Risk Reduction Policies to Reduce HIV in Prisons: Ethical and Legal Considerations and Needs for Integrated Approaches

Sayantanee Das,[1] *Sameer Ladha,*[2] *and Robert Klitzman*[2]

1: UNIVERSITY OF QUEENSLAND, BRISBANE, AUSTRALIA; 2: COLUMBIA UNIVERSITY, NEW YORK, NY, USA

Keywords: HIV/AIDS, Sexually Transmitted Infection (STI), Prison Health Care System & Human Rights, Pre-Exposure Prophylaxis (PREP), Mandatory Screening

Abstract: The United States has the fastest growing prison population in the world, and elevated incarceration rates, substance use, and human immunodeficiency virus (HIV) prevalence are fueling each other. Yet without a national guideline mandated for HIV care within the prison system, standards for state and federal prisons vary greatly.

Introduction

Prisoners influence the health status and outcomes of a sizable proportion of the general public.[1] Around 30 million American citizens encounter a prison or institutional setting every year; and an estimated 11 million people are incarcerated at any given time.[2] The proportion of Americans in prison has grown around 20% since the year 2000, greater than the rate of population growth (18%).[3] The US has the fastest growing prison population in the world, with 750 out of every 100,000 adults currently incarcerated.[4]

Prisons serve as a concentration mechanism for relatively unhealthy individuals, partly because the behavioral and structural factors that lead to poor health (e.g., illicit drug use and alcoholism) are also associated with increased likelihood of incarceration.[5] Those in contact with the criminal justice system are at risk for worsening health status in the long term.[6]

Elevated incarceration rates, substance use and HIV prevalence are synergistic — intertwining and mutually reinforcing epidemics.[7] The World Health Organization (WHO) estimates prisoners are 15 times more likely to live with HIV than those who are not imprisoned.[8] These epidemics must be addressed together in order to attack the public health crisis of high HIV rates in prison populations.

Both jails and prisons are important when designing and administering HIV prevention and treatment interventions. For the purposes of this paper, the term, "prisoner," is used broadly to refer to adult and juvenile males and females detained in criminal justice and correctional facilities during the investigation of a crime; while awaiting trial; after conviction and before sentencing; and after sentencing. The term, "prison," is used to refer to all criminal justice and correctional facilities.[9]

Increased HIV Risk in Prisons

Incarceration contributes to high-risk behavior and disease transmission. Support and prevention efforts for both current and former inmates are therefore critical.[10] Prisons are high-risk environments for HIV transmission due to various high-risk factors — drug use and needle sharing, tattooing with homemade and

Sayantanee Das, M.S., *is a fourth-year medical student at the Ochsner Clinical School in New Orleans, partnered with the University of Queensland in Brisbane, Australia.* **Sameer Ladha, J.D., M.S.**, *is the Deputy Academic Director and Lecturer, M.S. in Bioethics at Columbia University.* **Robert Klitzman, M.D.**, *is a Professor of Psychiatry (in Sociomedical Sciences) in the Vagelos College of Physicians and Surgeons and the Joseph Mailman School of Public Health, and Director of the online and in-person Masters of Bioethics program at Columbia University, New York, NY, USA.*

The Journal of Law, Medicine & Ethics, 51 (2023): 366-381. © 2023 The Author(s)
DOI: 10.1017/jme.2023.86

https://doi.org/10.1017/jme.2023.86 Published online by Cambridge University Press

unsterile equipment, high-risk sex and rape. Furthermore, people living with HIV are more susceptible to getting ill due to overcrowding, stress, malnutrition, drugs and violence that all contribute to weakening the immune system.[11] AIDS takes years to manifest in severe form, and cofactors are expected to influence the rate at which the disease develops from HIV.[12] Figure 1 demonstrates the relationship of various risk factors to the increased transmission of HIV and its public health crisis.

The prevalence of sexual activity in prisons is largely unknown and thought to be significantly underreported due to denial and fear of stigma in the U.S., as well as homophobia and criminalization of same sex conduct and elsewhere.[13] Despite the lack of statistics, what is known is that incarceration disrupts stable partnerships, as prisoners can form new and sometimes coercive sexual partnerships with several individuals in settings where access to condoms and lubricants are extremely limited. Condoms are the primary physical barrier method of birth control and sexually transmitted disease (STD) prevention.[14] In a study of 75 inmate participants who contracted HIV while incarcerated between 1992 and 2005, 30% of those reporting consensual sex said they used a condom or improvised a barrier method, such as plastic wrap or rubber glove.[15] Consistent condom use, with lubrication during sex reduces HIV incidence by 80% in heterosexual couples.[16] A 2016 study estimated that between 1-19% of prisoners are involved in consensual same-sex activity while incarcerated.[17] Allegations of sexual abuse in prisons in the U.S. are increasing according to a Department of Justice study. Between 2009 and 2011, administrators reported about 25,000 allegations of sexual victimization in adult correctional facilities; prison staff was allegedly responsible for 49% of reported incidents, prosecution for which is very rare.[18]

In fact, surveys show that condoms are likely to be used during consensual sex acts in prison when available; there is also no evidence that increasing availability of condoms will increase sex frequency.[19] Condom distribution in prisons can be unobtrusive to prison routines, represents no threat to security or prison operations, and is accepted by most prisoners and staff once introduced.[20]

In the general population, injection drug use is the second most common means of HIV exposure; but for inmates with HIV, injection drug use is the principal vector of exposure prior to incarceration.[21] Inmates who illicitly obtain drugs or needles for injection in prison are particularly at risk, as contraband needles are more likely to be shared in prison than on the street.[22] Needle and syringe programs are available in only eight countries, ranging from those with limited funding and infrastructural support (Afghanistan, Armenia, Kyrgyzstan, Moldova, and Tajikistan) to countries that are comparatively well resourced (Germany, Spain, and Switzerland).[23]

HIV stigma arises from poor moral judgments, fear, and lack of knowledge. There is a cyclical relationship between stigma and HIV; people who experience stigma and discrimination are marginalized and more vulnerable to HIV, while those living with HIV are more vulnerable to experiencing stigma and discrimination. The disease, once deemed a "gay-related illness," remains associated with taboo and risky behavior, such as sexual promiscuity and abuse or illegal drug use. Public opinion often associates a positive HIV status to personal fault meant to be punished or dealt with on one's own.

HIV/AIDS Societal Stigma

HIV stigma arises from fear, prejudice, and lack of knowledge.[24] There is a cyclical relationship between stigma and HIV; people who experience stigma and discrimination are marginalized and more vulnerable to HIV, while those living with HIV are more vulnerable to experiencing stigma and discrimination. The disease, once deemed a "gay-related illness," remains associated with taboo and risky behavior, such as sexual promiscuity and abuse or illegal drug use. Public opinion often associates a positive HIV status to personal fault meant to be punished or dealt with on one's own.[25]

People are often unaware of HIV transmission, and fear the potentially deadly and highly infectious aspects of the disease that are easily preventable

The Journal of Law, Medicine & Ethics, 51 (2023): 366-381. © 2023 The Author(s)
https://doi.org/10.1017/jme.2023.86 Published online by Cambridge University Press

now with anti-retroviral therapy and public health practices. Forms of stigma include avoidance, isolation and rejection; judgment, shame and blame; discrimination and abuse; stigma by association, and self-stigma.[26]

Current HIV/AIDS Policies

The Eighth Amendment prohibits cruel and unusual punishment. Inmates are the only population in the U.S. with a constitutional guarantee of medical care due to *Estelle v. Gamble* in 1976, in which the Supreme Court required prisons to provide a minimum amount of health care for inmates.[27] The Court did not rigorously define "serious medical need" in *Estelle*, except to say that failure to treat such need would cause deliberate indifference, or the "unnecessary and wanton infliction of pain."[28] Deliberate indifference is analyzed in light of the individual circumstances of each case;[29] therefore, the line is unclear between constitutional and unconstitutional treatment regarding how medical staff in correctional settings can handle HIV care and treatment.

In 1993, President Clinton established the Office of National AIDS Policy to coordinate domestic efforts in tackling the HIV epidemic. In 2010, President Barack Obama released the first comprehensive strategy, coordinating several federal departments, including the Bureau of Prisons to take its first steps to address the effects of HIV/AIDS within the prison population. Unfortunately, neither the American Correctional Association nor the American Public Health Association has mandated national guidelines for prison health care. Rather, correctional facilities establish independent medical programs paid for by respective government funds at the county, state, or federal level. Lack of funding causes prisons to eliminate all but the most essential programs.[30]

The 1998 Minority AIDS Initiative provides grants to community-based organizations for HIV/AIDS awareness, prevention, testing, and treatment programs serving minority communities.[31] H.R. 895, the Stop AIDS in Prison Act (2013) was introduced in February of 2009, but did not move forward for consideration by the House of Representatives. The act would require the Bureau of Prisons to develop a comprehensive policy to provide HIV testing, treatment, and prevention for inmates within the federal correctional setting and upon release from prison aim to reduce the risk of community transmission.[32] The most recent federal response includes the HIV National Strategic Plan, the nation's third consecutive five-year national HIV strategy covering years 2021-2025, with a 10-year goal of reducing new HIV infections by 90% by 2030.[33] While the plan demonstrates the importance of involving the Bureau of Prisons and the Department of Justice, no federal policies have been enacted to ensure prisoners' health and protection from HIV.

Without a national guideline mandated for HIV care within the prison system, standards for state and federal prisons vary greatly. Several research projects and access programs demonstrate effective methods for HIV care and prevention that should be considered for future implementation. Four diverse and distinctive projects have been conducted across the United States (U.S.) — "New York State Prison Project," "Seek, Test, Treat, Retain Cascade," the "Positive Justice Project," and the "Novel Condom Access Program." These four programs are each analyzed below, highlighting key similarities and differences in outcomes, successes, ethical considerations, areas of improvement, and future research and policy suggestions.

