs Attorney-General and Others</i> (AHLR 205 [NgHC 2004]): failure to provide treatment for HIV is a violation of rights
Adapted from Lines. <sup>3</sup> International legal sources for these rights are the International Covenant on Civil and Political Rights (articles 6, 7, 9, 10); International Covenant on Economic, Social and Cultural Rights (articles 11, 12); Convention Against Torture and other Cruel, Inhuman or Degrading Treatment or Punishment, Convention on the Rights of the Child (articles 24 and 25); Geneva Conventions (especially conventions III, IV); European Convention of Human Rights (articles 2, 3); African Charter on Human and Peoples' Rights (articles 4, 16); American Convention on Human Rights (articles 4, 5); American Declaration on the Rights and Duties of Man; UN Committee on Economic, Social and Cultural Rights (general comment 14: the right to the highest attainable standard of health, E/C.12/2000/4 [2000]). ART=antiretroviral therapy. RSA=Republic of South Africa. CPT=European Committee for the Prevention of Torture and Inhuman or Degrading Treatment or Punishment. ECHR=European Court of Human Rights.			
<b>Table 1: Key health rights of individuals deprived of liberty</b>			

fulfil the right. They must also adhere to certain core obligations such as ensuring equal access to health services, especially for vulnerable and marginalised groups, and providing essential drugs.<sup>4</sup>

Human rights law recognises that punishment for a criminal offence can include restrictions on liberty, but that prisoners retain their human rights, including rights to health and to be free from discrimination and cruel or inhuman treatment (tables 1 and 2).<sup>5</sup> The UN Standard Minimum Rules for the Treatment of Prisoners, revised in 2015 as the Mandela Rules (panel 1),<sup>6</sup> apply and provide operational guidance for countries on the human rights of prisoners. They state that prisoners have a right to medical services to evaluate, promote, protect, and improve their physical and mental health, offered by sufficient well qualified medical personnel operating with clinical independence. In some circumstances, fulfilling this right might require health services of a broader scope than those available in the community.<sup>7</sup> Prisoners also have rights to sufficient living space, appropriate ventilation, lighting, heat, sanitation, clean water, adequate and nutritious food, and a clean environment, and to be protected against violence (table 1).<sup>6</sup> Their rights to confidentiality, informed consent, and access to records must be respected and fulfilled, and legal aid must be made available to them (table 1).<sup>6</sup> Governments are also responsible to link released prisoners with social and health services and to protect them from discrimination.<sup>5,6</sup>

These human rights of prisoners are affirmed, too, in regional treaties and standards and monitoring mechanisms promulgated by the European Committee for the Prevention of Torture and Inhuman or Degrading Treatment or Punishment (CPT),<sup>8</sup> the Inter-American Commission on Human Rights,<sup>9</sup> and the African Commission on Human and Peoples' Rights.<sup>10</sup> (see table 1 for human rights instruments). Globally,

80 countries have joined the Optional Protocol to the Convention against Torture and Other Cruel, Inhuman or Degrading Treatment or Punishment, which also sets standards and mandates the creation of national monitoring mechanisms for prisons.<sup>11</sup>

In this review, we examine the effects of criminal laws, law enforcement policies and practices, and justice systems on rights to prevention and treatment of HIV, tuberculosis, and hepatitis and on the imprisonment of people with or at risk of HIV. We also analyse governments' compliance with obligations to prevent and treat HIV and related health conditions during and after incarceration (see appendix for search strategy). We focus on facilities that hold individuals arrested for or convicted of crimes—police lock-ups, jails, and prisons. Because of the great variation in how these institutions are used in criminal justice systems, we use the word prisoners to refer to all people who are incarcerated in criminal cases, including those in pretrial detention. Significant human rights violations, including arbitrary detention, physical and sexual abuse, and the denial of prevention and treatment services, have also been reported in so-called rehabilitation or administrative detention centres for sex workers and drug users<sup>1,12</sup> (panel 2).

### Punitive laws, discriminatory policing, and failed justice systems

According to WHO, between 40% and 50% of all new HIV infections among adults worldwide might occur in people from key populations and their immediate partners: men who have sex with men (MSM), sex workers, people who inject drugs, transgender people, and prisoners.<sup>13</sup> Racial and ethnic discrimination, low socioeconomic status, migrant status, mental illness, and housing instability can also, independently or with each other, increase the risk of detention and HIV infection.<sup>14</sup> Judicial systems often do not protect the

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See Online for appendix

Rights-based guidance	
Prevention of sexual transmission	Condoms and other safer sex materials must be made easily and discreetly available in a confidential and non-discriminatory manner
Prevention of injecting-related transmission	Needle and syringe programmes, including the provision of safer injecting supplies other than sterile syringes, must be made available in a confidential and non-discriminatory manner
Access to treatment	Evidence-based and voluntary drug dependence treatment (in particular opioid substitution therapy) must be made accessible to all persons in a non-discriminatory manner
HIV testing and counselling	Access to voluntary and confidential HIV testing and counselling must be made available to all who request it. No-one (detainee or staff member) should be tested without their informed consent. The confidentiality of test results must be ensured. HIV testing should never be a goal in itself, but instead a means to accessing HIV prevention, treatment, care, and support services
Medical care, treatment, and support	Detainees living with HIV must be ensured confidential and non-discriminatory access to timely and professional standards of HIV medical care, treatment, and support services; this must include provision of HIV antiretroviral therapy, proper diets, and access to pain management medications
Confidentiality	The confidentiality of a detainee's medical information must be ensured, and not shared without consent. Exceptional circumstances, when information must be shared without consent, must be defined in policy, and reflect the same legal and ethical principles as reflected outside of places of detention

Legal sources for these rights are UNODC, ILO, UNDP, WHO, UNAIDS—Policy brief: HIV prevention, treatment, and care in prisons and other closed settings: a comprehensive package of interventions, 2013; UNODC and WHO Europe—Good governance for prison health in the 21st century: a policy brief on the organisation of prison health, 2013; Principles and best practices on the protection of persons deprived of liberty in the Americas (resolution 1/08, March, 2008); Office of the UN High Commissioner for Human Rights, UNAIDS. International guidelines on HIV and human rights, 2006; UN Special Rapporteur on the Right to the Highest Attainable Standard of Health. Report of the Special Rapporteur on the right of everyone to the enjoyment of the highest attainable standard of physical and mental health (A/65/255 2010); UN Special Rapporteur on Torture—Report of the Special Rapporteur on torture and other cruel, inhuman, or degrading treatment or punishment UN (A/HRC/22/53 2013); European CPT—CPT standards: substantive sections of the CPT's general reports (CPT/Inf/E [2002] 1, revised 2015); Principles and best practices on the protection of persons deprived of liberty in the Americas (resolution 1/08 2008); and African Commission on Human and Peoples' Rights—Guidelines on the conditions of arrest, police custody, and pretrial detention in Africa, 2015. UNODC=United Nations Office on Drugs and Crime. ILO=International Labour Organization. UNAIDS=Joint United Nations Programme on HIV/AIDS. CPT=Committee for the Prevention of Torture and Inhuman or Degrading Treatment or Punishment.

