Innovative HIV Prevention and Care for People Who Use Drugs (PWUD)

A New Era in HIV Treatment and Prevention Requires an Inclusive Approach

Scientific advances in HIV prevention and treatment, including new longer-acting injectable medications that do not require daily pill taking, have created the opportunity to dramatically reduce new infections and improve outcomes for people living with HIV. Medications now exist for pre-exposure prophylaxis (PrEP) that can prevent HIV with as little as two doses per year and treat HIV with doses every two months. These innovations offer alternatives to more rigid regimens, which may be difficult to maintain for many, such as people who use drugs (PWUD) including people who inject drugs (PWID). Yet PWUD remain underdiagnosed, undertreated, and overlooked in HIV policy efforts.[1,2,3] Therefore, tailored and focused efforts are needed to ensure that PWUD benefit from these innovations.

Achieving the full public health impact for PWUD of longer-acting products will require that community-driven services delivery models are developed alongside a clinical infrastructure designed to engage PWUD consistently in care. Early in the HIV epidemic, PWID made up nearly 40% of new HIV cases in the U.S. While that number has declined to 7% as of 2018,[4] the policy focus on PWUD has declined along with it. Today, facets of the lived experience of many PWUD, including homelessness, stigma, transactional sex, and incarceration, continue to create structural barriers to HIV services for PWUD, even as the drug supply evolves and becomes riskier.

EVIDENCE FOR LONGER-ACTING THERAPIES

"We've had good success [in the drop-in clinic] for individuals who use methamphetamine and are positive for HIV starting longer-acting ART. Many of these patients have trouble taking daily oral medications continuously due to shared myths about substance interactions and resentment towards having to take daily medications for life. Unfortunately, there is not any uptake for PrEP, even in low barrier settings, mobile clinics or for individuals coming in for PEP [post-exposure prophylaxis]."

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ENSURE PWUD BENEFIT FROM INNOVATIVE HIV PREVENTION AND CARE

As scientific advances deliver more options for HIV treatment and PrEP that do not require daily pill taking, addressing the unique needs of people who use drugs (PWUD) will be critical:

ADAPTING SERVICES DELIVERY MODELS FOR PWUD

- Expand education and outreach to increase PrEP awareness and demand among PWUD
- Strengthen community-based PWUD health settings with drop-in care, services, and supplies for HIV care
- Standardize screening for HIV, PrEP delivery, and linkage to care across SUD and re-entry systems

ENHANCING CLINICAL MANAGEMENT OF LONGER-ACTING MEDICATIONS FOR PWUD

- Educate providers and consumers to overcome myths around long-acting PrEP and ART

IMAGINING NEW WAYS TO MEET THE NEEDS OF PWUD

- Leverage telehealth, mobile treatment, and pharmacies to expand HIV prevention and treatment options for PWUD
- Utilize longer-acting therapies to support continuity of care during re-entry following incarceration
- Pilot low-barrier access models, including home-based HIV testing and field-based injectable services

To ensure an equitable HIV response, policymakers must actively invest in delivery systems, clinical infrastructure, and provider education that center the needs of PWUD. This brief outlines key opportunities to do so, ensuring that longer-acting formulations in HIV care and prevention do not bypass the very populations that could benefit the most.

1. ADAPTING SERVICES DELIVERY MODELS FOR PWUD

While major advances in HIV prevention and treatment have improved outcomes for many people, PWUD, particularly people who inject drugs (PWID), continue to face systemic barriers to care. These challenges are especially acute for individuals who are also part of racial, ethnic, or sexual minority groups where intersecting forms of stigma related to drug use, HIV, race, gender, and incarceration compound and reinforce each other.[5] Higher rates of criminal legal involvement, homelessness, and housing instability further complicate access to consistent, high-quality care.

Awareness and use of PrEP remain unacceptably low among PWID. A 2023 study in San Francisco found that only 3% of PWID had used PrEP in the previous year.[6] National data show similarly low use: 2.6% in Philadelphia (2015)[7] and just 1.2% nationwide,[8] despite awareness increasing to around 60% in some states like New Jersey.[9] Among those at both high and low risk of infection, prior use and intent to use PrEP remain limited.