Advantages and Limitations of Different Projects

New York State Prison Project: Positive Pathways

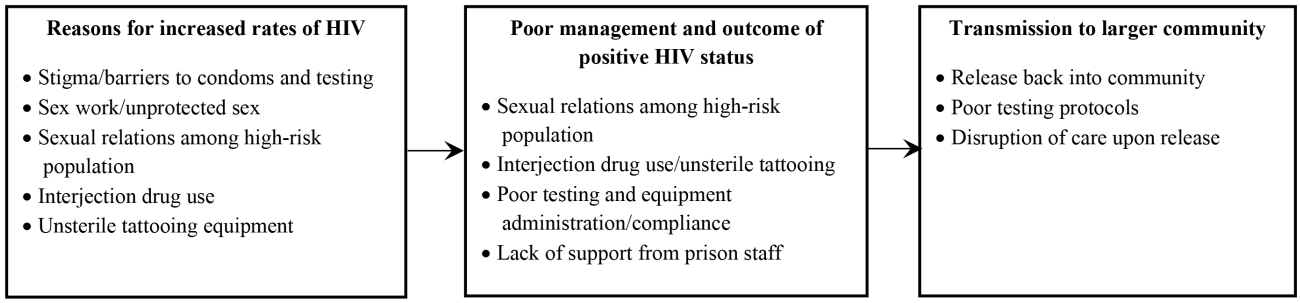
Positive Pathways is a three-year demonstration program funded by the Centers for Disease Control and Prevention (CDC), created by the New York State Department of Corrections and Community Supervision (DOCCS) and New York State Department of Health (NYS DOH). The goals are to reduce the stigma associated with being HIV positive in the correctional setting, identify new and existing HIV-positive persons in the inmate population, encourage HIV-positive inmates to link to medical care/treatment for HIV during incarceration, and link HIV-positive released offenders to medical care for HIV and supportive services in the community upon release and for six months post-release. The project focuses on the following strategies — education and training of DOCCS correction officers, DOCCS Health Services staff, and the general inmate population; delivery of an evidence-based intervention to connect inmates diagnosed with HIV to medical care; systematic offer of HIV testing to inmates with no testing history known to DOCCS within 90 days of release date; and supportive services in the community to ensure linkage to and continuation of medical care and treatment for HIV upon and after release for a period of six months.[34]

The emphasized role of correctional officers and health services staff in prisons creates a stigma-free environment and makes the facility a secure, safe, and respectful place. Prison staff undergo two-hour training sessions to learn policies and procedures of

The Journal of Law, Medicine & Ethics, 51 (2023): 366-381. © 2023 The Author(s)
https://doi.org/10.1017/jme.2023.86 Published online by Cambridge University Press

Figure 1

Social Determinants of HIV/AIDS in Relation to Prisoners



reducing HIV risk and occupational exposure protocol (post-exposure prophylaxis, or PEP). In NYS DOCCS facilities, approximately 34-55 significant exposures related to occupational exposure to HIV are reported annually; however, not a single exposure led to the transmission of HIV since 1999 due to the availability of PEP.[35] Staff also learn the basics of patient privacy and what is considered HIV-related personal information. Staff attempting to communicate about and transfer patients, sometimes overhear or wrongfully release HIV-related personal information. Yet disclosing the HIV-status of an inmate subjects him or her to stigma and discrimination. This training creates a safer environment for both staff, to now understand the risks and protective measures required in this environment, and prisoners, who, ideally, are now cared for by educated staff who will not promote stigma or discriminatory behavior.

Inmates receive educational video training, are offered HIV testing and access to ART. Treating HIV in prisons has shown to significantly lower HIV-related deaths, despite the hazardous environmental conditions and risks factors. Lowering viral load further decreases the chance of transmission if a significant exposure occurs.[36] Encouraging the discussion around HIV testing and treatment creates a more open and safe environment for inmates to vocalize their needs and recognize risk factors in their surroundings.

Positive Pathways Discussion

Education-based tactics have a great impact on changing cultural norms and behavior and reducing stigma towards vulnerable populations. As a behavior-change strategy, peer education is based on both individual cognitive and group empowerment and collective action theories.[37] This project takes a unique and positive approach by educating both prisoners and prison staff, since education of prisoners alone is not enough to change the prison's culture and environment. Prison staff and their treatment of and behavior around inmates living with HIV have a huge influence on culture and safety regarding such prisoners When the prison staff, including correctional officers, is well educated on HIV transmission and proper protocols for handling sensitive medical information, they are, ideally, better able to have unbiased and positive interactions with all prisoners, encouraging, through their example, the same behavior amongst the prisoners themselves.

Other projects also take on a peer education approach in group environments, while seeking to ensure security of inmates living with HIV. Project START and Project Bridge are two models that link returning offenders to follow-up services in the community to reduce HIV risk behavior.[38] Project START showed that enhanced multi-session interventions were more successful in reducing risky sexual behaviors than were single sessions, with incentives provided at weeks one and twelve.[39] Peer-education models are also designed for out-of-treatment drug users, for example, Self-Help in Eliminating Life-Threatening Diseases (SHIELD), the Risk Avoidance Project, and the Indigenous Peer Leader model in Chicago.[40]

Peer education involves training group members to affect change in knowledge, attitudes, beliefs, and behaviors among members of the same community. It typically generates the introduction of, and need for, other services, such as HIV counseling and testing. Some regard peer education as an inexpensive intervention strategy, because it typically relies on the use of volunteers.[41] Yet, high-quality peer education can be costly due to training, supervision, and resource provisions;[42] ideally, peer educators are continuously evaluated for competencies.[43] Peer educators themselves should be involved in the design or adaptation of the training curriculum and support materials to ensure the relevance of the training and ownership of the program in each specific state or local prison system.

The Journal of Law, Medicine & Ethics, 51 (2023): 366-381. © 2023 The Author(s)
https://doi.org/10.1017/jme.2023.86 Published online by Cambridge University Press

Group-level, peer-led interventions are highly effective by utilizing processes that reinforce norms and intentions to change.[44] Researchers are finding that the use of four one-hour small-group sessions focusing on health education issues is effective and easily administered.[45] Inmate peer educators create a natural environment of trust and respect for the health education topic in question. However, peers may not always be the most influential people to promote behavior change on certain topics. Perceived credibility of peers must be considered when designing programs, as well as status and power within the informal inmate hierarchy of those who volunteer or are selected.[46]

Seek, Test, Treat, Retain (STTR) Cascade

The National Institute on Drug Abuse implemented this novel strategy to collect and harmonize data across 22 independent research studies, developing and empirically testing interventions to effectively deliver an HIV continuum of care to diverse drug-abusing populations.[47] The seek, test, treat, and retain model of care (STTR) involves reaching out to at-risk individuals who have not been tested for HIV recently (Seek), engaging them in HIV testing (Test), initiating persons living with HIV on antiretroviral therapy (ART) and other treatment services (Treat), and facilitating uninterrupted HIV care (Retain).[48] This model integrates players in the jail or prison and the community to detect and treat offenders, as well as connecting them to HIV care services after release. Continuation of care is most valuable to achieve successful health outcomes. Though most releasees qualify for Medicare or Medicaid after release, numerous structural barriers often exist that may halt the continuation of proper HIV treatment. The significant increase in emergency department use and hospitalization upon prison release indicates the need to focus on proactive health care and health status evaluation at the time of release from prison, consistent with obligations defined by the United Nations in the Nelson Mandela Rules.[49]

DISCUSSION OF THE SEEK, TEST, TREAT, RETAIN CASCADE

The correctional system encompasses a range of overlapping systems. Different correctional jurisdictions greatly affect the circumstances and access to services for individuals with HIV, particularly salient for those who move from one facility to another.[50] These transitions have the potential to greatly disrupt HIV treatment and support for a given individual and present serious challenges to coordinated care, standards of care, and treatment outcomes.[51] The comprehensive approach of this project facilitates careful follow-up and continuation of care, fostering a stronger patient-provider relationship. Early detection of HIV is in the best interest of prisoners; evidence from clinical trials and observational studies showed that early initiation of ART in people living with HIV results in improved clinical outcomes compared with delayed treatment.[52] Increasing screening will gradually improve the standard of care for prisoners, however refusal to enforce screening due to institutions' wariness of assuming the responsibility to treat must first be addressed.

Limitations in this cohort study are inherent in combining data from independent studies with different enrollment criteria and different study designs.[53] While this variation limits power for analyses looking at longitudinal outcomes, the STTR cohort remains better powered than individual studies. The study provided helpful data on prisoners' demographics, risk behaviors characteristics, and substance abuse distributions.

The Positive Justice Project

The Positive Justice Project (PJP) is a national coalition of organizations and individuals working to end HIV criminalization in the U.S. The goal of the PJP

The Positive Justice Project (PJP) is a national coalition of organizations and individuals working to end HIV criminalization in the United States. The goal of the PJP is to end laws and policies that subject people living with HIV and other stigmatized diseases to arrest and increased punishment on the basis of ignorance about the nature and transmission of HIV; bias against those who are disproportionately affected; and lack of consideration of whether HIV-positive people intended or caused any harm.

The Journal of Law, Medicine & Ethics, 51 (2023): 366-381. © 2023 The Author(s)

https://doi.org/10.1017/jme.2023.86 Published online by Cambridge University Press

is to eliminate: laws and policies that subject people living with HIV and other stigmatized diseases to arrest and increased punishment on the basis of ignorance about the nature and transmission of HIV, and reduce bias against those who are disproportionately affected, and lack of consideration of whether HIV-positive people intended or caused any harm.[54]

The PJP has investigated over 350 cases in which offenders were accused of exposing others to HIV. These offenders are imprisoned for decades, and in many cases, have to register as sex offenders, as a consequence of exaggerated fears about HIV. Most of these cases involve consensual sex or conduct (such as spitting and biting) that has only a remote possibility of HIV exposure. For example, a number of states have laws that make it a felony for someone who has had a positive HIV test to expose another person to their blood or saliva.[55] In some cases unrelated to HIV exposures, prosecutors disclosed the offenders' HIV status to increase punishment, as it was seen as an aggravating factor in their crime.[56]

Stigma and discrimination regarding HIV have impeded the justice of many prisoners, in terms of receiving both appropriate care and an impartial sentence.[57] Often, states are putting HIV-positive people in prison for not disclosing their status or engaging in risky behavior. This perpetuates the public health problem in prisons and puts HIV-negative prisoners at higher risk of contracting the disease, especially if these prisoners are not tested after being sentenced and put on ART immediately, if infected.