**Table 2: Human rights-based, health-related guidance on HIV in prisons and other places of detention**

### Panel 1: UN Mandela Rules

60 years ago, the UN adopted Standard Minimum Rules for the Treatment of Prisoners. Although not binding, they proved useful to prison administrators and monitoring bodies. But they were also a product of another era, a time when the human rights of prisoners were not widely recognised, and before the HIV/AIDS epidemic, the war on drugs, and the recognition of high prevalence of mental illness among prisoners. Bringing the rules up to date, however, was a major challenge, because many countries were reluctant to subject themselves to more stringent rules that could be used to hold them to account. Once the process of revision got underway, it took 5 years to reach fruition. The new rules, named the Mandela Rules, were finally adopted by the UN Commission on Crime Prevention and Criminal Justice in May, 2015, and approved by the UN General Assembly in December, 2015.

The new rules, though a product of negotiation and compromise, are nevertheless a milestone. They start from the premise (rule 1) that prisons must be managed in a manner to respect and protect the human rights and dignity of prisoners. Nigel Rodley, the former UN Special Rapporteur on Torture, wrote that they represent “a deontological reorientation of the philosophy of penal institutional management” (AR1). The rules view prisons as a place of preparation for reintegration into society and so, to the extent possible, they should

minimise difference between life in prison and life in society (rule 5). Prisoners should be provided adequate food, sanitation, ventilation, and protected from violence, and not be subjected to discrimination. Prisons must be kept “scrupulously clean” (rule 17).

The Mandela Rules on health services are far reaching: prisoners “should enjoy the same standards of health care that are available in the community, and should have access to necessary health-care services free of charge without discrimination on the grounds of their legal status” and be organised “in close relationship to general public health administration and in a way that ensures continuity of treatment and care, including for HIV, tuberculosis and other infectious diseases, as well as for drug dependence” (rule 24). A full range of evaluation, diagnostic, prevention, and treatment services, including mental health and drug-dependency treatment, must be in place to meet the health needs of prisoners, with records kept in a professionally appropriate manner. No clinical decision can be ignored or over-ruled by non-medical staff (rule 27). Finally, both medical ethics and the autonomy of patients must be respected, with protection of confidentiality and informed consent (rule 32).

See appendix for references. AR=appendix reference.

rights of people in these groups to be free from arbitrary arrest, to pretrial release and a speedy trial, and to fair and proportionate sentencing.

Key populations comprise a substantial percentage of all imprisoned individuals overall, and individually have a high lifetime risk of incarceration. According to United

Nations Office on Drugs and Crime (UNODC), 21% of sentenced individuals worldwide were convicted for drug offences in 2012,<sup>15</sup> more than 80% of them for drug use or possession; sentences are often long.<sup>16</sup> Mandatory sentences are common.<sup>17</sup> UNAIDS estimates that 56–90% of people who inject drugs are incarcerated at some stage in their lives.<sup>18</sup> Moreover, irrespective of the reason for incarceration, 10–48% of male inmates and 30–60% of female inmates are estimated to have used illicit drugs in the month before entering prison.<sup>19</sup> Though representing a smaller percentage of prison populations, sex workers are also at high risk of incarceration because more than 100 countries criminalise some or all aspects of sex work.<sup>13</sup> At least 75 countries make same-sex sexual activity a criminal offence.<sup>20</sup> Apart from laws targeted at key populations, at least 63 countries have adopted HIV-specific criminal laws and others have prosecuted people living with HIV under laws against sexual assault, attempted murder, and criminal negligence for spitting, hitting, or biting.<sup>21</sup>

In addition to criminal penalties, punitive law enforcement practices target key populations (even where sex work has been partly decriminalised or where homosexuality has been fully decriminalised) and also increase risk of HIV infection. These practices include sexual abuse and extortion of sex workers by the police, sometimes in exchange for their liberty.<sup>22,23</sup> In some places, possession of condoms is used as evidence for criminal prosecution of prostitution or homosexual sex.<sup>24–26</sup> These and related police practices also discourage people who use drugs, MSM, and sex workers from accessing health and harm reduction services, disrupt safe injection networks, discourage use of condoms, increase sharing of syringes, and interrupt attempts to obtain treatment and prevention services for HIV and hepatitis.<sup>22,27–32</sup>

Transgender people also often face high risks of HIV transmission and incarceration as a result of criminalisation, discrimination in health settings, punitive law enforcement, and social marginalisation. Laws against cross-dressing and homosexuality as well as discrimination result in high rates of unemployment and underemployment of transgender people and compel many of them to find work in the underground economy, including sex work.<sup>33</sup> Transgender women are subject to high levels of police abuse, including profiling as sex workers and sexual exploitation and physical and verbal abuse from guards and male inmates while in detention (panel 3).<sup>34,35</sup>

In many countries, the risk of arrest and incarceration increases substantially if one is a member of a racial, ethnic, or national minority, a migrant, a foreign national, or is from a low socioeconomic group.<sup>16</sup> Discriminatory law enforcement practices and subsequent incarceration are often part of systemic inequality and class disadvantage, paralleling disparities in health. In the USA, which has by far the highest number of prisoners

### Panel 2: Arbitrary detention of patients with tuberculosis

Individuals with tuberculosis, especially those with drug-resistant strains, can face a range of rights-limiting measures—from detention in a prison to forced admission in a hospital or home arrest for claimed non-adherence to treatment. Detention is usually initiated as a purported public health measure, but is often done under improper public health justifications (AR1).

In 1985, the UN Economic and Social Council adopted the Siracusa Principles (AR2) to set standards for the legitimacy of countries' limitations on civil and political rights in the name of public health or other social purposes. In conjunction with guidance by UN human rights bodies, these principles underscore that restrictions on human rights to advance public health must be non-discriminatory and strictly necessary to achieve pressing public or social need. They must also be proportionate to the aim, and also must be the least restrictive means required for achieving the purpose of the limitation. These principles of human rights are in harmony with WHO guidance, which emphasises the exceptional circumstances under which forcible detention of patients with tuberculosis can be considered appropriate (AR3).

