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HIV testing, care, and treatment among women who use drugs from a global perspective: progress and challenges

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Abstract

The paper reviews data on HIV testing, treatment, and care outcomes for women who use drugs in five countries across five continents. We chose countries in which the HIV epidemic has, either currently or historically, been fueled by injection and non-injection drug use, and that have considerable variation in social structural and drug policies: Argentina, Vietnam, Australia, Ukraine, and the United States. There is a dearth of available HIV care continuum outcome data (i.e., testing, linkage, retention, ART provision, viral suppression) among women drug users, particularly among non-injectors. While some progress has been made in increasing HIV testing in this population, HIV-positive women drug users in four of the five countries have not fully benefitted from ART nor are they regularly engaged in HIV care. Issues such as the criminalization of drug users, HIV-specific criminal laws, and the lack of integration between substance use treatment and HIV primary care play a major role. Strategies that effectively address the pervasive factors that prevent women drug users from engaging in HIV care and benefitting from ART and other prevention services are critical. Future success in enhancing the HIV continuum for women drug users should consider structural and contextual level barriers and promote social, economic and legal policies that overhaul the many years of discrimination and stigmatization faced by women drug users worldwide. Such efforts must emphasize the translation of policies into practice and approaches to implementation that can help HIV-infected women who use drugs engage at all points of the HIV Care Continuum.

Keywords

Drug use; HIV care continuum; Women; Global

Introduction

Research demonstrates that timely testing, linkage, ART initiation and viral suppression prolongs survival for persons living with HIV and prevents HIV transmission.¹ However, the lack of data on how drug-using women* proceed through the care continuum is of particular concern. Gender disparities in HIV risk, care use and service access is worrisome² and compounded for women drug users. Women drug users generally report higher levels of stigma from health service providers, family and friends, and law enforcement than male drug users.³ Women drug users often have high rates of co-morbidities such as other infections (e.g., sexually transmitted infections, Hepatitis C) and/or mental health issues.^{4,5} Yet, women frequently participate in harm reduction services and drug treatment at lower levels than men, often because such services are rarely tailored toward women.^{6,7}

This paper examines HIV testing, treatment, and care outcomes for women who use drugs in five countries across five continents – Argentina, Vietnam, Australia, Ukraine, and the United States (U.S.). We selected these countries because their HIV epidemics have been fueled by injection and non-injection drug use at some point in time, yet they maintain considerable variation in structure and policies that may support or inhibit access to HIV testing, ART, substance use treatment, and harm reduction services among women drug users. We also wanted to ensure geographic variability and include both high- and low-income countries.

We conducted a literature search using databases, including but not limited to PubMed, Medline and targeted journals, for publications from 2000–2015. The search term “HIV” was used in conjunction with the following: “‘treatment cascade’ or ‘care continuum,’” “‘(injection) drug use’” ‘female’ or ‘women,’” “‘stigma,’” and/or “‘substance/drug abuse treatment.’” We also searched country government websites to obtain available national-level data. We used national-level surveillance data when available and, when it did not exist, relied on regional studies. Available information on epidemiology and the HIV care continuum varies considerably among these selected countries. Particularly, few countries provide disaggregated data by gender or drug use. Therefore, while we first searched for data on female drug users, we often had to report on drug users, or females, or even country-level care continuum numbers due to lack of data. Following the presentation of these case studies, we discuss progress, ongoing challenges, and strategies to improve the HIV care continuum for women drug users.

Country Case Studies

Argentina

Epidemiology—With a total population of approximately 41.5 million, Argentina had 6,000 incident HIV cases and a total of 110,000 HIV-positive people (32.7% women) in

*Please note, when we use the phrase “women drug users”, “ women who use drugs” or simply, “drug use” we are referring to both injection and non-injection drug users/drug use. If we are referring specifically to injection vs. non-injection use (or vice versa) we will clarify that distinction.