The problem then lies in determining a just and appropriate punishment for people living with HIV who knowingly putting others at risk of contracting the potentially fatal disease. Typically, there is no punishment for people with the flu, TB, or other infectious diseases for knowingly putting others in harm's way. HIV should now be treated similarly. With the recent advances in medicine and technology, HIV is no longer considered the death sentence it was when it was first discovered. With proper medication and therapies, patients can maintain an undetectable viral load, putting those with whom they engage in intimate contact at virtually no risk. Rather than incarcerating these individuals enabling the public fear, and furthering stigma towards this population, policies should shift away from punishment and towards counseling and treatment.

Discussion of the Positive Justice Project

Structural changes in society and the justice system are crucial goals that will reduce stigma and continued HIV transmission. Discrimination against people living with HIV remains a large challenge and affects our justice system through human biases held by decision makers.

It is fundamentally unjust, morally harmful, and virtually impossible to enforce the criminalization of HIV transmission with any semblance of fairness. According to various laws that criminalize HIV transmission, HIV status must be disclosed to sexual partners. Yet in many cases, there is no definitive method to prove disclosure. Though intent to transmit HIV is a key element of the crime, simply knowing one's own HIV status and failing to disclose that to sexual and needle-sharing partners is enough for prosecution in 21 and 12 states, respectively, and successful transmission is not required.[58] As of 2020, only 9 of the 37 states with HIV criminalization laws account for HIV prevention measures that defendants took to reduce transmission risk, such as condom use, and ART.[59] The best available scientific and medical evidence should guide any use of criminal law; therefore, use of condoms, and having a low viral load should indicate lack of intent to infect. Nor should acts of biting or spitting qualify as intent to harm. Non-disclosure alone is not proof of malicious intent. Such laws impose systems of surveillance and punishment on sexually active people living with HIV, not only in their intimate relations and reproductive lives, but also in their attempts to earn a living, engage in public services, and access public accommodations.[60]

International Guidelines on HIV/AIDS and Human Rights, UNAIDS and the Global Commission on HIV and the Law do not recommend HIV-specific criminal laws, but instead recommend the use of general laws for only the most egregious behavior, or intentional transmission.[61] However, HIV criminalization consists of selective and arbitrary prosecutions, resulting in disproportionate sentencing and increasingly harmful impacts on public health and human rights violations. As of 2020, 37 states have laws that criminalize HIV exposure, but only 9 states account for HIV prevention measures and ART.[62] Singling out a person's HIV status is inherently stigmatizing; the PJP also highlights that a number of cases criminalize unrisky behaviors consider HIV-status for an unrelated crime.[63]

The side effect of these prosecutions and sentences is reinforcement of stigma. South African judge, Edwin Cameron said, "HIV criminalization makes it more difficult for those at risk of HIV to access testing and prevention. It also makes it more difficult for those living with the virus to talk openly about it, and to be tested, treated, and supported."[64]

The Journal of Law, Medicine & Ethics, 51 (2023): 366-381. © 2023 The Author(s)

https://doi.org/10.1017/jme.2023.86 Published online by Cambridge University Press

Novel Condom Access Program

The Novel Condom Access Program for San Francisco County Jail Prisoners is a collaborative project between the Center for Health Justice (a community-based organization focused on HIV prevention and treatment among Californian prisoners), the San Francisco Sheriff's Department, and the Forensic AIDS Project (FAP), and sponsored by the Center for AIDS Prevention Studies of the University of California, San Francisco. They installed, stocked, and monitored one condom-dispensing machine in a gymnasium facility where 800 prisoners had weekly access. The machine was purchased from an online vendor for $200 and stocked with individually wrapped Lifestyles brand vending condoms that cost about 22 cents each, but were dispensed at no charge.[65] Center for Health Justice or FAP staff member regularly restocked the machine, escorted by custody staff for two months during the study, providing San Francisco prisoners with two methods to access condoms — health education sessions or the dispensing machine.

The project resulted in many positive findings. Prisoners who were gay, female, transgender/other gender, or previously diagnosed with HIV were more likely to have obtained condoms than prisoners who were heterosexual, male, or HIV-negative. Prevalence of sexual activity in prisons did not change, rather only the prisoners' awareness of access to condoms and their likelihood of obtaining condoms increased after the free condom-dispensing machine was installed in the jail. Initially, higher-level administrators were concerned that condom access would send a "mixed message," because sex is illegal in jail. After the study, custody operations were not impeded, and custody staff acceptance of condom access for prisoners improved. Interviewees of the study reported little to no embarrassment associated with accessing the machine themselves, and few had negative thoughts about other prisoners who did.

NOVEL CONDOM ACCESS PROGRAM DISCUSSION

A US prison medical provider would be reasonable and responsible in giving an inmate a condom to prevent HIV and other sexually transmitted infections. Doing so, however, acknowledges that unprotected sex occurs in jails and prisons, when in fact, current policies in the vast majority of US prisons hold that sex in prison is illegal and condoms are contraband. The human need and social reality that sex occurs in prison must be met with the practical approach of ensuring that the sex that is taking place is happening safely and consensually. In 2015, San Francisco's chief deputy sheriff, Matthew Freeman, pointed out concerns for potential harm: "we know from our experiences running and managing these county jails that even consensual sexual activity amongst inmates can lead to very real problems, like disharmony in the jail, which the sheriff's department says is a potential security risk."[66] At the same time, the public health department noted that the use of and exposure to condoms was another way of de-stigmatizing HIV.

In 1989, San Francisco became one of the first places in the country to provide condoms to inmates in the county jail.[67] As of 2008, fewer than one percent of correctional facilities provide condoms to inmates, though those that do include some of the nation's largest urban prisons; and no state provides clean injection equipment for prisoners.[68] California is the second state after Vermont to require condoms to be made available to all state prisoners within five years of 2015, even though sex between prisoners is unlawful. Successful models for condom distribution have been witnessed in San Francisco, District of Columbia, Los Angeles, Philadelphia, parts of NYC, Mississippi, and Vermont.[69] For example, a study at the Washington, DC Central Detention Facility assured that condom access is unobtrusive to the jail routine, displays no threat to security or operations, does not increase in sexual activity, and is accepted by most inmates and correctional officers.[70]

This project's condom machine method, however, was the first in the United States to provide prisoners direct access to condoms, which could serve to limit the stigma attached to these risk behaviors. Previous methods required going to health services to request a condom or attending a one-on-one counseling session. Adding such barriers, while they may seem small, suggests that condoms should remain a taboo topic and its use be discouraged, as it is associated with prohibited behavior. Condoms are a low-cost and easy-to-use physical measure to protects the community; when this novel project was expanded into a one-year pilot study, the researchers found that distributing condoms using discreetly located condom dispensers would cost less than $2 per inmate annually.[71]

An Evaluation of Programs

Each program has provided beneficial insight, outlined in Figure 2, into the needs of the prison community concerning HIV care, treatment, and prevention. The Positive Pathways project increases the autonomy of prisoners and prison staff alike, as all members of the prison system are more educated and are better able to make decisions regarding their personal health and their interactions within the prison community. The intervention technique of Positive Pathways pro-

The Journal of Law, Medicine & Ethics, 51 (2023): 366-381. © 2023 The Author(s)
https://doi.org/10.1017/jme.2023.86 Published online by Cambridge University Press

vides much greater benefits over harm, as the educational seminars will reduce stigma and open up the conversation regarding risk behaviors and HIV to be less taboo. Initial resistance to the program may be expected, but with continued efforts — repeated seminars, and positive examples set by prison staff and correctional officers — the social atmosphere should gradually improve. The most positive aspect of the project is how it targets every member of the prison to improve the HIV crisis from all angles, rather than targeting those at risk and separating them from others. Approaching only those inmates living with HIV or exhibiting high-risk behavior prevents long-term improvement in education and awareness with the ultimate goal of reducing stigma. Protection of confidentiality and privacy in correctional settings faces major challenges — adequate protection for medical records, personal disclosures in group settings, and reports of behavior that violate security rules or threaten safety and security; this project addresses these issues through correctional officer and staff training.[72]

In comparison, the STTR project focuses on understanding the demographic and behavior of HIV positive inmates from before entering prison to after their release in terms of risky behavior, sexual preferences, and continuity of care. The largest barrier to the treatment cascade is cost, though US courts affirm that lack of resources is not an acceptable justification for failing to meet prisoners' constitutional rights — such as access to medically necessary care.[73] Expanded treatment of this STTR cascade has significant budgetary implications, and without concurrent expansion of correctional healthcare budgets, correctional institutions are reluctant to begin the "seek" and "test" aspects of the intervention, given the ethical obligation to then "treat" and "retain."[74]

While the research of the STTR cohort study provides a great amount of insight and benefit for future interventions, the study focuses solely on downstream measures compared to more upstream prevention methods. The STTR cascade results are published to design future interventions that will ideally curb risk factors and ensure continued treatment and rehabilitation for those affected by HIV. The project has done little to empower and educate the research subjects — the prisoners. The interventions to be put into place and ensure continuity of care from this cohort study should include proper educational components as a part of the informed consent. Research subjects should be able to view the results and benefit from the study each step of the way, but the studies are currently extremely diverse in their intervention techniques and locations of implementation.

The PJP, similar to the Positive Pathways project, has an educational component of HIV prevention and care prior to imprisonment of HIV-positive offenders. The PJP focuses greatly on nonmaleficence and justice — to protect HIV-positive offenders from the biases and inequalities of the criminal justice system to ensure equal and fair treatment. Most importantly, unbiased sentencing of offenders living with HIV will likely lighten the burden on prisons — the number of prisoners they must provide HIV treatment for and the amount of time these prisoners are in their care.