The effect of detention of individuals with tuberculosis for non-adherence to treatment raises certain similarities to the criminalisation of HIV exposure, and concerns that such criminalisation could be expanded under treatment as prevention programmes that seek to immediately enrol all HIV-infected individuals in care. In both cases, use of the criminal law against people living with HIV or tuberculosis can jeopardise public health efforts to expand detection and ensure linkage to care, including among key populations and women.

See appendix for references. AR=appendix reference.

in the world,<sup>36</sup> more than 60% of people incarcerated are racial and ethnic minorities and one in ten African American men in their 30s is in prison or jail.<sup>37</sup> Although white Americans commit more drug crimes than do racial minorities, two-thirds of people incarcerated for drug-related crimes are people of colour.<sup>37</sup> Because of racial disparities in HIV prevention and treatment, and discriminatory policing and justice system practices, African American male prisoners are five times as likely to have HIV as white male counterparts.<sup>38</sup> These high rates of imprisonment destabilise households, relationships, and communities, and exacerbate poverty and homelessness.<sup>39</sup> The USA is not alone in disparities in incarceration: Aboriginal, Indigenous people, ethnic minorities, and people who are religiously or culturally marginalised in many parts of the world, such as the Roma in Europe,<sup>40</sup> the Maori in New Zealand,<sup>16</sup> and Muslims and the Dalit in India,<sup>41</sup> are disproportionately incarcerated in those countries.

Once arrested, racial and ethnic minorities, key populations, and socially marginalised groups worldwide frequently face significant barriers to fairness in the criminal justice system. They often lack legal counsel, are not considered for pretrial release or alternatives to detention, or are denied release on inappropriate grounds, and do not receive a speedy trial.<sup>42,43</sup> Globally, 3 million people are in pretrial detention.<sup>44</sup> Long pretrial incarceration, lengthy sentences, lack of or ineffective parole and probation procedures, and failure to provide for compassionate release keep many people incarcerated

**Panel 3: Abuse of African American transgender women in US prisons**

Transgender individuals in the USA, especially those of colour, confront high rates of unemployment, homelessness, and marginalisation, which often force them to work in the underground economy, including commercial sex exchange. One in six transgender people reports a history of incarceration; and nearly half of African American transgender women have been incarcerated (AR1). Once incarcerated, 35% of transgender women experience sexual victimisation from other prisoners or from correctional staff (AR2). HIV prevalence among transgender women of colour in the USA has been found to be as high as 27% (AR3).

**A personal testimony by Tela La'Raine Love:**

"I am one of many African-American transgender women living in the Greater New Orleans area profiled and arrested for being in the right place at the wrong time, in the wrong body. I was arrested for the first time at 21 while trying to survive. In the past, police picked me up and threatened to take me in if I didn't perform oral sex on them, but this time I was taken to jail. It's like a stage set for depression and suicide.

I was probably infected with HIV because of unprotected sex, a product of fear and necessity. There are no condoms in jail, only plastic bread bags and some rubber gloves. In order to preserve my safety and dignity I always chose a man before he forced himself on me.

With little or no family support, during my first ten jailings I had to use my most valuable commodity at the time, my youthful body, to obtain necessities. I became a prison concubine to career criminals, many of who had been with every young trans-woman arrested on sex-work charges.

My last time in prison lasted 104 days. I had objects thrown in at me, was harassed for sexual favors, and was strip-searched by staff to look at my body. Staff allowed men with long sentences in maximum security threaten to get to me. I filed many complaints, but I was in the hole and guards paid no attention. The guards forced me to degrade myself just to have the bare necessities like a blanket to keep warm. 'Pop it off', I was told, 'or you gonna freeze tonight'. I had to flash private parts of my body to get a blanket.

During my incarcerations I witnessed innocence, vibrancy and youth snatched from countless transgender women of color, especially HIV positive women. At least eight of my friends probably became infected in jail. Once released, they had to engage in sex work outside to survive, just as in jail. None of them lived to the age of 35. I live with the trauma of this experience daily."

See appendix for references. AR=appendix reference.

for excessively long periods of time, increase risk of HIV infection, and pose barriers to accessing treatment.

**Human rights and HIV within prisons**

Prisoners with, or at risk of, HIV frequently endure pervasive human rights violations that affect all people incarcerated from time of arrest through completion of sentences. These violations include overcrowded and unhealthy conditions of confinement, sexual and other forms of violence, lack of adequate medical care, and absence of adequate planning for, and procedures and policies about, continuity of prevention, care, and treatment throughout all stages of the process, from arrest to release. They may also be subjected to abusive practices because of their HIV status, including discrimination, segregation, and denial of essential health interventions (table 3).

**Overcrowding, unhealthy conditions, violence, and discrimination**

Prison overcrowding is a systemic problem in more than half of countries globally: in 117 countries, prison occupancy is more than 100% of capacity, with 47 countries over 150% of capacity and 20 above 200% of capacity.<sup>36</sup> Overcrowding can force prisoners to sleep in shifts or on top of each other, reduce access to food, strain already substandard sanitation facilities, increase the spread of tuberculosis, encourage risky behaviour, exacerbate the suffering of individuals with mental illness, impede HIV prevention, increase risks of violence, and compromise the availability of medical care.<sup>45-51</sup> Among women, overcrowding exacerbates health risks associated with pregnancy and childbirth.<sup>52-54</sup> Sexual and other forms of violence, perpetuated by prison staff and other prisoners, is endemic in prisons, and contributes to HIV transmission, though rates are difficult to ascertain because of under-reporting.<sup>52,55,56</sup>

Although segregation of individuals with HIV in prisons has ended in many countries, it persists elsewhere. In some cases, on the basis of the false claim that it will protect HIV-positive people from violence, segregation is used as a purported means of protecting prisoners from violence.<sup>48</sup> Homophobia among staff and inmates can discourage HIV testing and treatment and lead to mistrust of medical staff.<sup>31</sup>

**Denial of access to prevention and treatment**

Prison health services in many countries are characterised by too few and poorly trained staff, inadequate health assessments on entry, poor record keeping, unavailability of prevention and treatment services, and breaches of confidentiality. Prison health services are often isolated from national AIDS and other disease programmes under the leadership of a country's ministry of health.<sup>3</sup> Negative attitudes by prison staff to key populations, stateless and poor people, minorities, and immigrants, who constitute a high percentage of the prison population in many countries, contribute to poor quality monitoring and treatment of HIV, tuberculosis, hepatitis, and drug dependency.<sup>5,49,50,57,58</sup>