These gaps suggest broader systemic challenges. Social disparities, criminalization and the mental health aspect of drug use place HIV prevention low on PWUD's hierarchy of needs, well behind stable shelter, food and other everyday means of living.[10] Stigma among PWUD and lack of trust in healthcare providers reduces access to care and screening.[11,12] This is exacerbated by limited capacity to provide HIV and other infectious disease screening, prevention, and treatment services or appropriate linkage to care for these other services. In 2023, only 34% of substance use disorder (SUD) treatment facilities offered HIV screening services and just 22% offered early intervention services.[13] Emergency departments, often the first point of care for undiagnosed populations, screened fewer than 1% of patients in 2022.[14] Where automated ED screening systems have been implemented, studies show improved diagnosis rates and linkages to care.[15,16]

PWUD such as methamphetamine, face even greater challenges. Individuals with a history of methamphetamine use are the least likely to follow up with treatment services,[15] more so than any other population subgroup, including people who were younger, Black men who have sex with men (MSM), who had a mental health disorder, were unhoused, or who were recently incarcerated.[16] This group may be especially suited for longer-acting PrEP or antiretroviral therapy (ART) options, but more research is needed to understand how to best support their engagement.[17] Emerging models and resources suggest a comprehensive, engagement-oriented, harm reduction forward model to engage people who use methamphetamine.[18]

Disparities in HIV rates among PWUD persist across racial lines. In 2022 and 2023, PWID made up roughly 6-7% of the new HIV diagnoses, with white individuals representing 44% — below their share of the overall population.[19,20] Reliable estimates are challenging, however, due to limited data collection and inconsistent engagement from unhoused, low-income, or formerly incarcerated populations.[21]

Programs that co-locate syringe services programs (SSPs) and medications for opioid use disorder (MOUD) have demonstrated significant HIV prevention benefits, reducing infection risk by almost 50%.[22,23] These sites are well positioned to offer injectable HIV medications, which may require fewer clinic visits and less infrastructure (e.g. refrigeration). Yet, many syringe services programs (SSPs) face legal and logistical barriers, including state and local laws that prevent establishment, prohibitions on use of federal funds to purchase and distribute syringes, community opposition, and a lack of healthcare infrastructure to show effective linkage to care and treatment retention for individuals screened for HIV.[23]

Despite these challenges, there is strong support for integrating longer-acting PrEP into SSPs. Surveys of SSPs in the Northeast and the South show overwhelming support from both patients and providers for inclusion of longer-acting injectable PrEP.[24,25] Implementation, however, requires attention to practical concerns, such as provider training costs, transportation, and care coordination, as well as broader health system readiness.[26,27,28]

POLICY ACTION:

Expand education and outreach to increase PrEP awareness and demand among PWUD.

Tailored, community-led interventions and campaigns, especially those led by PWUD and PWUD living with HIV, can demystify PrEP and address concerns around side-effects, safety and stigma.[29] Additionally, outreach or school-based education with parents or guardians about HIV risk may be an outlet for conversations with youth about HIV incidence and safe practices.

POLICY ACTION:

Strengthen community-based PWUD health settings with drop-in care, services, and supplies for HIV care.

Federal and state policymakers should consider policies to facilitate a greater role for community-based organizations and networks of PWUD to expand access to PrEP and support retention in HIV care. SSPs and SUD treatment programs can serve as trusted, low-barrier entry points to HIV prevention and care.

Opening SSPs in areas at high risk of HIV transmission has led to decreased disease transmission and has resulted in cost savings to publicly funded HIV initiatives in Maryland, Philadelphia, and the District of Columbia.[30,31] SSPs in rural areas during the COVID-19 pandemic used telehealth and task shifting of personnel to harm reduction services and rapid HIV testing services.[32] Building on the success of these and other successful initiatives can provide a platform for expanding access to HIV services for PWUD.

POLICY ACTION:

Standardize screening for HIV, PrEP delivery, and linkage to care across SUD and re-entry systems.

Treatment centers, SSPs, jails, and recovery settings should follow clear protocols for HIV screening and referral. State-level models such as Washington state's "Health Hubs" demonstrate how wraparound harm reduction and clinical services can be integrated into familiar settings. The model is adapted from the Community Based Medications First study, which demonstrated excellent buprenorphine utilization among a largely unhoused population in diverse communities across Washington state.[10] One of the challenges in expanding screening and linkage to care for PWUD is that the knowledge needed can seem too complex or require too much from SUD programs.

Steps can be taken, however, without overburdening existing SUD programs. A first step is to standardize the protocols for screening and linkage to care in SSPs and other SUD programs. SUD treatment services, recovery settings (such as recovery community organizations and recovery housing), and jails and prisons should include more standardized HIV screening and referrals to further care, as well as access to PrEP and HIV educational materials. Prioritization of opt-out services, i.e., offering HIV screening unless declined by the client, and new FDA approved at-home tests and sample collection for self, peers and partners can be used to drive standardization of screening and retention in care for PWUD.