The Novel Condom Access Program demonstrates a cost-effective method to provide ethical HIV prevention and break down structural barriers evident in the prison environment. The addition of a condom-dispensing machine allows the entire prison population to freely and easily access the intervention without judgment or stigma — demonstrating equity and justice. Inmates would have the autonomy to access freely on their own volition this physical barrier intervention, which the requirement of even a simple health counseling session could deter for some prisoners. Condom access has shown no harmful impacts in prisons and no increase in sexual activity, clearly indicating that the benefit-risk ratio encourages implementation of this intervention. Unfortunately, the lack of acknowledgement of sexual activity in prisons due to its illegal status makes it extremely difficult to then advocate for interventions to ensure safe sex practices.[75] Only if the criminal justice system can work past this "Catch-22," will the addition of further condom dispensing machines discourage unsafe sex, greatly reducing the risk of HIV transmission.

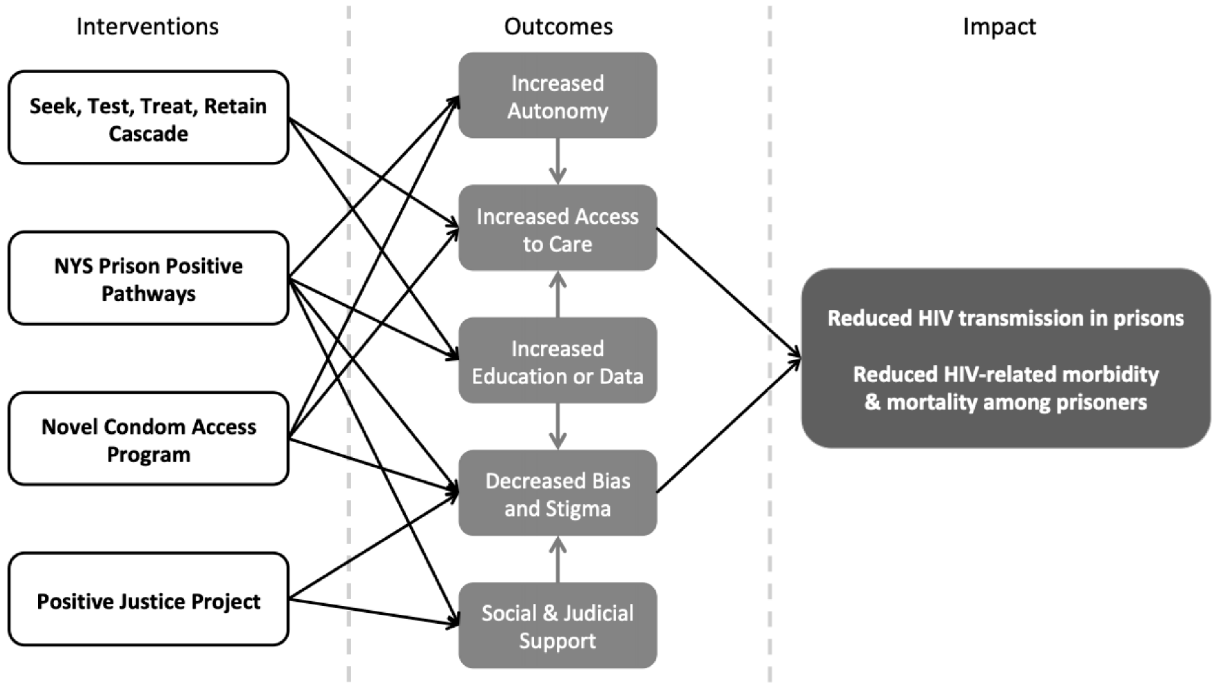
New Solutions

Cost-Effectiveness and Mandation of PrEP

Pre-exposure prophylaxis (PrEP) is a way for people who do not have HIV, but are at substantial risk of getting it, to prevent infection by taking daily oral or injectable medication — such as Truvada (emtricitabine/tenofovir disoproxil fumarate) or Descovy (emtricitabine tenofovir alafenamide).[76] Substantial HIV risks in prison include many factors observed amongst the prison population: being in a sexual relationship with an HIV-positive partner, inconsistent or non-use of condoms during sex, having a high number of sex partners, recent acquisition of a sexually transmitted infection (STI), engaging in transactional sex, or sharing injection or drug preparation equipment.[77] PrEP is needed during periods of risk rather than for life, so prisoners would typically only need the medi-

The Journal of Law, Medicine & Ethics, 51 (2023): 366-381. © 2023 The Author(s)
https://doi.org/10.1017/jme.2023.86 Published online by Cambridge University Press

Figure 2
Differing outcomes of interventions.



cation during the duration of their sentence. PrEP has been shown to reduce the risk of HIV infection by up to 92% when taken consistently.[78] According to U.S. Public Health Service (USPHS) clinical guidance, PrEP is appropriate for HIV-negative persons who are at "substantial risk" for contracting HIV, especially when they reside in high HIV burden areas. Because maternal seroconversion during pregnancy and breastfeeding is a significant source of pediatric HIV infection, PrEP is especially important in cases of expecting women with HIV in prisons in order to prevent transmission to potential mothers and their fetuses.[79] In 2016, PrEP prescriptions were lowest in Southern states and states with higher proportions of African-American residents; these states and individuals are found to have higher rates of HIV transmission.[80] Changing the conversation in these states to encourage education and usage of PrEP will likely change the risks of HIV transmission both in prison and the general population.

PrEP costs are substantial, and include costs for clinic staff, medications, laboratory testing, pharmacy services, community education, provider education and monitoring and evaluation. Implementation research typically should include evaluation of strategies for minimizing costs that do not compromise safety, effectiveness or the quality of information provided to prospective PrEP users. Ways to negotiate lower prices for medications and laboratory tests could be developed using volume purchasing. PrEP use is straightforward, which should help in readily expanding its use.

A study in PrEP administration in South African women found that the medication is very cost-effective by South African standards, presenting noteworthy value under virtually all plausible scenarios.[81] The HIV incidence threshold for cost-saving implementation of PrEP will vary depending on the relative costs of PrEP, and treatment for HIV infection and the anticipated effectiveness of PrEP.

Mandatory Screening

A national survey of correctional facilities revealed that 32% of state and federal prisons mandated HIV screening upon entry in 2005.[82] A subsequent, 2009 article reported that 24 states required mandatory HIV screening of inmates upon entry, and sometimes also release, from prison.[83] Of the states that mandated screening in 2005, only 7% actually tested inmates, unless they refused, and less than half (45%) routinely offered or encouraged inmates with risk factors the opportunity to be tested.[84] Among city and

The Journal of Law, Medicine & Ethics, 51 (2023): 366-381. © 2023 The Author(s)
https://doi.org/10.1017/jme.2023.86 Published online by Cambridge University Press

county jails, none in 2005 mandated HIV screening or tested inmates unless they refused, but about a third (36%) routinely offered the opportunity and encouraged inmates with risk factors to be tested.[85]

A recent study in a Fulton County, Georgia high-volume jail found routine, rapid opt-out screening was cost saving compared to clinician-initiated testing, even with greater costs for screening and earlier treatment.[86] Federal HIV prevention funding could be better appropriated for screening when considering these results.

OPT-OUT POLICY FOR MANDATORY SCREENING

Mandatory screening, or even mandatory administration of pre-exposure prophylaxis (PrEP), infringes on a number of human rights. At the same time, the HIV crisis in prison settings calls for an evaluation of the balance between autonomy and public health. Having prison staff and health services conduct medical testing or prescribe treatment without the patients' full consent, even with the patients' interests at heart, is a form of paternalism. According to *Schloendorff v. Society of New York Hospital* in 1914, "every human being of adult years and sound mind has a right to determine what shall be done with his own body."[87] While prisoners must give up a variety of rights and privileges in terms of their autonomy and freedoms, they should be able to maintain basic human rights, including the ability to make choices regarding their medical well-being.

An opt-out policy for HIV screening or pre-exposure prophylaxis would change public norms and community expectations, while maintaining some prisoner autonomy; this voluntary method has increased response and testing rates in a variety of scenarios even outside of HIV.[88] In 2006, the CDC recommended that all health-care settings, including prisons, provide HIV testing in an opt-out manner.[89] According to a 2014 study published in *Health Affairs*, however, only 19% of prison systems and 35% of jails provide opt-out HIV testing.[90]

With opt-out testing the patient is notified that testing will be conducted unless the patient declines.[91] While, opt-out testing has increased response rates and testing numbers, it is prone to inadequate implementation, particularly testing without patients' full knowledge or consent.[92] The failure to adequately explain the voluntary nature of opt-out HIV testing is not unique to correctional settings, however due to the explicit loss of autonomy and other rights, prisoners must be further protected in such cases and recognized as a vulnerable population.

Mandatory testing policies have the opportunity to change the overall stigma and discrimination associated with HIV care.

Similarly, for example, Similarly, for example, historically, mandatory requirement of vaccinations for other infections prior to entering public schools or hospital staff has shifted public opinion, practice, and understandings of public health. Ideally, the opt-out option for vaccinations allows students and families to make autonomous medical decisions for religious or philosophical reasons but minimizes the rising incidences of many harmful diseases due to herd immunity of the community members that do get their immunizations. For the majority of Americans without a strong personal belief for exemption, getting the vaccination is acceptable as the path of least resistance.[93] With coronavirus 19 (COVID-19), the ethical discussion and controversies surrounding mandatory vaccinations have been much more public and available in the literature, largely due to advocacy groups, politicians, and media reactions. Similar policies in prisons and their ethical implications are less likely to be discussed to the same extent in the media, as the general public does not relate to the prison population nor do they understand that prison health affects the health of the overall population.