UN agencies recommend 15 key prevention and treatment interventions for HIV in prisons, including prevention and treatment for HIV, drug dependence, tuberculosis, and hepatitis.<sup>59</sup> Unprotected sex and needle sharing are common in prisons, reinforcing the need for condom distribution, opioid substitution therapy, and needle exchange programmes as prevention strategies for both HIV and hepatitis.<sup>31,57,59,60</sup> In many countries, however, prevention interventions are either unavailable, sometimes as a matter of policy, or substantially compromised. Although some countries make condoms available to prisoners, accompanied by confidentiality protections,<sup>56</sup> others do not, citing security needs or prohibition of sex in prisons.<sup>45,47,61</sup> Prison guards can limit condom distribution to exercise power over inmates.<sup>49</sup>

## Testimony of individuals before, during, and after detention

## Before detention

Discrimination against drug users	<p>"They destroy all your day, all your program, your health...I said [to the police officer], 'You have taken me in 15 times you, yourself. You know who I am. You know there is no pending court decision or anything against me. Please let me go to do my surgery, I have an appointment with the doctor'. I said I have a problem, a serious one, and I showed it to them...He didn't even consider it. He told me sit where you are. And I missed my surgery."</p> <p><i>Homeless drug user with hepatitis C and other health conditions, Greece (AR1)</i></p> <p>"I've been stopped by the police. They ask me where I'm headed. Drug users are not considered people; they can do anything to you. They just classify people in their minds—drug users at the bottom...They believe drug users are always at fault. They judge you by your appearance. They make you show them your arms, and if they see needle marks, they demand money—you pay or you can be detained."</p> <p><i>Drug user, Russia (AR2)</i></p> <p>"I was caught by police in a roundup of drug users. They saw me with other users. They took me to the police station in the morning and by that evening I was in the drug center...I saw no lawyer, no judge."</p> <p><i>Formerly detained male drug user, Vietnam (AR3)</i></p>
Discrimination against transwomen	<p>"I was at [a bar] with a man and the cops asked only the transwomen to go outside and they searched us. If we had condoms we got arrested for attempted solicitation."</p> <p><i>Transwoman, New Orleans, USA (AR4)</i></p>
LGBT/sexual violence	<p>"One Sunday evening he called me over, handcuffed me, and told me that I was arrested for loitering. He drove me to a field, pulled my pants down, removed my handcuffs, put his gun to my head, and raped me. I grunted and screamed. When he was finished the police officer said, 'If you tell anyone, you're dead.'"</p> <p><i>MSM, Jamaica (AR5)</i></p>
Discrimination against LGBT individuals	<p>"In December [2011], I was in a place where I look for clients. I met a client, but [it turned out] it was not a normal person, it was a police officer. We went to a guest house. The client said, 'Take off your clothes'. I took off my clothes and suddenly the man pointed a pistol at me. Suddenly the guy had a tape recorder and a video camera. He said 'You will be an example for others. I am from CID [Criminal Investigation Department] and I'm looking for people like you'. He took me to Central Police Station and put me in lock-up. The police there told me, 'Call your fellow gays. We are going to a bar'. They were asking for gays in general, not just sex workers. They were five police. They gave me their phone and said, 'Call your friends, tell them there is a party here, so there are a lot of drinks'. They were threatening to shoot me if I didn't call my friends. They had SMG [submachine] guns. They cocked the guns at me, saying, 'If you don't call your friends, we'll shoot you.'"</p> <p><i>MSM, Tanzania (AR6)</i></p>

## Detention

Access to care	<p>"I started taking antiretroviral drugs before I was put into detox. Then when I was in [detox] I had to stop. I was really worried about my health but there was nothing I could do."</p> <p><i>Formerly detained male drug user, China (AR7)</i></p>
Long-term pretrial detention of juvenile prisoners	<p>"I am here on remand; I came in July 2007. I am done with my trial, just waiting for judgment...The trial didn't take too long, it is only the judgment that has taken long. It's been a year and four months since my trial ended. I've been back to court four times just for the judgment but it never comes."</p> <p><i>Juvenile male prisoner, Zambia (AR8)</i></p>
Food/physical violence/torture	<p>"They kept me in Buraiman Prison for 15 days. Sometimes they brought food but it was very little and people fought over it. There was no medical care. Sometimes they slapped us with belts."</p> <p><i>Formerly detained male prisoner, Saudi Arabia (AR9)</i></p>
Legal representation	<p>"I had no representation, I stood on my own behalf. It was my first time in a police station or in court. I was just speaking, and I was scared. So I didn't know what I was saying...As young people, it is very threatening to see the inside of the court. Even if you are not guilty, you end up pleading guilty."</p> <p><i>Juvenile male prisoner, Zambia (AR10)</i></p>
Physical violence/torture	<p>"If we opposed the staff they beat us with a one-meter, six-sided wooden truncheon. Detainees had the bones in their arms and legs broken. This was normal life inside."</p> <p><i>Formerly detained male drug user, Vietnam (AR11)</i></p>
Access to care	<p>"Lots of people inside drug detention centers have TB, and lots of people get TB while in detention. There is no treatment and everyone is all together all the time."</p> <p><i>Formerly detained male drug user, China (AR12)</i></p> <p>"I was kept in the HIV-positive ward [after I got my test result]. The people who were kept there went crazy. Many were serving long sentences, and they thought they would die there, so some of them did everything possible to die even sooner. There wasn't much difference in the treatment of HIV-positive prisoners compared to the rest. We didn't get better health care—we got some vitamins now and then, but they were past their expiration date. I wrote about this to the prison authorities because I knew that they had money that was supposed to be spent on AIDS in prisons. I complained over and over again about the food."</p> <p><i>Former detainee, Russia (AR13)</i></p>
Physical abuse/torture	<p>"We were stripped naked, only in our underwear, forced to sleep directly on the tile floor. Early in the morning, we were ordered to crawl. We were kicked, beaten, trampled. If they held an iron bar, we got the iron bar. If they held a wooden bat, we got the wooden bat. If they held a wire cable, we got cabled. Shoes. Bare hands. They used everything."</p> <p><i>Formerly detained male prisoner, Indonesia (AR14)</i></p>
Barred access to care	<p>"The psychiatrist comes once a month. He was here two weeks ago, but I didn't get to see him. My family tried to get me my medication, but couldn't. In here, if you complain too much, they put you in solitary."</p> <p><i>Male prisoner, Jordan (AR15)</i></p>