2014.⁸ There were approximately 74,500 injection drug users (IDUs) in 2009, half of whom were HIV positive.⁹

Continuum of Care—In 2007, 47% of Argentinian IDUs had received an HIV test in the last year and knew their results (43% of men and 62% of women).⁹ IDUs are the most likely of all transmission categories to be diagnosed late with 32% of women having a CD4 cell count of <200 at diagnosis, which did not significantly differ from men.⁸

In 2013, 71% of HIV-positive individuals in Argentina knew their status, 47% were receiving ART and 31% had an undetectable viral load (i.e., <50 copies/mL); the Argentine Ministry of Health did not disaggregate these data by gender or drug use.⁸ UNAIDS found no available data on the proportion of HIV-positive injection drug users who receive ART in Argentina and other countries in Latin America.¹⁰

Structural Factors and Government Services—The Ministry of Health is promoting testing across the country and in 2014 it distributed 2 million testing kits to 651 HIV testing centers nationwide.⁸ Argentina has universal healthcare¹¹ and began its national ART policy in 1990. As of December 2014, HIV medication can be prescribed irrespective of CD4 cell count⁸ and is distributed through 350 established sites throughout the country.⁸

Illegal drug use in Argentina rose in the 1980s and 1990s leading to repressive and extensive drug control policies, the majority of which have since been curtailed.¹² As a result of the high rates of HIV prevalence among IDUs, needle and syringes programs (NSPs) and free condom access were implemented in the 1990s.¹² Syringes can be purchased from pharmacies or accessed through NSPs (25 as of 2008), but there is no data regarding utilization.⁹

There is currently no available opioid substitution treatment (OST) in Argentina¹³ and the therapeutic infrastructure is poor, particularly outside the capital, consisting mainly of therapeutic communities or religious-focused centers that do not incorporate HIV prevention interventions.¹⁴

Exchanging sex for money is legal under Argentinian law but organized prostitution (e.g., brothels, prostitution rings, and pimping) is illegal.¹⁵ One study found high rates of illegal drug use (injection and non-injection) among female sex workers (30%), suggesting that women may work in exchange for drugs or money to purchase drugs.¹⁵

Vietnam

Epidemiology—Vietnam (population 90 million) has approximately 14,000 new HIV cases each year. The Vietnam Administration of AIDS Control (VAAC) reported that 219,163 people were HIV-positive by mid-2014 (72,543 women and 146,620 men). Vietnam's HIV epidemic has been driven by drug use and an estimated 40% of IDUs nationwide are HIV-positive.¹⁶ In 2010, 32% of new cases resulted from injection drug use. Women constitute 20% of IDUs in Vietnam.¹⁷

Continuum of Care—A preliminary continuum of care was developed in March 2014.¹⁸ The continuum demonstrated that only 42% of HIV-positive women in Vietnam were linked to care, of which 99% were currently on ART; only 38% of men living with HIV were linked to care with 99% on ART. As of May 2014, only 11% of the 163,714 recorded drug users were accessing one of the 92 methadone maintenance treatment (MMT) clinics; of the 20.9% HIV-positive enrollees in MMT clinics, 75.3% were on ART.¹⁸ The percentage with viral suppression is unknown.

Structural Factors and Government Services—Since 2009, the Vietnamese government has fully subsidized health care for certain groups (e.g., children, the elderly, the poor, and ethnic minorities)¹⁹ though out-of-pocket expenses for the majority of the population remain high as the country works to develop a universal healthcare system.¹⁹ ART is delivered through 364 HIV outpatient clinics and national guidelines call for initiation at a CD4 cell count of <350 cells/ml. External donors, such as the U.S. President's Emergency Plan for AIDS Relief (PEPFAR), cover 94% of people receiving ART though this funding is expected to be cut back since Vietnam gained middle income country status.¹⁶

Vietnam has government run compulsory detoxification centers and at least one-third of IDUs have attended such centers; over 50% of IDUs who attended a center in 2009 were HIV-positive.²⁰ Methadone, the only approved opioid dependence medication, was introduced in 2008.

NSPs began in Vietnam as early as 1993 and by 2013, 60 of the 63 provinces had some type of NSP; syringes are also available in pharmacies.²¹ A study of 403 female IDUs found that only 50% of women in Hanoi and 63% in Ho Chi Minh City had ever heard of NSPs²², and only 17% and 24% in each city, respectively, had received a free needle in the last 6 months.²²

Sex work is illegal in Vietnam, though regulation is irregular and consequences are shifting from rehabilitation camps to monetary fines.¹⁶

Australia

Epidemiology—Australia (population 23 million) has an estimated 26,800 HIV-positive individuals with 86% aware of their diagnosis.²³ 1,236 new cases were reported in 2013 of which 29 were among IDUs.²³

