The Path to Implementation of HIV Pre-exposure Prophylaxis for People Involved in Criminal Justice Systems

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Published online: 8 March 2018

The criminal justice (CJ)-involved population in the United States (US) is among the most vulnerable to and heavily impacted by HIV [1]. HIV prevalence is three to five times higher among incarcerated populations than in the general population [2] and one in seven people living with HIV (PLH) pass through CJ systems each year [3]. Among racial and ethnic minorities, HIV and incarceration are even more closely intertwined: one of every five HIV-infected black or Hispanic/Latino adults passes through CJ systems annually [4]. Individuals involved in CJ systems experience a confluence of factors at the individual (e.g., substance abuse, mental health issues, childhood abuse), interpersonal (e.g., inconsistent condom use, intimate partner violence exposure), and community level (e.g., housing instability, unemployment, poverty, disengagement from medical services, stigma) that increase their risk of HIV [5–15]. HIV risk is exceptionally high immediately following release from prisons or jails, termed "community re-entry," when relapse to substance use, discontinuous healthcare engagement, homelessness and under-insurance compounds, and other health disparities [16]

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Additionally, individuals from populations with an elevated risk of HIV acquisition (i.e., Black men who have sex with men [MSM], people who inject drugs [PWID], commercial sex workers [CSWs]) frequently come into contact with CJ systems [14, 17–21]. These subpopulations that experience intersecting risk, exacerbated by CJ involvement, need to be engaged in HIV prevention interventions. However, traditional HIV prevention approaches alone, such as risk reduction counseling and condom distribution programs, have had limited success with currently and recently incarcerated populations [22, 23].

One possible innovative strategy to address HIV risk during community re-entry is to implement pre-exposure prophylaxis (PrEP) uptake and adherence interventions. Many individuals with recent CJ involvement may be clinically indicated for PrEP due to engaging in high-risk and overlapping sexual and substance use networks. In addition, the World Health Organization has recently introduced the concept of "substantive risk" as a precursor to PrEP initiation. Those at "substantive risk of HIV" include any individuals belonging to a group that has a disproportionate burden of HIV, which includes those with a history of incarceration [22]. Despite these recommendations, PrEP implementation in real-world settings including CJ settings and during community re-entry among at-risk populations remains low [24, 25] and, to our knowledge, PrEP linkage is not currently available in any closed CJ settings in the US.

PrEP's optimal impact depends on awareness, acceptability, uptake, and adherence among high-risk groups living in the community. PrEP awareness and acceptability vary (depending on the population) [16], and uptake and adherence to PrEP is influenced by social and structural factors such as access to health services, copayments, social norms, and, for recently incarcerated individuals in particular, an often chaotic post-release environment. Recently incarcerated individuals often face numerous competing priorities during community re-entry such as intersectional stigma, discrimination, loss of

social support, inability to find stable housing or employment, and untreated psychiatric or substance use disorders [26] that may uniquely shape their awareness and acceptability of, and access, uptake, and adherence to PrEP.

Outside of clinical trial settings, there are a number of considerations in designing and implementing future PrEP interventions in collaboration with CJ partners. As such, we propose the following as critical next steps in addressing national disparities in HIV, by implementing PrEP programs for individuals who are nearing release (Table 1).

1. Identify best practices for timing of PrEP screening and linkage. Closed settings (prisons, jails) need to identify best practices for PrEP screening (including the provision of an HIV test to ensure PrEP candidates are HIV negative) and linkage during the course of an individual's CJ involvement. This could happen upon intake, during first medical visit, or during community re-entry planning and optimal timing of screening could vary by correctional facility and type (e.g., in terms of size, sentencing status, usual length of stay, and jurisdiction).
2. Establish protocols and standards of PrEP care. Decisions need to be made relevant to whether all at-risk individuals would be enrolled in CJ-based PrEP programs or if efforts should target certain high-risk groups (e.g., MSM, PWID, CSWs). In addition, optimal PrEP program implementation will require the development of detailed standards and protocols specific to each type of CJ setting (e.g., jails, prisons, pre-trial detention) that include information relevant to determining clinical indication and procedures for PrEP provision or linkage. For instance, prison administrators and medical staff will have to decide if it is feasible to begin providing PrEP prior to discharge to ensure adherence prior to release or if it is more reasonable to link clinically indicated individuals to PrEP services immediately upon release. The amount of time spent in jails and brief detention sentences versus longer stays in residential or prison settings will impact such decision-making. In either scenario, the cost of PrEP treatment and care will also need to be considered, especially in the context of current threats to Medicaid expansion and the repeal and replacement of the Affordable Care Act. Alternative funding mechanisms such as developing industry-sponsored patient assistance programs in correctional facilities should be considered.
3. Provide training to CJ-based clinicians specific to assessing risk and indication for PrEP treatment and care. Empirical evidence suggests that, in general, awareness and acceptance of, and willingness to prescribe PrEP is low among clinicians [27]. Utilization of PrEP by CJ-based clinicians is dependent upon educating providers about PrEP medication and the associated care regimen (e.g., HIV-testing every 90 days) and the potential side-effects and subsequent patient education that needs to be given in combination with a PrEP referral or prescription.
4. Determine acceptability and feasibility of CJ-based PrEP provision. Finally, research must be conducted to understand the acceptability and feasibility of PrEP programs and preferences of PrEP formulations (e.g., long-acting injectable, vaginal rings, daily oral pills) for individuals with CJ involvement, the challenges and best practices related to program implementation, and the impact on HIV-related outcomes after release; these data will need to be collected not only from individuals with a history of incarceration, but also CJ stakeholders, medical personnel, and administrators. Perceptions of acceptability of PrEP-specific programming should be examined in the context of other harm reduction and HIV-prevention strategies including the provision of medication-assisted treatment and condom distribution.

Table 1 Recommended considerations when designing PrEP programs for individuals during community re-entry

1. Identify best practices for timing of PrEP screening and linkage during an individual's CJ involvement.
2. Establish CJ site-specific protocols and standards of care for PrEP enrollment and provision for individuals in CJ settings.
3. Provide training for CJ-based health care providers related to assessing risk and indication for PrEP treatment and care.
4. Determine the feasibility and acceptability of CJ-based PrEP provision and linkage to care.

Although the number of HIV diagnoses in the US has declined in recent years, new diagnoses are concentrated among individuals who experience confluent interpersonal, social, and structural risks. In order to reach the national goal to reduce the number of new HIV infections by 25% in 2020 [28], scientifically informed and culturally appropriate biomedical HIV prevention interventions are desperately needed. CJ settings represent an important opportunity to initiate or and link individuals at high risk for HIV to PrEP services that have the potential to stem HIV infection in this priority population [14, 17–20].

Compliance with Ethical Standards

Conflict of Interest The authors declare that they have no competing interests.

Human and Animal Rights and Informed Consent This article does not contain any studies with human or animal subjects performed by any of the authors.

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