(Table 3 continues on next page)

Testimony of individuals before, during, and after detention	
(Continued from previous page)	
Sexual abuse	<p>"The man who was interrogating me walked over and stood face-to-face with me, and he said, 'Little Tamara, here's when everything starts to change. Now we're going to give you love and affection...because here you're going to have many friends—they're lining up for you'... and they began to grope me all over. They lifted off my bra and I felt their hands all over my body. They touched my buttocks and insulted me saying, 'Now you're going to feel what's good. You're good, you damn whore!'"</p> <p><i>Formerly detained woman, Mexico (AR16)</i></p>
Physical violence/torture	<p>"When I was in police custody, they beat me, a torture I have never experienced in my lifetime. They beat me, undressed me, whipped me. They put handcuffs on me so hard that the blood couldn't flow. They turned me upside down and hung me upside down, with a steel cord between my legs. They swung me and beat me. They saw I was crying and screaming and put a cloth in my mouth to suffocate me. I fainted—I couldn't handle the pain. They were abusing me with their language, calling me a prostitute. They put me somewhere where I couldn't talk to anyone. They were trying to get me to say something—I don't know. They were just torturing me for four days, beating me. After, there was lots of blood where I was beaten. My hands were green and swelling. They hit me on my ears and face with a metal band. There were scratches on my face. They said, 'you have to give us information about who had killed the person'. They tried to find out who had killed the person—I didn't know. The police are supposed to investigate a case, not to torture. After, they were scared to take me to a doctor because I still had injuries. They only took me after one month, when the swelling was down. When I went to the doctor, the police [officer] followed me into the doctor's room and listened to me. The police told the doctor that I was lying. 'Just a simple torture that she was given, not much', he said."</p> <p><i>Formerly detained woman, Zambia (AR17)</i></p>
Lack of food	<p>"If we get a sack of sorghum then we will eat it until it is finished. But after that we can wait for days before we get any more, just eating a bit of broth."</p> <p><i>Male prisoner, South Sudan (AR18)</i></p>
Lack of food/postnatal care	<p>"My child is not considered for food—I give my share to the baby, beans and kapenta—we each eat once a day. I am not given any extra food, and no special diet for the child. I simply make some porridge for him out of my nshima. The baby has started losing weight and has resorted to breast milk because the maize meal is not appetizing."</p> <p><i>Female prisoner, Zambia (AR19)</i></p>
Access to care	<p>"It is not possible here to go to the doctor. At the moment we wake up, we go to the field, then we go to a different field. Even if you complain [that you are sick], the officers tell you that you still have to go."</p> <p><i>Male prisoner, Zambia (AR20)</i></p>
Lack of ART medications	<p>"I had VCT [voluntary counseling and testing for HIV]—they tested my blood again and told me I was HIV-positive. They told me my CD4 count was too high for ART. I wasn't given any HIV drugs to prevent transmission, only folic acid and vitamins."</p> <p><i>Female prisoner, Zambia (AR21)</i></p>
Lack of clean water/physical violence	<p>"There is no permanent water here. The kind of water we use is from the ponds we dig...When you're in the gardens, some people who are thirsty, if they come across stagnant water, kneel down and drink it. They drink it without the permission of the warden. But if you're found drinking like a cow, they beat you."</p> <p><i>Male prisoner, Uganda (AR22)</i></p>
<b>After release</b>	
Discrimination	<p>"I really can't go out in public anymore because if police are trying to fill their quota they will arrest me when they see me."</p> <p><i>Formerly detained male drug user, China (AR23)</i></p>
Discrimination	<p>"Employers tell me they can't hire me because the police will be on their backs. Ex-prisoners usually find work by opening up their own little shops or businesses. If they do anything big, however, they'll make problems for you. But I can't even start a little project because I have no money."</p> <p><i>Male former prisoner, Tunisia (AR24)</i></p>
See appendix for references. AR=appendix reference. LGBT=lesbian, gay, bisexual, and transgender. MSM=man who has sex with men. ART=antiretroviral therapy.	

**Table 3: Prisoners' voices**

As of 2014, only 43 countries offer opioid substitution in at least one prison, about half the number that provides it in communities,<sup>17,62</sup> and rarely at adequate coverage.<sup>31,63,64</sup> Although needle and syringe exchange programmes have been widely adopted, only eight countries have implemented these programmes in prisons,<sup>62</sup> sometimes because officials do not want to be seen as encouraging unlawful drug use.<sup>17</sup> Women are more likely than men to have used illicit drugs before entering prisons, yet have less access to HIV prevention services.<sup>57</sup>

In the past decade, the availability of HIV testing in prisons has increased.<sup>65</sup> However, coercion, breaches of confidentiality and lack of protection from discrimination as a result of testing are commonly reported even in countries where national guidelines, along with UNAIDS and WHO, call for voluntary testing.<sup>48,66–68</sup> Therefore,

prisoners often do not perceive opt-out testing to be voluntary.<sup>69</sup> Post-test counselling is often unavailable, as are linkages to care and treatment. In some prisons, individuals are not informed of their test results.<sup>49,70</sup>

Antiretroviral therapy (ART) for HIV is available to prisoners in just 43 countries as of 2012.<sup>71</sup> When ART is offered, ancillary services might be lacking. In the USA, a broad survey showed that over 90% of prisons and jails offered ART, but almost 25% did not test viral loads or CD4 cell counts, nor refer to HIV specialists or psychologists if indicated. Only half offered substance abuse counselling and support specific to HIV-positive inmates.<sup>72</sup> Even where ART is offered, it is sometimes compromised by poor nutrition, substandard prison conditions, and violence.<sup>5,73,74</sup>

Prisoners are also highly vulnerable to tuberculosis and hepatitis C virus (HCV) infection. Prison overcrowding



and inadequate ventilation can spread tuberculosis,<sup>63,75,76</sup> which is a leading cause of the death of inmates in many countries.<sup>77</sup> Yet worldwide only about 63 countries provide tuberculosis treatment for prisoners (Dolan K, unpublished). HCV prevalence in prisons globally is estimated to be more than 10% and is spread through sexual violence, tattooing, and drug injection.<sup>1</sup> Substantially higher prevalence is not uncommon (eg, 38% in central Asia and Italy,<sup>78,79</sup> and 17.4 % in the USA<sup>80</sup>). But screening and treatment for HCV is uncommon in prisons.<sup>79-82</sup>

Finally, medical care in prisons is compromised by structural factors that often compel prison health professionals to put the interests of prison administrators over their duty of loyalty to and respect for their patients. Conflicts arise, for example, in health professional participation in the discipline of prisoners and in rules for the presence of security officials in medical examinations and allowing them access to inmate medical records.<sup>83-85</sup> These conflicts can lead to compromised quality of health services and foster distrust by prisoners of medical staff, discouraging use of health services that are available.