Recommendation to Mandate HIV Numbers Release

Started in 1926, the National Prisoner Statistics (NPS) Program collects annual data on prisoners at year-end. In 1991, the Bureau of Justice Statistics (BJS) began using the NPS to collect data on the number of prisoners who had HIV or confirmed AIDS. Since HIV data collection began in the NPS, completeness of HIV reporting has ranged from one to four missing jurisdictions in any given year. To produce national and state totals of the number of prisoners who had HIV, estimates were made for non-reporting jurisdictions.[94]

The lack of accurate statistics has increased the struggle for state and national political leaders to make appropriate policy changes. Without the correct numbers, policy makers cannot properly evaluate whether state or federal allocations of funds have been sufficient for prisons' use of treatment and counseling. In fact, the lack of such statistics has been used for political and financial gain, promoting corruption and reallocation of funds according to politicians' personal or professional needs.

Gaps in Federal HIV Prevention Policy

Near the end of 2017, President Donald Trump's administration dismissed the remaining members of

The Journal of Law, Medicine & Ethics, 51 (2023): 366-381. © 2023 The Author(s)
https://doi.org/10.1017/jme.2023.86 Published online by Cambridge University Press

a federal advisory council on HIV and AIDS, dissolving the group completely.[95] One of the former members, Scott A. Schoettes, claimed that "the Trump administration has no strategy to address the ongoing HIV/AIDS epidemic, seeks zero input from experts to formulate HIV policy, and ... pushes legislation that will harm people living with HIV and halt or reverse important gains made in the fight against this disease."[96] The Presidential Advisory Council on HIV/AIDS (PACHA) was created in 1995 by President Bill Clinton to provide recommendations and feedback for the National HIV/AIDS strategy. The Director of the Office of National AIDS Policy (ONAP), a position created in 1993 by Clinton, has been vacant since the Trump administration began in January 2017. The director oversees domestic efforts to fight the epidemic through the National HIV/AIDS Strategy (NHAS), including the administration's HIV/AIDS policies across multiple federal agencies. Without a national coalition and systematized updates according to the newest efforts and research findings, the nation will be at a standstill in terms of goals and directions to target the disease.

Americans generally do not want their tax dollars going towards prison rehabilitation, especially if they believe it will continue to propagate risky behavior and substance abuse that is seen as being at higher rates amongst prisoners. This arises from the notion that prison is a punishment, rather than its intended purpose of rehabilitation.

Nevertheless, the problem cannot be solved on a federal level alone. Notably, 92.1% of inmates diagnosed with HIV or AIDS were held in state prisons; therefore, passage of federal legislative guidelines at the state level, including enactment in local jails, is invariably important.[97] Typically, state and other legislation is not changed or implemented without sufficient evidence or statistics to back the advocators' claims. While anecdotal evidence and studies indicating prisoners' high-risk behavior have led to the distribution of condoms and dental dams in correctional facilities in 18 countries, bleach distribution in 13 countries, methadone maintenance in five countries, the U.S. has often faced challenges in making legislative or policy changes regarding prisoners.[98]

Each prison has a potential to be a healthy setting, provided there is political will and technical competence on the part of governments and custodial authorities to address the overall health of inmates, including their social, physical, spiritual, and mental well-being. Funding for prison health care is a major impediment; however, prevention methods may decrease costs of healthcare and treatment overtime, and the stress on prison budgets may be reduced by penal systems being more selective about criminals who receive custodial punishment.[99] Prison reforms have a strong potential to benefit not just inmates, but also the wider community, into which most inmates will return in the fullness of time.[100]

Underlying Ethical Tensions

What is the Bare Minimum for Healthcare and Human Rights?

Each of the four projects examined here has demonstrated effective and positive movement towards ethical HIV care and prevention for the prison population. However, without heightened public and government recognition of the need and ethical duty to care for inmates, enactment of such initiatives, nationally, faces obstacles. For incarcerated people who lack health insurance in the community, the correctional setting may be a primary point of access to HIV testing and treatment.[101]

Ethical HIV prevention, care, and treatment in correctional settings requires that people who are infected with HIV or at risk for infection have safe access to medical testing and preventive services; understand their treatment options and the potential benefits or side effects of testing and treatment; have the information and capacity to freely consent to or refuse testing and treatment; and have reasonable assurance that the confidentiality of their medical records and the privacy of their medical treatment will be protected.[102]

New legislation in the U.S. has slowly improved the standard of HIV care in prison to uphold these values. The Eighth Amendment guarantees inmates healthcare services, noting that indications of illness cannot be ignored. The Prison Rape Elimination Act creates a safer environment for prisoners amongst themselves and their supervisors. Americans with Disabilities & Rehabilitation Act asserts equal treatment and access for all persons in prison despite their HIV status.

The unsuccessful Stop AIDS in Prison Act, however, represented a new approach, needed to nation-

The Journal of Law, Medicine & Ethics, 51 (2023): 366-381. © 2023 The Author(s)

https://doi.org/10.1017/jme.2023.86 Published online by Cambridge University Press

ally mandate the ethical HIV care, prevention, and treatment practices in all prison systems. South Africa demonstrated such a progressive trajectory in its justice system's accountability for rights to health and dignity in prison. Yet with resource constraints and high demand for government service delivery for the general population, there is frequently little incentive for legislators to increase compliance with human rights standards in prisons.[103] In spite of the legal and political context — in the U.S., South Africa, or elsewhere — public health authorities and legislators must constantly defend and advocate for ethical HIV prison care.[104]

Punishment Versus Rehabilitation

Americans generally do not want their tax dollars going towards prison rehabilitation, especially if they believe it will continue to propagate risky behavior and substance abuse that is seen as being at higher rates amongst prisoners. This hesitancy arises from the notion that prison is punishment, rather than rehabilitation. The government supplies the bare minimum for health care and basic rights, trying to keep costs low to provide as many services as possible to the entire incarcerated population; however, the judgment of what medications and pain care are necessary should be carefully made and not be overly restricted.

This is where health care providers and doctors must come in, as the advocates for their patients. They are restricted by formularies and various regulations that try to lower excessive healthcare costs of prisoners. Providers in correctional settings face additional challenges in providing services in an environment that often serves to objectify and dehumanize the individual.[105] Furthermore, doctors are restricted in the time they can devote to incarcerated patients; they are not fee for service and often do not have the opportunity to build rapport. Considering how the system treats prisoners, doctors may also feel biased towards their patients, unable to truly trust their word in terms of pain and other hard-to-diagnose symptoms. They must balance what they can observe with the patient's account and history, making it difficult to ignore bias based on past abuse or failure to comply with treatment. Providers are severely restricted to certain medications or treatments that may not be the best options for their patients, and this restricts their ability to act beneficently, for the wrong treatment can lead to further abuse and harm.

Explosive increases in prison and jail populations in the late 20th century have been attributed to the mandatory sentencing for drug-related crimes.[106] President Ronald Reagan had signed the Anti-Drug Abuse Act in 1988, which created mandatory minimum sentences for drug-related crimes and allocated millions of dollars to the construction of new prisons. As a result, a conviction for selling five grams of hard drugs, such as crack cocaine, suddenly meant a mandatory sentence of five years in prison.[107] Similarly, longer sentences (mostly for non-violent offenses) have increased the average age of the prison population.[108] This legislation caused extreme increase in prison populations due to non-violent crimes, which has seriously strained federal and state budgets, forcing the system to cut corners and sacrifice quality in many aspects, including health care. Reducing the number of people who are in prison or in compulsory treatment and rehabilitation centers because of problems related to their drug use must be a priority.[109] To reduce overcrowding, some South Africans advocate employing restorative justice for minor offenses, decriminalizing petty offenses, and releasing offenders into community supervision.[110]

Offenders and their families face great challenges. Inmates are in prison to take them out of the general public for rehabilitation, not cruel or extreme punishment. However, the American incarceration system tends to force prisoners into a consistent cycle of mistrust and inability to rejoin the general community. This problem makes it difficult for patients to advocate for themselves, losing a great deal of autonomy in terms of their healthcare decisions, which they must trust to the government while they are taken out of the general population.

The flaws in our prison healthcare system have been exacerbated not only by the ongoing HIV epidemic, but by the 2019 COVID-19 pandemic. The first case of COVID-19 in a main jail complex was diagnosed in mid-March 2000 at Riker's Island; within 2 weeks, the initial case spread to more than 200 cases within the facility, despite efforts to curb the spread.[111] With so many inmates with pre-existing chronic conditions, the dual threat of COVID-19 and HIV served as a prime example of failure to include prisons in national planning efforts.[112] We have learned from other epidemics, such as the 1918 influenza pandemic, that nonpharmaceutical interventions are effective, but they have the greatest impact when implemented early.[113] Less overcrowding, routing testing, mitigating preexisting conditions, and early treatment are methods to combat COVID-19, HIV, and future such infectious diseases.

Conclusion

The smallest category of the federal HIV budget is domestic HIV prevention — totaled at $900.8 mil-

The Journal of Law, Medicine & Ethics, 51 (2023): 366-381. © 2023 The Author(s)

https://doi.org/10.1017/jme.2023.86 Published online by Cambridge University Press

lion, or 3% of the overall HIV budget in fiscal year 2019. The prevention budget has remained the same since the 2013 fiscal year, while the budget for care and treatment has increased by over 30% and the budget for HIV research has decreased.[114] Prevention and education techniques, however, are more cost-effective at minimizing overall HIV care and treatment costs in the long run, and create larger changes in social norms and community awareness. Prison systems have an ethical obligation to respect inmates, maintain confidentiality, and protect HIV-related information.

Each project examined above provides valuable insight into prisons reform regarding HIV. The Positive Pathways project of New York urges the importance of educational seminars for prisoners and prison staff alike, influencing attitudes about HIV from all angles. Education-based interventions have positive effects on key outcomes — including HIV knowledge, intentions to change risky behaviors, perceived risk of infection, coping, social support, and HIV test rates.[115] The STTR cascade provides insight into all aspects of screening, treatment, and continuation of care and the varying factors that influence successful care. The PJP aims to reduce the number of people imprisoned for non-violent crimes or requiring compulsory treatment and rehabilitation. Finally, the Novel Condom Access Program demonstrates the positive effects of the introduction of easy access condom machines in state prisons, breaking down yet another barrier to HIV prevention.