Continuum of Care—As of 2014, 50% of HIV negative individuals in NSPs reported having an HIV test in the prior year.²³ Linkage and retention in HIV care are high in Australia; in 2013, 90% of those with diagnosed HIV were linked to care within three months and approximately 88% were retained in care.²³ In 2013, 76.6% of HIV positive individuals received ART, and 71.8% of all HIV-positive individuals had undetectable viral loads, defined as <400 copies/mL.²³ One-quarter of the women identified illegal drug use as the main contributor to missed ART doses.²⁴

Structural Factors and Government Services—Universal healthcare, instituted in 1984, is publicly-funded and available to all citizens and many immigrants; virtually all HIV-positive individuals have access to this system.²⁵

There are over 3,000 NSPs across the private and public sectors including mobile and outreach services and syringe vending machines.²⁶ Sex work laws vary by state/territory, with some decriminalizing prostitution and allowing sex work within brothels and the streets.²⁷

Ukraine

Epidemiology—Ukraine (population 44 million) had an estimated 238,000 HIV-positive individuals²⁸ and 21,631 incident cases in 2013.²⁹ The prevalence of HIV among the 290,000 persons who inject drugs (PWID) was 21.5%.³⁰ PWIDs account for 60.5% of all HIV cases.³¹

Continuum of Care—There is minimal research on the HIV care continuum in Ukraine.³² Only 28% of HIV-positive individuals have been tested and are aware of their status^{33,34} while only 13% of IDUs may be aware of their HIV status.^{35,36} Women drug users are more likely to receive later diagnoses than women who do not use drugs.^{37,38} Implementation of routine and voluntary HIV testing in primary care settings has been minimal despite 2005 Ministry of Health guidelines that called for the expansion of voluntary counseling and testing.³⁴

HIV-positive individuals are referred free-of-charge to a network of government sponsored AIDS centers, the only providers of HIV healthcare.³⁹ These centers often result in fragmented services, i.e., lack of follow-up services.^{28,39} Consequently, only about half of known HIV-positive individuals are enrolled in HIV treatment services.²⁸ Data from Kiev showed that in the first six months of 2013, only 41% of persons who died from HIV/AIDS-related causes had received HIV treatment and only 5.7% of those who died had received ART for more than one year.⁴⁰ Although the number of PWID receiving ART increased from 2006 to 2011, coverage among this population remains very low.³⁰

Structural Factors and Government Services—Drug users in Ukraine can be detained for up to 72 hours without charges, and there are reports of police using the painful withdrawal from opioids (or the threat of it) to coerce confessions to unsolved crimes or exact bribes.⁴¹ Drug users who are detained often spend a year or more awaiting trial and can be sentenced for up to three years for possession of less than one daily dose of homemade opioid.

Policy changes have led to modest improvements in access to HIV prevention services for PWID.^{13,30} However, major barriers to HIV treatment and prevention still persist, including harassment by and fear of police enforcement and limited governmental support.^{30,42} Treatment programs dedicated to ART were implemented in 2004 with external support and the Ukrainian government assumed principal responsibility in 2008, leading to higher, though still suboptimal, treatment rates.^{39,43}

OST with buprenorphine was introduced in 2004, and methadone was incorporated in 2007.⁴⁴ OST and NSPs are still not provided in the Ukrainian prison system, with the exception of pre-trial detention, where OST patients may continue treatment.³⁰ The absence of an integrated care system for HIV-positive drug users remains a concern. As a result, novel models of healthcare delivery emerged in 2008 and provide a single location where HIV-positive injection drug users can receive services for primary care, case management, ART and OST and improve overall healthcare quality.⁴⁴

United States

Epidemiology—The U.S. (population 320 million) had an estimated 1.2 million individuals aged 13 living with HIV in 2011. Approximately 86% of these individuals had been diagnosed with HIV, including 88% of females and 94% of female injection drug users.⁴⁵ Overall HIV incidence amongst IDUs declined by 80% between 1988–1990 and 2003–2006, but no difference was noted between 2008 and 2010^{46,47}; recent data from the 2012 National HIV Behavioral Surveillance system indicates that 11% of all IDUs have HIV, of which 63% are aware of their infection.⁴⁸ Eight percent of new HIV infections occur among IDUs and 15% of people currently living with HIV are IDUs; female IDUs constituted 16% of new HIV cases among women in 2010.⁴⁵ African Americans constitute the greatest numbers of new infections among IDUs.⁴⁹