### Continuity of care upon release from prison

Linkage to care after release is rarely available or studied outside Europe and the USA. From published reports, various factors seem to contribute to positive outcomes for people living with HIV after release including access to HIV, substance use and mental health treatment, and social welfare support such as shelter, food, and livelihood. Yet most prisoners living with HIV are released without support to face pervasive and multidimensional forms of exclusion, stigma, and discrimination based on their incarceration history, HIV status, socioeconomic class, and race.<sup>86</sup>

The US Centers for Disease Control and Prevention recommends that discharge planning should include making an appointment with a community health-care provider, assisting with enrolment in social welfare or entitlement programmes for which released prisoners are eligible, and providing a supply of HIV medication and medical record.<sup>66</sup> But prisoners are either not linked to HIV, HCV, or drug treatment services upon release or are provided only some services; often they are deprived of information about them.<sup>66,87</sup>

The absence of adequate discharge planning and follow-through has profound and immediate health effects. A systematic review in the USA found that prisoners were likely to be lost to follow-up in post-incarceration linkage and retention in care. After release, ART use diminished from 51% to 29% and virological suppression dropped from 40% to 21%.<sup>88</sup> Hispanics and black people were less likely than non-Hispanic white people to acquire a prescription for ART after release.<sup>89</sup> Lack of follow-up for HCV treatment undermines the effectiveness of prison-provided care and contributes to spread of the disease in the community.<sup>81,82</sup>

Drug users have a severe risk of death from overdose after release from prison, especially in the first 2 weeks.<sup>90</sup> Results from a UK study showed that within the first week of discharge, drug users released from prison were 40.2 times more likely to die than individuals not formerly incarcerated.<sup>91</sup> Yet released prisoners are rarely able to access overdose prevention medications such as naloxone, methadone, or other treatment for substance dependence.

Fulfilment of the right of access to housing is an important determinant of access and retention in HIV care. Disparities in housing status contribute substantially to the gap in HIV treatment outcomes between homeless and non-homeless patients, including in achievement of virological suppression over time.<sup>92</sup> Homelessness among released prisoners is a significant barrier to retention in care<sup>93</sup> because it leads to social exclusion, difficulty accessing services, and lack of safe storage for HIV medications, thereby compromising adherence. More fundamentally, stigma and discriminatory housing laws and policies prevent former prisoners from finding stable housing<sup>94</sup> and from connecting with providers and social service agencies.

### The way forward

The factors leading to the disproportionate incarceration of people with or at risk of HIV can be considered classic social determinants of ill health. More specifically, they are political determinants of health, subject to what one of us has identified as “political epidemiology”, defined as exploring how laws, policies, and their enforcement affect health-related behaviours and outcomes and can point to key areas for reform.<sup>95</sup> For individuals whose identity or behaviours are criminalised, who are subjected to systematic discrimination, or who are currently or formerly detained, addressing political determinants is crucial to reducing incarceration and improving HIV and related outcomes.

Further research is needed to address the effects of social and political determinants on HIV outcomes and to support the development of appropriate legal, justice system, corrections, and public health reforms. There is evidence, though, that interventions that respect and fulfil human rights can reduce HIV incidence, enhance care, and improve retention for key populations and racial and ethnic minorities and other disadvantaged people in the cascade of care from diagnosis to viral suppression.

Evidence also exists that respecting human rights and engaging in good public health practice can reduce disproportionate incarceration of people with or at risk of HIV and related conditions. This human rights and public health approach includes ending the criminalisation of key populations; providing community-based drug treatment; ending the structural, social, ethnic, and racial disparities and violations of due process in law enforcement and criminal justice systems

that lead to overincarceration; ensuring fulfilment of prisoners' health and other rights within prisons; following UNAIDS guidelines for eliminating stigma and discrimination in the ability of people with HIV to access housing, treatment, jobs, and other resources;<sup>96</sup> and providing for a rigorous human rights monitoring programme in places of detention. Needed reforms can best succeed through ensuring the participation of groups most affected by the human rights violations.

### Reform of criminal laws

Countries should repeal laws that criminalise behaviour, status, and identity and that lead both to the spread of HIV, tuberculosis, and hepatitis in communities and to the unjust imprisonment of many of the people most at risk of these diseases. Similarly, laws that criminalise sex work and same-sex behaviours should be repealed. Reforming laws to decriminalise drug use and personal possession can improve access to HIV prevention and treatment, reduce levels of incarceration, and lessen prison overcrowding. Various forms of decriminalisation have been undertaken in Europe and Latin America; Portugal's decriminalisation of individual use and possession of drugs, for example, led to decreases in HIV transmission from unsafe injection in addition to reducing arrests.<sup>17</sup> Decriminalisation of sex work can also be effective: according to one study it could avert 33–46% of HIV infections among sex workers and their clients over a 10 year period.<sup>97</sup> Decriminalisation of MSM and homosexual sex could reduce the vulnerability of lesbian, gay, bisexual, and transgender people to violence and enhance the ability of these groups to self-organise, work with law enforcement officials, maximise their protection and dignity, and help ensure equal access to health services and justice.

### Reforms of law enforcement and the justice system

Reforms of law enforcement practices and the justice system can reduce both HIV transmission and incarceration. Good models exist to reduce HIV vulnerability among people who use drugs by engaging police in harm reduction approaches with them.<sup>98–100</sup> Arrest and prosecution of sex workers have been reduced by ending the use by police and prosecutors of condoms as evidence of prostitution.<sup>24,101</sup> Reforms to reduce disparities in law enforcement practices and to ensure a fairer justice system to reduce imprisonment overall can spare people with or at high risk of HIV the harms flowing from incarceration and can reduce overcrowding in prisons. Steps to reduce pretrial incarceration by ensuring quick case review, increasing use of release on personal recognisance, and adhering to human rights standards for the determination of whether to hold a person charged before trial (such as assuring presence in court), have been successfully undertaken in, for example, Argentina, Brazil, Costa Rica, and Russia.<sup>42</sup> In a pilot project in Nigeria, increasing access to legal counsel

reduced the duration of pretrial detention by 72%.<sup>42</sup> In the absence of decriminalisation of sex work and drug use, justice reforms can include reducing lengths of prison sentences, adopting alternatives to prisons, and early release, such as have been undertaken in Finland, Kazakhstan, and Uruguay.<sup>42</sup>

As part of overall reform of the justice system, legal counsel and legal assistants can be available in communities to support access to justice for people with or at risk of HIV, including those released from incarceration, and to increase legal and health literacy. This intervention can improve uptake of health services, and provide additional entry points for outreach, testing, and treatment.