Many interventions have yet to be investigated or implemented on a large scale in the U.S. A 2017 systematic review of risk reduction interventions in US prisons notes that the largest barrier to preventing infection is the high rate of transmission among people who are unaware of their status.[116] Opt-out screening is relatively new to many states; this method normalizes the process of HIV and STD testing for all prisoners, though it poses ethical questions concerning informed consent and prisoner autonomy. Mandatory PrEP for high-risk prisoners can be a cost-effective method to prevent transmission that may otherwise be inevitable. US prisons are also very new to needle exchange and opioid management programs, as the public worries such interventions may encourage these risky behaviors; however, like the condom machines, acknowledgement of the illegal behavior will finally allow for these interventions to prompt safer practices.

The prejudices, fears, and legacy of discrimination against HIV-infected individuals have strong roots in American society.[117] Monetary costs should not be the ultimate consideration, since reducing and containing HIV transmission has intangible value for all communities. States must consider the prevention mechanisms that will best improve the conditions of their prisons and incorporate as many aspects as possible of the HIV prevention and treatment projects that are feasible to implement. A combination of the four evaluated projects with mandatory PrEP and screenings will provide promising long-term effects in lowering HIV transmission, reducing stigma, and providing quality HIV care. Demonstrating that risk reduction and education are effective uses of American tax dollars requires promising evidence on a larger scale in realistic ways. Improving attitudes toward rehabilitation, reducing prison populations, and improving prison HIV statistics reporting will help rally public support for such interventions.

Note

Dr. Klitzman reports funding from NIH Grant # 5P30MH043520. Sameer H. Ladha is a member of the MS in Bioethics Advisory Board, Columbia University and a Board Member, Emgage Action.

Acknowledgements

The authors would like to thank Patricia Contino, M.F.A., for her assistance with the preparation of this manuscript.

Author Contributions

Sayantanee Das drafted the initial version of the article. Sameer Ladha and Robert Klitzman revised the manuscript extensively, adding substantial content, ideas, elaboration, and relationships to other literature. All authors have read and agreed to the published version of the manuscript.

References

1. N. Awofeso, "Prisons as Social Determinants of Hepatitis C Virus and Tuberculosis Infections," *Public Health Reports* 125 (2010): 25-33, DOI: 10.1177/00333549101250S406.
2. K. Dolan, B. Moazen, A. Noori, S. Rahimzadeh, F. Farzadfar, and F. Hariga, "People Who Inject Drugs in Prison: HIV Prevalence, Transmission and Prevention," The *International Journal on Drug Policy* 26, Suppl 1 (2015): S12-S15. DOI: 10.1016/j.drugpo.2014.10.012. Epub 2014 Dec 1; Institute for Crime & Justice Policy Research, *World Prison Brief. World Prison Population List.* 12th edition (2018).
3. Harm Reduction International, *The Global State of Harm Reduction.* 6th edition. (2018).
4. A. P. Wilper, S. Woolhandler, J. W. Boyd, K. E. Lasser, D. McCormick, D. H. Bor, and D. U. Himmelstein, "The Health and Health Care of US Prisoners: Results of a Nationwide Survey," *American Journal of Public Health* 99, no. 4 (2009): 666-672, DOI: 10.2105/AJPH.2008.144279.
5. See Awofeso, *supra* note 1.
6. S. Galea and D. Vlaho, "Social Determinants and the Health of Drug Users: Socioeconomic Status, Homelessness, and Incarceration," *Public Health Reports* 117 Suppl, no. 3 (2002): S135-S145, PMCID: PMC1913691.
7. M. Singer, "A Dose of Drugs, a Touch of Violence, a Case of AIDS: Conceptualizing the SAVA Syndemic," *Free Inquiry in Creative Sociology* 28, no. 1 (2000): 13-24.
8. World Health Organization (WHO), "*People in Prisons and Other Closed Settings*," *World Health Organization Regional Office for Europe. HIV/AIDS*, 2019, *available at* <https://www.who.int/teams/global-hiv-hepatitis-and-stis-programmes/

The Journal of Law, Medicine & Ethics, 51 (2023): 366-381. © 2023 The Author(s)

https://doi.org/10.1017/jme.2023.86 Published online by Cambridge University Press

populations/people-in-prisons> (last visited December 13, 2021).
9. R. Jurgens, M. Nowak, and M. Day, "HIV and Incarceration: Prisons and Detention," *Journal of the International AIDS Society* 14 (2011): 26, DOI: 10.1186/1758-2652-14-26.
10. M. R. Khan, I. A. Doherty, V. J. Schoenbach, E. M. Taylor, M. W. Epperson, and A. A. Adimora, "Incarceration and High-Risk Sex Partnerships among Men in the United States," *Journal of Urban Health* 86, no. 4 (2009): 584-601, DOI: 10.1007/s11524-009-9348-5; M. R. Khan, W. C. Miller, V. J. Schoenbach, S. S. Weir, J. S. Kaufman, D. A. Wohl, and A. A. Adimora, "Timing and Duration of Incarceration and High-Risk Sexual Partnerships among African Americans in North Carolina," *Annals of Epidemiology* 18, no. 5 (2008): 403-410, DOI: 10.1016/j.annepidem.2007.12.003.
11. Joint United Nations Programme on HIV/AIDS (UNAIDS), *The Gap Report: Prisoners*, UNAIDS (2014); Joint United Nations Programme on HIV/AIDS, *Health, Rights and Drugs: Harm Reduction, Decriminalization and Zero Discrimination for People Who Use Drugs*, UNAIDS (2019): at 5.
12. R. A. Weiss, "How Does HIV Cause AIDS?" *Science* 260, no. 5112 (1993): 1273-1279, DOI: 10.1126/science.8493571.
13. See Joint United Nations Programme on HIV/AIDS (UNAIDS) (2014), *supra* note 11.
14. Centers for Disease Control (CDC) and Prevention. *Condom Effectiveness*, 2013, *available at* <https://www.cdc.gov/condomeffectiveness/index.html> (last visited December 14, 2021).
15. Centers for Disease Control and Prevention, "HIV Transmission among Male Inmates in a State Prison System – Georgia, 1992-2005," *MMWR Morbidity and Mortality Weekly Report* 55, no. 15 (2006): 421-426, DOI: 10.15585/mmwr.mm6745a6.
16. S. Weller. and K. Davis, "Condom Effectiveness in Reducing Heterosexual HIV Transmission," *Cochrane Database Systematic Rev*iew no. 1 (2002): CD003255, DOI: 10.1002/14651858.CD003255.
17. A. Kamarulzaman, S. E. Reid, A. Schwitters, L. Wiessing, N. El-Bassel, K. Dolan, B. Moazen, A. L. Wirtz, A. Verster, and F. L. Altice, "Prevention of Transmission of HIV, Hepatitis B Virus, Hepatitis C Virus, and Tuberculosis in Prisoners," *Lancet* 388, no.10049 (2016): 1115-1126, DOI: 10.1016/S0140-6736(16)30769-3.
18. R. R. Rantala, J., Rexroat, and A. J. Beck, *Survey of Sexual Violence in Adult Correctional Facilities, 2009–11 - Statistical Tables*, US Department of Justice, Office of Justice Programs, Bureau of Justice Statistics, NCJ 244227 (2014).
19. T. Butler, J. Richters, L. Yap, and B. Donovan, "Condoms for Prisoners: No Evidence That They Increase Sex in Prison, but They Increase Safe Sex," *Sex Transmitted Infections* 89, no.5 (2013): 377-379, DOI: 10.1136/sextrans-2012-050856.
20. See Jurgens et al., *supra* note 9.
21. R. J. MacGowan, A. Margolis, J. Gaiter, K. Morrow, B. Zack, J. Askew, T. McAuliffe, J. M. Sosman, G. D. Eldridge, and Project SSG, "Predictors of Risky Sex of Young Men after Release from Prison," *International Journal of STD & AIDS* 14, no. 8 (2003): 519-523, DOI: 10.1258/095646203767869110.
22. Correctional Service Canada, *HIV/Aids in Prisons : Final Report of the Expert Committee on Aids and Prisons* (Montreal: McGill Centre for Ethics, Medicine, and Law, 1994).
23. See Harm Reduction International, *supra* note 3.
24. New York State Department of Health, Positive Pathways Project. Corrections and HIV/AIDS. (2015).
25. The Egyptian Anti-Stigma Forum, *Combating HIV/AIDS Related Stigma In Egypt: Situation Analysis and Advocacy Recommendations* (The Ford Foundation, 2012).
26. See New York State Department of Health, *supra* note 24.
27. E. Malave, "Prison Health Care after the Affordable Care Act: Envisioning an End to the Policy of Neglect," *New York University Law Rev*iew 89, no. 2 (2014): 700-738.
28. *Estelle v. Gamble E*, 429 US 97. US Court of Appeals (5th Cir. 1976).
29. See Office of Congresswomen Maxine Waters, Press Release, *Congresswoman Waters Reintroduces the Stop AIDS in Prison Act*, April 4, 2017, *available at* <https://waters.house.gov/media-center/press-releases/congresswoman-waters-reintroduces-stop-aids-prison-act-0> (last visited December 14, 2021).
30. See Malave, *supra* note 27.
31. See Office of Congresswomen Maxine Waters, *supra* note 29.
32. L. McDougle, S. L. Davies, and D. M. Clinchot, "HIV and African Americans: Relationship to Cultural Competence, Implicit Bias, Social Determinants, and US Jails and Prisons," *Spectrum: A Journal on Black Men* 5, no. 2 (2017): 97-111, DOI: https://doi.org/10.2979/spectrum.5.2.06.
33. Centers for Disease Control and Prevention, *HIV National Strategic Plan for the United States: A Roadmap to End the Epidemic 2021–2025* (Washington, DC., 2021).
34. See New York State Department of Health, *supra* note 24.
35. *Id.*
36. *Id.*
37. P. Freire, *Pedagogy of the Oppressed* (1970), 4th ed. (New York: Bloomsbury, 2018); Population Council/Horizons, *Peer Education and HIV/AIDS: Past Experience, Future Directions,* 1999, *available at* <https://healtheducationresources.unesco.org/sites/default/files/resources/peer_ed.pdf> (last visited December 14, 2021).
38. O. Grinstead, G. Eldridge, R. MacGowan, K. M. Morrow, D. W. Seal, B. J. Zack, M. Sosman, and The Project START Study Group, "An HIV, STD, and Hepatitis Prevention Program for Young Men Leaving Prison: Project START," *Journal of Correctional Health Care* 14, no. 3 (2008): 183-196, DOI: https://doi.org/10.1177/1078345808318217; N. D. Zaller, L. Holmes, A. C. Dyl, J. A. Mitty, C. G. Beckwith, T. P. Flanigan, and J. D. Rich, "Linkage to Treatment and Supportive Services among HIV-Positive Ex-offenders in Project Bridge," *Journal of Health Care for Poor and Underserved* 19, no. 2 (2008): 522-531, DOI: 10.1353/hpu.0.0030.
39. See Grinstead, *supra* note 38.
40. C. A. Latkin, S. Sherman, and A Knowlton, "HIV Prevention among Drug Users: Outcome of a Network-Oriented Peer Outreach Intervention," *Health Psychology*, 22, no. 4 (2003): 332-339, DOI: 10.1037/0278-6133.22.4.332; M. R. Weeks, J. Li, J. Dickson-Gomez, M. Convey, M. Martinez, K. Radda, and S. Clair, "Outcomes of a Peer HIV Prevention Program with Injection Drug and Crack Users: The Risk Avoidance Partnership," *Substance Use & Misuse* 44, no. 2 (2009): 253-281, DOI: 10.1080/10826080802347677; W. W. Wiebel, *The Indigenous Leader Outreach Model: Intervention Manual* (Washington, DC: National Institute on Drug Abuse, 1993).
41. T. Lyons, E. Osunkoya, I. Anguh, A. Adefuye, and J. Balogun, "HIV Prevention and Education in State Prison Systems: An Update," *Journal of Correctional Health Care*. 20, no. 2 (2014): 105-115, DOI: 10.1177/1078345813518630.
42. See Population Council, *supra* note 37.
43. See Lyons, *supra* note 41.
44. D. Wohlfeiler and J. M. Ellen, "The Limits of Behavioral Interventions for HIV Prevention," in *Prevention is Primary: Strategies for Community Well-being*, 2nd ed., eds. L. Cohen, V. Chavez, and S Chehimi (San Francisco: Jossey Bass, 2007): at 329–347.
45. A. Schwitters, "Annex 4: Health Interventions in Prisons: A Literature Review," In: *Consolidated Guidelines on HIV Prevention, Diagnosis, Treatment and Care for Key Populations – 2016 Update* (Geneva: World Health Organization, 2016).
46. See Population Council, *supra* note 37; See Lyons, *supra* note 41.
47. R. K. Chandler, S. Y. Kahana, B. Fletcher, D. Jones, M. S. Finger, W. M. Aklin, K. Hamill, and C. Webb, "Data Collection and Harmonization in HIV Research: The Seek, Test, Treat, and Retain Initiative at the National Institute on Drug Abuse," *American Journal of Public Health* 105, no. 12 (2015): 2416-2422, DOI: 10.2105/AJPH.2015.302788.
48. J. Skarbinski, E. Rosenberg, G. Paz-Bailey, H. I. Hall, C. E. Rose, A. H. Viall, J. L. Fagan, A. Lansky, and J. H. Mermin, "Human Immunodeficiency Virus Transmission at Each Step