Low-barrier health care for PWUD in the states of Washington and New York (Health Hubs) provide wrap around harm reduction and clinical services to populations that would otherwise not receive health care. This is one model for jurisdictions and clinics to consider. Legislation passed in Washington state in 2024 established a pilot program for health hubs in SSPs, tribal health clinics, and other behavioral health agencies in locations where PWUD are likely to engage.[33] Additional models of services delivery that foster community-based injectable PrEP delivery, such as task shifting, off-site and telesupervision, and injections allowed in non-clinic spaces (home, mobile unit, field areas, etc.), are needed to expand these programs. Some of these approaches, however, may require state-level legislative authorization.

2. ENHANCING CLINICAL MANAGEMENT OF LONGER-ACTING MEDICATIONS FOR PWUD

Longer-acting therapies for HIV prevention and treatment—administered via subcutaneous or intramuscular injection—offer major advantages for individuals who struggle with daily oral medication adherence, including many PWUD. Yet, uptake remains limited, with only about 3% of people prescribed PrEP receiving injectable forms as of 2024.[34]

While cost is a known barrier, expanding access to longer-acting PrEP and ART for PWUD, including PWID, also requires addressing clinical, operational, and provider-level challenges. This section focuses on strategies to improve access to both longer-acting prevention (PrEP) and treatment (ART) for PWUD. While these interventions serve different clinical purposes, both require thoughtful, sustained engagement to be effective. Longer-acting PrEP reduces new infections among those at risk, while maintenance of consistent access to longer-acting ART is essential for viral suppression and the prevention of drug resistance.

Daily treatment adherence can be challenging, particularly for people navigating unstable housing and transportation, substance use, or other structural barriers. For many, taking a daily pill serves as a persistent reminder that they have a life-threatening disease, contributing to treatment fatigue and disengagement. Longer-acting ART offers an alternative—with success in both adherence and patient satisfaction. These benefits are especially important for PWUD, who often face significant challenges staying consistently engaged in care.

Between 2013 and 2023, over one million individuals in the U.S. were prescribed oral PrEP.[35,36] In 2024, more than 600,000 individuals received a PrEP prescription, but few were offered injectable options. As the newest form of PrEP, these medications require clinical transformation to deliver at scale, including changes to financing models, staffing, scheduling, and training. Clinics also must navigate reimbursement challenges and evolving guidelines for use in high-risk populations, including PWUD, with additional behavioral or physical comorbidities.[37] Comorbidities such as elevated depression symptoms correlate with lower PrEP use and adherence rates.[38] Women or sexual minorities who use drugs are a prime population for longer-acting PrEP given higher rates of comorbidities along with drug use and transactional sex.[39]

Providers report hesitancy to prescribe injectable medications to PWUD, citing concerns about relapse, potential drug interactions, adherence, patient safety and tolerability, lack of standardization in screening, priority of other healthcare issues, and stigma.[40,41,42] These concerns persist despite evidence that injectable medications for substance use disorders, such as MOUD, improve adherence and retention in treatment services, and reduce relapse.[43,44] Injectable

BARRIERS TO LONGER-ACTING INJECTABLE PrEP UPTAKE IN PEOPLE WHO USE DRUGS: MYTHS AND FACTS

Utilizing surveys and peer reviewed documents with providers and PWUD, below are some myths and facts on longer-acting PrEP and ART based on these discussions:

MYTH: Injectable medications cannot be prescribed to individuals who inject drugs.

FACT: Injectable medications for substance use disorders, such as MOUD, improve adherence and retention in treatment services and reduce relapse.[43,44]

MYTH: PrEP creates safety and tolerability issues for PWUD

FACT: Injectable buprenorphine, for example, is associated with reduced HIV risk and fewer drug-drug interactions with PrEP compared to methadone.[45,48,60] if using methadone, clinical monitoring is recommended as methadone dosing may need to be adjusted upward in certain individuals.

Clinical guidelines for PrEP are currently available at https://clinicalinfo.hiv.gov/en/guidelines/hiv-clinical-guidelines-adult-and-adolescent-arv/whats-new. Other potential resources include IAS-USA and IDSA.