### Addressing violence and rights violations in prisons and upon release

Prison violence, including rape and other forms of sexual violence against individuals in state custody, whether inflicted by staff or other inmates, can be reduced by rigorous data collection; analysis and reporting to understand the prevalence, causes, and dynamics of prison violence; adequate staffing and staff training; architectural interventions such as better lighting; redesigned prison management practices; documentation of incidents; and accountability for perpetrators.<sup>56,102</sup> Prison administrators and national officials can establish plans, with benchmarks, indicators, and regular reviews.<sup>102</sup> Other interventions to reduce violence include, but are not limited to, ensuring that prisoners have sufficient space to live; are provided with adequate food, nutrition, water, sanitation, and a hygienic and safe environment; are not subjected to torture or other forms of cruel, inhuman, or degrading treatment or punishment; and are not discriminated against or segregated on the basis of HIV status.<sup>42,102</sup> Prison disciplinary procedures can be accompanied by rigorous protections of due process, and guarantees against arbitrary or discriminatory punishment. In some countries, independent external monitors from national, regional, and international human rights bodies already have regular and complete access to detention facilities and individuals in detention, without prior notice. Such access can and should also be granted to non-governmental organisations involved in monitoring human rights and health conditions in prisons.

Comprehensive training to prison staff about the needs and rights of key populations, racial and ethnic minorities, migrants, poor people, foreigners, and women, as well as people with HIV generally, can help reverse discriminatory attitudes.<sup>72</sup> Furthermore, engaging key populations, racial minorities, women, and detained and formerly detained people to participate as peer supporters and to train law enforcement and health-care providers can bring their experiences to design effective strategies to reduce stigma and discrimination.

### Fulfilling the right to health in prisons

UNODC and WHO have urged that health services in prisons be organised under the leadership and authority of a country's ministry of health and national HIV/AIDS and tuberculosis programmes, whose expertise, independence from prison administration, and commitments to health can help ensure quality programmes.<sup>5,85</sup> Services should be at least equivalent to those in the larger community as measured by right-to-health standards of availability, accessibility, acceptability, and quality in staffing, equipment, supplies, and medication availability and services.<sup>4,7</sup> Referrals to community hospitals should be available where the prison cannot meet individual needs. Governments are responsible for assuring adequate resources to meet these requirements, and the international community can contribute resources to lower income countries through bilateral and multilateral mechanisms for global health funding.

Health services should include the full range of recognised prevention and treatment services for HIV, tuberculosis, hepatitis, drug dependence, and other health conditions. Experience has shown that prevention measures such as condom distribution and needle exchange programmes can be successfully implemented in prisons without causing security breaches or resulting in an increase in violence or other unlawful behaviour.<sup>56,103</sup> Opioid substitution therapy, ART, and tuberculosis treatment have all been successfully implemented in prisons,<sup>76</sup> reducing deaths among prisoners.<sup>65,104</sup> Despite the expense, screening and treatment for HCV is feasible and effective provided treatment is completed and there is continuity of care after release.<sup>79–82</sup> Providing health information to prisoners has been effective in engaging them in health promotion in prisons, especially if peer led.<sup>76</sup> Health administrators and staff can be trained in meeting the unique challenges of providing health care to prisoners and in addressing ethical concerns that arise in prison health practice, and given support in carrying out their responsibilities.<sup>85</sup>

Continuity of care upon discharge is essential for the effectiveness of HIV, tuberculosis, and hepatitis treatment, so discharge plans should include needed medicines, appointments for follow-up in the community, and copies of medical records. Linkage to social supports including housing should also be in place at the time of release.

### Conclusion

Structural social, legal, and political injustices that lead to disproportionate risk of HIV and to incarceration can and must be addressed. The use of prison, and pretrial detention, in response to non-violent crimes must be reduced. People in prisons must have their human rights respected. Following the steps that we have outlined here can bring about both better health outcomes for these populations and advance human rights and dignity.

### Contributors

LSR, JJA, and MM shared responsibility for literature search and developing initial drafts and writing the manuscript. KD contributed to the literature review. RL contributed tables on legal requirements. RL, LSR, JJA, MM, CB, and KD reviewed the initial draft and contributed content to it. LSR, JJA, MM, PE, RL, and KD participated in writing the second draft, which was reviewed by PE, KD, MM, RL, and CB. The third and final drafts were prepared by LSR and JJA with assistance from PE, MM, KD, and CB. All authors made substantial contributions to the design and approach, and approved the final paper. LSR had full access to the data for this paper and had final responsibility for submission for publication.

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We declare no competing interests.

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# THE LANCET

## **Supplementary appendix**

This appendix formed part of the original submission and has been peer reviewed. We post it as supplied by the authors.

Supplement to: Rubenstein L S, Amon J J, McLemore M, et al. HIV, prisoners, and human rights. *Lancet* 2016; published online July 14. [http://dx.doi.org/10.1016/S0140-6736\(16\)30663-8](http://dx.doi.org/10.1016/S0140-6736(16)30663-8).

## THE LANCET D-15-07178

### Web extra Search strategy

We identified published articles, papers and reports through a comprehensive review using terms: HIV, AIDS, Prisons, Correctional Facilities, Inmates, Jail, Incarceration, Penitentiary, Maximum Security Facility, Reformatory, Closed Setting, Detention Center, Crime, Criminalization, Human Rights, Human Rights Abuses, Stigma, Discrimination, Harassment, Social Stigma, Prejudice, Social Discrimination, Social Marginalization, Stereotyping, Sexual Harassment or Vulnerable.