The Journal of Law, Medicine & Ethics, 51 (2023): 366-381. © 2023 The Author(s)

https://doi.org/10.1017/jme.2023.86 Published online by Cambridge University Press

of the Care Continuum in the United States," *JAMA Internal Medicine* 175, no. 4 (2015): 588-596, DOI: 10.1001/jamainternmed.2014.8180.
49. United Nations General Assembly, Resolution 70/175, United Nations Standard Minimum Rules for the Treatment of Prisoners (the Nelson Mandela Rules), December 17, 2015, *available at* <https://undocs.org/A/RES/70/175> (last visited December 14, 2021); F. G. Kouyoumdjian, S. Y. Cheng, K. Fung, A. M. Orkin, K. E. McIsaac, C. Kendall, L. Kiefer, F. I. Matheson, S. E. Green, and S. W. Hwang, "The Health Care Utilization of People in Prison and after Prison Release: A Population-Based Cohort Study in Ontario, Canada," *PLoS One* 13, no. 8 (2018): e0201592, DOI: 10.1371/journal.pone.0201592. eCollection 2018.
50. D. W. Seal, G. D. Eldridge, B. Zack, and J. Sosman, "HIV Testing and Treatment with Correctional Populations: People, Not Prisoners," *Journal of Health Care for Poor and Underserved* 21, no. 3 (2010): 977-985, DOI: 10.1353/hpu.0.0351.
51. B. L. Stephenson, D. A. Wohl, C. E. Golin, H. C. Tien, P. Stewart, and A. H. Kaplan, "Effect of Release from Prison and Re-Incarceration on the Viral Loads of HIV-Infected Individuals," *Public Health Reports* 120, no. 1 (2005): 84-88, DOI: 10.1177/003335490512000114.
52. INSIGHT START Study Group; J. D. Lundgren, A. G. Babiker, F. Gordin, Emery S, B. Grund, S. Sharma, et al., "Initiation of Antiretroviral Therapy in Early Asymptomatic HIV Infection," *NEJM* 373, no. 9 (2015): 795-807, DOI: 10.1056/NEJMoa1506816.
53. R. Chandler, M. S. Gordon, B. Kruszka, L. N. Strand, F. L. Altice, C. G. Beckwith, M. L. Biggs, et al., "Cohort Profile: Seek, Test, Treat and Retain United States Criminal Justice Cohort," *Substance Abuse Treatment, Prevention and Policy* 12, no. 1 (2017): 24, DOI: 10.1186/s13011-017-0107-4.
54. The Center for HIV Law and Policy, *The Positive Justice Project*, 2019, *available at* <https://www.hivlawandpolicy.org/initiatives/positive-justice-project> (last visited December 14, 2021).
55. E. J. Bernard, "US: Positive Justice Project Publishes Essential New Advocacy Resource," *HIV Justice Network*, November 17, 2010, *available at* <https://www.hivjustice.net/news/us-positive-justice-project-publishes-essential-new-advocacy-resource/> (last visited December 14, 2021).
56. R Bennett-Carlson, D. Faria, and C. Hanssens, *Ending and Defending against HIV Criminalization – A Manual for Advocates: Vol. 1.* (New York: Center for HIV Law and Policy and Positive Justice Project, 2010).
57. Z. Lazzarini, S. Bray, and S. Burris, "Evaluating the Impact of Criminal Laws on HIV Risk Behavior," *Journal of Law, Medicine & Ethics* 30, no. 2 (2002): 239-253, DOI: 10.1111/j.1748-720x.2002.tb00390.x.
58. Centers for Disease Control, *HIV and STD Criminalization Laws*, 2020, *available at* <https://www.cdc.gov/hiv/policies/law/states/exposure.html> (last visited December 14, 2021); R. Richardson, S. Golden, and C. Hanssens, *Positive Justice Project: State and Federal Laws and Prosecutions,* Vol. 1, 2nd edition, (New York: The Center for Law and Policy, 2015).
59. See CDC and Prevention (2021), *supra* note 33.
60. Global Commission on HIV and the Law, *HIV and the Law, Risks, Rights & Health, Executive Summary* (New York: Global Commission on HIV and the Law, United Nations Development Programme, 2012).
61. E. J. Bernard, *Decriminalising HIV-A Human Rights and Public Health Priority,* presentation at HIV Justice Network 90-90-90 Targets Workshop, Amsterdam, July 21-22, 2018, *available at* <https://www.iapac.org/909090-workshop/presentations/909090tw18-Su1000-Bernard.pdf> (last visited December 14, 2021).
62. See CDC (2020), *supra* note 59.
63. See The Center for HIV Law and Policy (2019), *supra* note 54.
64. See United Nations Development Programme, *supra* note 60.
65. M. Sylla, N. Harawa, and O. Grinstead Reznick, "The First Condom Machine in a US Jail: The Challenge of Harm Reduction in a Law and Order Environment," *American Journal of Public Health* 100, no. 6 (2010): 982-985, DOI: 10.2105/AJPH.2009.172452.
66. G. Lavender, "California Prisons Aim to Keep Sex Between Inmates Safe, If Illegal," January 21, 2015, in *All Things Considered*. Audio, 4:00, *available at* <npr.org> (last accessed December 14, 2021).
67. *Id.*
68. M. McLemore, "Access to Condoms in U.S. Prisons," *HIV AIDS Policy & Law Rev*iew 13, no. 1 (2008): 20-24, PMID: 18724450.
69. J. D. Tucker, S. W. Chang, and J. P. Tulsky, "The Catch 22 of Condoms in US Correctional Facilities," *BMC Public Health* 7, (2007): 296, DOI: 10.1186/1471-2458-7-296.
70. J.P. May, and E. L. Williams, Jr., "Acceptability of Condom Availability in a U.S. Jail," *AIDS Education and Prevention* 14, no. 5 (Suppl B) (2002): 85-91, DOI: 10.1521/aeap.14.7.85.23863.
71. K. D. Lucas, J. L. Miller, V. Eckert, R. L. Horne, M. C. Samuel, and J. C. Mohle-Boetani, "Risk, Feasibility, and Cost Evaluation of a Prisoner Condom Access Pilot Program in One California State Prison," *Journal of Correctional Health Care* 20, no. 3 (2014): 184-194, DOI: 10.1177/1078345814530869.
72. See Seal et al., *supra* note 50.
73. American Bar Association, *ABA Standards for Criminal Justice: Treatment of Prisoners* (Chicago: ABA Publications, 2010).
74. S. Larney, C. G. Beckwith, N. D. Zaller, B. T. Montague, and J. Rich, "'Seek, Test, Treat and Retain' for Hepatitis C in the United States Criminal Justice System," *International Journal of Prisoner Health* 10, no. 3 (2014): 164-171, DOI: 10.1108/IJPH-11-2013-0051.
75. See Tucker et al., *supra* note 69.
76. Centers for Disease Control and Prevention, *Pre-Exposure Prophylaxis (PrEP), available at* < https://www.cdc.gov/hiv/risk/prep/index.html> (last visited December 15, 2021).
77. US Public Health Service, *Preexposure Prophylaxis for the Prevention of HIV Infection in the United States — 2017 Update* (Washington, DC: CDC, 2017).
78. See CDC, *supra* note 76.
79. D. L. Joseph Davey, L.-G. Bekker, P. Gorbach, T. Coates, and L Myer, "Delivering Preexposure Prophylaxis to Pregnant and Breastfeeding Women in Sub-Saharan Africa: The Implementation Science Frontier," *AIDS* 31, no. 16 (2017): 2193-2197, DOI: 10.1097/QAD.0000000000001604.
80. S. Bush, D. Magnuson, M. K. Rawlings. T. Hawkins, S. McCallister, and. R. Mera Giler, "Racial Characteristics of FTC/TDF for Pre-exposure Prophylaxis (PrEP) Users in the US," presented at ASM Microbe/ICAAC, Boston, MA, June 16-20, 2016, *available at* <https://www.natap.org/2016/HIV/062216_02.htm> (last visited December 15, 2021).
81. R. P. Walensky, J. E. Park, R. Wood, K. A. Freedberg, C. A. Scott, L. G. Bekker, E. Losina, L. G. Mayer, G.R. Seage III, and A. D. Paltiel, "The Cost-Effectiveness of Pre-exposure Prophylaxis for HIV Infection in South African Women," *Clinical Infectious Diseases* 54, no. 10 (2012): 1504-1513, DOI: 10.1093/cid/cis225.
82. T. M. Hammett, S. Kennedy, and S. Kuck, *National Survey of Infectious Diseases in Correctional Facilities: HIV and Sexually Transmitted Diseases*, Document number 217736, Department of Justice Award Number 2001-IJ-CX-K018; 99-C-008-T005 (March 2007), *available at* <https://www.ojp.gov/pdffiles1/nij/grants/217736.pdf> (last visited December 15, 2021).
83. J. L. Pope, "HIV Testing in State Correctional Systems," *Journal of Law and Health* 22, no. 1 (2009): 16-52, *available at* <http://devel-drupal.law.csuohio.edu/currentstudents/studentorg/jlh/documents/2gPope.pdf> (last visited December 15, 2021).
84. See Hammett et al., *supra* note 82.
85. *Id.*