Please note that this discussion does not constitute clinical guidance and is provided as illustrative of considerations relevant to prescribers for PWUD.

buprenorphine, for example, is associated with reduced HIV risk and fewer drug-drug interactions with PrEP compared to methadone.[45] This hesitancy by providers reflects systemic bias and calls for integrated approaches, such as integrating community PrEP navigators in their services delivery models.

Research on longer-acting PrEP for PWUD is limited and should be prioritized. For example, of 147 PrEP studies reviewed as of 2024, only four included PWID as a target population, and just two examined longer-acting injectable PrEP in this group.[46] This gap in the evidence base hampers clinical confidence and limits guideline development. Infectious disease health and research authorities, such as the CDC and National Institutes of Health, should promote research for this population and build the evidence base needed to promote effective use.

Stimulant use, particularly methamphetamine, is associated with higher risk of viral rebound, faster disease progression, and reduced viral suppression rates following ART initiation.[47,48] Methamphetamine also facilitates HIV replication in both the body and the brain.[49,50] Active substance use in general requires additional supports to promote ART adherence.[51] For individuals who use methamphetamine, engagement-based care models and provider education are essential to create open, stigma-free conversations about ART and PrEP.[52]

Though limited in scale, longer-acting ART has been well-received by PWUD living with HIV who've struggled with daily adherence due to methamphetamine use or structural instability. Many individuals express a strong preference for longer-acting ART, citing fewer side effects and greater convenience, which highlights the need to ensure PWUD are included in future research, care models, and clinical guidance for longer-acting therapies.[53]

Safety concerns around longer-acting PrEP among PWUD are frequently cited but often overstated. Most studies have not found clinically significant interactions between PrEP and MOUD. Surveys indicate that while interest in injectable PrEP is high, questions remain about tolerability, relapse triggers, and safety. [54,55,56] These issues must be addressed directly through provider training, patient education, additional research, and transparent communication around risks and benefits.

POLICY ACTION:

Educate providers and consumers to overcome myths around longer-acting PrEP and ART.

Longer-acting PrEP and ART therapies represent a major opportunity to improve adherence and reduce transmission risk among PWUD. But myths and knowledge gaps among both providers and patients threaten to limit their reach. Therefore, it is necessary to:

- Develop clear clinical guidance to support providers in safely prescribing longer-acting PrEP and ART to PWUD, including protocols for individuals using MOUD or stimulants.
- Expand consumer education campaigns that explain what longer-acting HIV medications are, how they work, and potential side effects or interactions, especially in SUD and harm reduction settings.
- Leverage lessons from MOUD delivery to normalize injectable care for PWID. Longer-acting buprenorphine has shown strong adherence rates among this population and can serve as an operational model.
- Fund inclusion of PWUD in HIV research to build a stronger evidence base for longer-acting product safety, effectiveness, and delivery strategies.

Surveys of both clinicians and PWUD demonstrate a high-level of interest in longer-acting therapies for PrEP and HIV treatment. They are viewed as more convenient, yet there is also a need to develop educational materials both for providers and consumers to provide current information on topics such as safety, side-effects, drug-drug interactions and other considerations. Safety or other issues must be clearly stated. Experience with other medications can provide insights both into the appropriateness of these options and potential issues. For example, routine preventative medications provided at clinics, such as vaccines and MOUD, are provided to PWUD.[57] MOUD, such as buprenorphine, lowers HIV risk and has fewer drug-drug interactions than methadone with PrEP.[58] Moreover, the body of research studying drug-drug interactions with many forms of PrEP is expanding to include prescribed, recreational, and illicit drugs.[59,60] No significant drug interactions between oral HIV PrEP medications and MOUD have been observed. Co-administration of longer-acting ART and PrEP with methadone has not been directly studied, however, minor interactions during metabolism may slightly raise or lower methadone concentrations.[59]

3. IMAGINING NEW WAYS TO MEET THE NEEDS OF PWUD

Longer-acting HIV prevention and treatment options open the door to more flexible, person-centered care. To realize their full potential, however, these innovations must be embedded in services delivery models that meet people where they are. For PWUD, this often means leveraging mobile health, telehealth, pharmacies, and re-entry support systems to provide consistent access to HIV care during periods of instability, transition, or disengagement.

Daily pill regimens are difficult to maintain for anyone, particularly for individuals experiencing homelessness, incarceration, or active substance use. Even when people initiate PrEP, many discontinue despite ongoing risk. Longer-acting PrEP and ART reduce the burden of daily adherence and offer a longer window of protection, making them particularly well suited for individuals with intermittent access to care.