Databases consulted in June 2015 included Pubmed [1311 hits], Web of Science [405 hits], PsycINFO [120 hits], Criminal Justice Abstracts with Full Text [583 hits], CINAHL [88 hits]. Additional articles were identified from reference lists as well as key informants and from websites of key organizations, eg, Human Rights Watch, WHO and UNAIDS and finally Google Scholar to identify relevant reports [50]. After the exclusion of duplicates, articles that did not address HIV, human rights or prison populations and articles published prior to 2000, 313 articles were assessed in full text and analyzed for this review. Additional articles were obtained and reviewed after the completion of the initial search.

Database	Search	Date	Hits
Pubmed	("HIV Infections"[Mesh] OR "HIV"[Mesh] OR HIV*[tw] OR "Human Immunodeficiency"[tw] OR "Acquired Immune Deficiency"[tw] OR "Acquired Immunodeficiency Syndrome Virus"[tw] OR Immunodeficiency Virus*[tw]) AND ("Prisons"[Mesh] OR prison*[tw] OR correctional facilit*[tw] OR inmate*[tw] OR jail*[tw] OR Incarcerat*[tw] OR Penitentiari*[tw] OR Maximum Security Facilities[tw] OR Maximum Security Facility[tw] OR Reformatory*[tw] OR Closed Setting*[tw] OR Detention Center*[tw] OR "Crime"[Mesh] OR Criminalis*[tw] OR criminaliz*[tw]) AND ("Human Rights"[Mesh] OR "Human Rights Abuses"[Mesh] OR Human right*[tw] OR stigma*[tw] OR discriminat*[tw] OR Harass*[tw] OR "Social Stigma"[Mesh] OR "Prejudice"[Mesh] or prejudice*[tw] OR "Social Discrimination"[Mesh] OR "Social Marginalization"[Mesh] OR "Stereotyping"[Mesh] OR stereotyp*[tw] OR "Sexual Harassment"[Mesh] OR vulnerab*[tw])	June 1st 2015	1311
PsycINFO	(DE "HIV" OR DE "AIDS" OR TI (HIV* OR "Human Immunodeficiency" OR Acquired Immune Deficiency) OR AB (HIV* OR "Human Immunodeficiency" OR Acquired Immune Deficiency)) AND (DE "Prisoners" OR DE "Prisoners of War" OR DE "Correctional Institutions" OR DE "Prisons" OR DE "Reformatories" OR TI ( prison* OR correctional facilit* OR inmate* OR jail* OR Incarcerat* OR Penitentiari* OR Maximum Security Facilities OR Maximum Security Facility OR Reformatory* OR criminaliz*) OR AB ( prison* OR correctional facilit* OR inmate* OR jail* OR Incarcerat* OR Penitentiari* OR Maximum Security Facilities OR Maximum Security Facility OR Reformatory* OR criminaliz* )) AND (DE "Human Rights" OR DE "Social Equality" OR DE "Social Justice" OR DE "Stigma" OR DE "Discrimination" OR DE "Harassment" OR DE "Prejudice" OR DE "Stereotyped Attitudes" OR DE "Marginalization" OR TI (Human right* OR stigma* OR discriminat* OR Harass* OR prejudice* OR stereotyp* ) OR AB (Human right* OR stigma* OR discriminat* OR Harass* OR prejudice* OR stereotyp* ))	June 16th 2015	120
Criminal	((ZU "hiv (viruses)") or ((AB "hiv")) or ((AB "aids")) or ((AB	June 18th	583

Justice Abstracts with Full Text	“aids”) or ((AB “Human Immunodeficiency”) or ((AB “Acquired Immune Deficiency”))) and (((ZU "prison accountability") or (ZU "prison administration") or (ZU "correctional institutions") or (ZU "correctional institutions") or (ZU "jail overcrowding") or (ZU "jails")) or ((AB “prison*”) or ((AB “correctional facilities”) or ((AB “incarcerat*”) or ((AB “jail*”)))	2015	
CINAHL	(( (MH "Human Immunodeficiency Virus") OR (MH "Acquired Immunodeficiency Syndrome") OR (MH "AIDS Patients") OR (MH "Anti-HIV Agents") OR (MH "HIV Seropositivity") OR (TI "Human Immunodeficiency Virus") OR (TI "Acquired Immunodeficiency Syndrome") OR (TI "AIDS Patients") OR (TI "Anti-HIV Agents") OR (TI "HIV Seropositivity") OR (TI “HIV”) OR (TI “AIDS”) OR (AB "Human Immunodeficiency Virus") OR (AB "Acquired Immunodeficiency Syndrome") OR (AB "AIDS Patients") OR (AB "Anti-HIV Agents") OR (AB "HIV Seropositivity") OR (AB “HIV”) OR (AB “AIDS”) ) AND ( (MH "Correctional Facilities") OR (MH "Correctional Health Services") OR (MH "Correctional Facilities Personnel") OR (MH "Prisoners") OR TI ( prison* OR correctional facilit* OR inmate* OR jail* OR Incarcerat* OR Penitentiari* OR Maximum Security Facilities OR Maximum Security Facility OR Reformatori* ) OR AB ( prison* OR correctional facilit* OR inmate* OR jail* OR Incarcerat* OR Penitentiari* OR Maximum Security Facilities OR Maximum Security Facility OR Reformatori* ) ) AND ( (MH "Human Dignity") OR (MH "Human Rights") OR (MH "Patient Rights") OR (MH "Discrimination") OR (MH "Racism") OR (MH "Stigma") OR (MH "Prejudice") OR (MH "Stereotyping") OR (TI "Human Dignity") OR (TI "Human Rights") OR (TI "Patient Rights") OR (TI "Discrimination") OR (TI "Racism") OR (TI "Stigma*") OR (TI "Prejudice") OR (TI "Stereotyp*") OR TI ("Criminali*") OR (AB "Human Dignity") OR (AB "Human Rights") OR (AB "Patient Rights") OR (AB "Discrimination") OR (AB "Racism") OR (AB "Stigma*") OR (AB "Prejudice") OR (AB "Stereotyp*") AB ("Criminali*") )	June 22nd 2015	88
Web of Science	(HIV* OR "Human Immunodeficiency" OR Acquired Immune Deficiency OR AIDS) AND TOPIC: (prison* OR correctional facilit* OR inmate* OR jail* OR Incarcerat* OR Penitentiari* OR Maximum Security Facilities OR Maximum Security Facility OR Reformatori*) AND TOPIC: ("Human Right*" OR stigma* OR "Social Discrimination" OR "Human Rights Abuses" OR discriminat* OR Harass* OR "Social Marginalization" OR Stereotyp* OR “Sexual Harassment" OR Prejudice)	July 1st	405



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