The Journal of Law, Medicine & Ethics, 51 (2023): 366-381. © 2023 The Author(s)

https://doi.org/10.1017/jme.2023.86 Published online by Cambridge University Press

86. A. Hutchinson, M. Adee, C. Bowden, A. Margolis, M. L. Qi, and A. Spaulding, "41st Annual Meeting of the Society for Medical Decision Making, Portland, Oregon, October 20–23, 2019. PS 1-31: Costs and Outcomes Associated with Discontinuing a Routine HIV Screening Program in a High Volume Jail," *Medical Decision Making* 40, no. 1 (2020): E36-E37, DOI: https://doi.org/10.1177/0272989X19890544.
87. New York Court of Appeals, *Schloendorff v. Society of New York Hospital*, 211 N.Y. 125, 105 N.E. 92 (April 14, 1914), *available at* <https://biotech.law.lsu.edu/cases/consent/schoendorff.htm> (last accessed December 16, 2021).
88. M. T. Celada, R. C. Merchant, M. J. Waxman, and A. M. Sherwin, "An Ethical Evaluation of the 2006 Centers for Disease Control and Prevention Recommendations for HIV Testing in Health Care Settings," *American Journal of Bioethics* 11, no. 4 (2011): 31-40, DOI: 10.1080/15265161.2011.560339; L. R. E. Shepherd, O'Carroll, and E. Ferguson, "An International Comparison of Deceased and Living Organ Donation/Transplant Rates in Opt-in and Opt-Out Systems: A Panel Study," *BMC Medicine* 12 (2014): 131, DOI: 10.1186/s12916-014-0131-4.
89. B. M. Branson, H. H. Handsfield, R. S. Lampe Janssen, A. W. Taylor, S. B. Lyss, and J. E. Clark, "Revised Recommendations for HIV Testing of Adults, Adolescents, and Pregnant Women in Health-Care Settings," *MMWR, Recommendations and Reports* 55, no. RR14 (2006): 1-17, *available at* <https://www.cdc.gov/mmwr/preview/mmwrhtml/rr5514a1.htm/> (last visited May 26, 2023).
90. R. Rubin, "US Prisons Missing Opportunities to Tackle HIV in Inmates," *Lancet* 388, no. 10049 (2016): 1041-1042, DOI: 10.1016/S0140-6736(16)31078-9.
91. D. L. Rosen, C. E. Golin, C. A. Grodensky, J. May, J. M. Bowling, R. F. DeVellis, B. L. White, and D. A. Wohl, "Opt-Out HIV Testing in Prison: Informed and Voluntary?" *AIDS Care* 27, no. 5 (2015): 545-554. DOI: 10.1080/09540121.2014.989486.
92. See Celada et al., *supra* note 88.
93. T. Haelle, "US States Make Opting Out of Vaccination Harder," *Nature*, October 5, 2012, *available at* <https://www.nature.com/articles/nature.2012.11548> (last visited December 16, 2021).
94. L. M. Maruschak and J. Bronson, *HIV in Prisons, 2015 – Statistical Tables* (Washington, DC: Bureau of Justice Statistics, 2017).
95. M. Stevens, and D. Victor, "Trump Ends Terms of Remaining Members of H.I.V. and AIDS Council," *The New York Times*, December 30, 2017, *available at* <https://www.nytimes.com/2017/12/30/us/politics/trump-aids-council.html> (last visited December 16, 2021).
96. S. A. Schoettes, "Trump Doesn't Care About HIV. We're Outta Here," *Newsweek*, June 16, 2017, *available at* <https://www.newsweek.com/trump-doesnt-care-about-hiv-were-outta-here-626285> (last visited December 16, 2021).
97. See McDougle et al., *supra* note 32.
98. K. Dolan, A. Wodak, and R. Penny, "AIDS Behind Bars: Preventing HIV Spread among Incarcerated Drug Injectors," *AIDS* 9, no. 8 (1995): 825-832, PMID: 7576315; N. Mahon, "New York Inmates' HIV Risk Behaviors: The Implications for Prevention Policy and Programs," *American Journal of Public Health* 86, no. 9 (1996): 1211-1215, DOI: 10.2105/ajph.86.9.1211.
99. See Awofeso, *supra* note 1.
100. N. H. Williams, 'Prison Health and the Health of the Public: Ties That Bind," *Journal of Correctional Health Care* 13, no. 2 (2007): 80-92, DOI: https://doi.org/10.1177/1078345807301143.
101. See Seal et al., *supra* note 50.
102. *Id.*
103. E. N. Keehn and A. Nevin Health, "Human Rights, and the Transformation of Punishment: South African Litigation to Address HIV and Tuberculosis in Prisons," *Health and Human Rights Journal* 20, no. 1 (2018): 213-224. PMCID: PMC6039737.
104. B. S. Elger, "Prison Medicine, Public Health Policy and Ethics: The Geneva Experience," *Swiss Medical Weekly* 141, (2011): w13273, DOI: 10.4414/smw.2011.13273. eCollection 2011.
105. See Seal et al., *supra* note 50.
106. S.K. Leh, "HIV Infection in U.S. Correctional Systems: Its Effect on the Community," *Journal of Community Health Nursing* 16, no. 1 (1999): 53-63, DOI: 10.1207/s15327655jchn1601_5.
107. M. Sylla, "HIV Treatment in Us Jails and Prisons," *The Body: The HIV/AIDS Resource*, January 31, 2008, *available at* <https://www.thebody.com/article/hiv-treatment-u-s-jails-prisons> (last accessed December 16, 2021).
108. L. Hawks, S. Woolhandler, and D. McCormick, "COVID-19 in Prisons and Jails in the United States," *JAMA Internal Medicine* 180, no. 8 (2020): 1041-1042. DOI: 10.1001/jamainternmed.2020.1856.
109. See Schwitters, *supra* note 45.
110. U. Mahlati, "Tuberculosis (TB) in South African Prisons," *HIV Nursing Matters* (2015): 30-33.
111. See Hawks et al., *supra* note 108.
112. M. J .Akiyama, A. C. Spaulding, and J. D. Rich, "Flattening the Curve for Incarcerated Populations - Covid-19 in Jails and Prisons," *NEJM* 382, no. 22 (2020): 2075-2077, DOI: 10.1056/NEJMp2005687/.
113. R. J. Hatchett, C. E. Mecher, and M. Lipsitch, "Public Health Interventions and Epidemic Intensity during the 1918 Influenza Pandemic," *Proceedings of the National Academy U S A.* 104, no. 18 (2007): 7582-7587, DOI: 10.1073/pnas.0610941104.
114. Kaiser Family *Foundation Federal Funding for HIV/AIDS: Trends Over Time*, March 5, 2019, *available at* <https://www.kff.org/hivaids/fact-sheet/u-s-federal-funding-for-hivaids-trends-over-time/> (last visited December 16, 2021).
115. P. Valera, Y. Chang, and Z. Lian, "HIV Risk Inside U.S. Prisons: A Systematic Review of Risk Reduction Interventions Conducted in U.S. Prisons," *AIDS Care* 29, no. 8 (2017): 943-952, DOI: 10.1080/09540121.2016.1271102.
116. See Valera et al., *supra note* 115.
117. E. C Chambers, "Asymptomatic HIV as a disability under the Americans with Disabilities Act," *Washington Law Review* 73, no. 2 (1998): 403-431, PMID: 12465639.

The Journal of Law, Medicine & Ethics, 51 (2023): 366-381. © 2023 The Author(s)

https://doi.org/10.1017/jme.2023.86 Published online by Cambridge University Press