POLICY ACTION:

Leverage telehealth, mobile treatment, and pharmacies to expand HIV prevention and treatment options for PWUD.

Telehealth, which allows for remote visits via a secure connection with a health care provider, has emerged as an essential tool for delivering HIV and SUD care to people in remote, underserved, or stigmatized settings. Access limitations remain, however. Longer-acting ART and PrEP are cost-prohibitive for many community pharmacies and generally are only available in specialty pharmacies. As services delivery evolves, both telehealth and longer-acting therapies will better meet the needs of PWUD.

One promising model is the Comprehensive-Teleharm Reduction (C-THR) intervention, which delivers HIV prevention services, including PrEP, through an SSP.[61] SSPs can support mobile health units at both fixed sites and community pop ups. Telehealth for OUD treatment is becoming increasingly popular as it is comparably effective to in-person treatment.[62] Providing buprenorphine and PrEP at telehealth-based SSPs is a promising practice, however, more studies are needed on adherence of PrEP after starting MOUD.[58] To scale these models, policymakers must ensure that telehealth remains reimbursable, including through Medicaid, and is supported by infrastructure investments.

POLICY ACTION:

Use longer-acting therapies to support continuity of care during re-entry following incarceration.

Upon leaving incarceration, people with HIV who have been virally suppressed often lose access to ART and face gaps in care, and persons who may benefit from PrEP often re-enter society without receiving care. Compulsory detainment can increase both HIV incidence, relapse to drug use and other adverse effects.[63] Re-entry is a moment of elevated HIV vulnerability, especially for PWUD who are at highest risk of returning to drug use and overdose,[64,65] experience homelessness, or face barriers to resuming care.

By initiating ART or PrEP prior to release, correctional health systems can provide a protective buffer of viral suppression or HIV prevention during the critical weeks post-release. Yet few systems do so. One study found that 35% of people with HIV were released from incarceration with less than one month of ART, and many with no medication at all.[66]

Existing Peer/Patient Navigation (PN) and Mobile Health Units (MHU) are effective models to connect people involved in the criminal justice system with HIV and SUD prevention and treatment services in the community.[67] Warm handoffs from carceral settings to community providers can ensure continuity of care upon re-entry into the community. Integrating longer-acting PrEP and ART into these models can further strengthen continuity of care. Additional support is needed, however, to coordinate warm handoffs from jails and prisons to community-based providers, and to address gaps in re-entry planning and insurance coverage. Policymakers should establish policies that support initiation of longer-acting ART or PrEP prior to release from incarceration and should invest in peer navigation, mobile units, and wraparound supports to ensure continuity of care upon re-entry.

POLICY ACTION:

Pilot low-barrier access models, including home-based HIV testing and field-based injectable services.

An important idea is to explore the feasibility of safe, at-home, community-, or field-based administration of longer-acting HIV medications—especially for rural or justice-involved populations. Expansions of health regulations to foster access to home HIV testing and ensure linkage to care pathways, such as off-site and telesupervision or allowances for non-clinic administration, will enable positive results.

Pharmacists represent another underutilized access point for longer-acting HIV services. Community pharmacies are already critical to vaccine delivery and are often more accessible than clinics, especially in rural or underserved areas. With the right training and protocols (i.e., collaborative practice agreements and infectious disease specialization), pharmacists could serve as primary providers or administrators of longer-acting PrEP, particularly for populations with low engagement in primary care. This can be facilitated by expanded pharmacy scope-of-practice laws, collaborative practice agreements, reimbursement models, and specialty pharmacy delivery partnerships.

In addition, as HIV diagnostics and injectable technologies evolve, home-based or field-based strategies (such as street medicine models[68,69]) may become a viable option for certain individuals. Home-based HIV testing is already widely available, and early research is underway into the feasibility of self-administered or community-administered injections for PrEP and ART. These models could offer low-barrier, stigma-reducing access for PWUD, especially in rural or criminalized settings—if designed with proper safeguards and clinical oversight.

THE TIME IS NOW

Longer-acting medications for HIV treatment and prevention represent a breakthrough moment in the fight against HIV. Current policy proposals and threats to funding for physical, mental and behavioral health, however, place both progress and lives at risk. PWUD, especially PWID, face compounding barriers to care, yet remain central to ending the HIV epidemic. With the right investment in equitable delivery models and policies that include all vulnerable populations, we can close longstanding gaps in HIV outcomes and reduce HIV transmission in this high-risk population.

ENDNOTES

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