Continuum of Care—Only 53% of women injectors had been tested in the past 12 months and 92% in their lifetime.⁵⁰ Overall, just more than half (51%) of IDUs report having an HIV test in the past 12 months.⁴⁸ Approximately 80% of new HIV cases are linked to care within three months,⁴⁵ including women whose HIV infection was attributed to injection drug use. Despite relatively high linkage to care rates, only about 40% of all individuals are engaged in care (38% of men, 45% of women), and only 37% (35% of men and 41% of women) are prescribed ART. Overall, only 30% of Americans living with HIV are virally suppressed, with no gender differences. In 2011, 94% of female IDUs have been diagnosed, 47% retained, 42% prescribed ART, and 35% are virally suppressed (i.e. <200 copies/mL).⁴⁵

Structural Factors and Government Services—The U.S. healthcare system is a combination of private insurers and a public system that covers the elderly and low-income families. The 2010 Affordable Care Act (ACA) expanded public coverage and enacted other changes that guaranteed access to comprehensive and affordable health care for all. The Ryan White HIV/AIDS Program (a payer of last resort) ensures that all HIV-positive persons have access to HIV care, though its future remains unclear as individuals transition to the expanded system under the ACA or to private insurance.⁵¹

The U.S. has 194 syringe service programs in 33 states⁵² that are geographically clustered and only available for less than three percent of all injections per year. These restrictions are largely due to Congress re-instating the ban on federal funding for NSPs in 2012.⁵³ Research has shown that 68% of states with a high to low HIV incidence trajectories (or low to low) had publically funded programs whereas none of the states whose incidence

remained high had publically funded syringe exchange programs; the provision of public funding was associated with a reduction in HIV incidence among IDUs.⁵⁴

Few PWID received substance abuse treatment (33% in the last year) and only 21% had been part of an HIV behavioral intervention according to 2009 data.⁵⁰ There are more than 14,500 specialized drug treatment facilities in the U.S. that serve both injection and non-injection drug users, and there is a major emphasis to increase integration of substance use treatment with primary care. In 2012, only 8% of all substance abuse treatment facilities had OST.⁵⁵

Currently, the U.S. has strict policies and laws that result in many drug users facing criminal consequences from illicit drug use.⁵⁶ Commercial sex work and prostitution are illegal in the U.S. aside from a few jurisdictions.⁵⁷

Discussion

Four major findings emerge from this review:

First, there is scant data on how women drug users progress through the HIV care continuum

While the five countries discussed have made some progress, we lack general data (e.g., national-level viral suppression), much less data disaggregated by gender or drug use. This is concerning given the approximate 3.5 million women who inject globally⁶ with studies showing higher HIV prevalence in female versus male IDUs.⁶ Frequently the only women drug user data is combined with sex workers or partners of IDUs.²⁰ Another major challenge is the lack of integrated data management systems that span HIV surveillance and clinical care activities; integrating these would facilitate measurement of steps in the HIV care continuum.⁵⁸ Longitudinal studies could examine how women drug users move in and out of the HIV care continuum particularly since it may not be a linear process, especially for people living with multiple morbidities. In addition, since ART treatment thresholds vary across countries, it is important to ensure that pre-ART care is monitored and tracked over time.

Second, while there has been progress in increasing HIV testing among women drug users, most have not benefitted from ART and are not engaged in HIV primary care

The majority of people living with HIV in four of the five country cases knew their diagnosis. However, the proportion on ART and the percentage of whom were virologically suppressed was less than optimal; this critical information is unknown in Vietnam and Ukraine. There is a dearth of data and few evidence-based interventions available to promote linkage to and retention in care in high, middle or low-income countries.⁵⁹ Intervention strategies that have been successful have been simple and inexpensive such as enhanced face-to-face contact and appointment reminders⁶⁰; however, these interventions have not worked well for substance users. Some successful strategies used to enhance adherence among drug users include peer counseling, case management, directly observed treatment, financial incentives, and integrated drug treatment.^{41,61} However, injection and other drug use has been identified as a cause of discrimination from healthcare providers and

a subsequent deterrent to seeking care and adhering to treatment among HIV positive individuals.^{62,63}

Third, there is a lack of integration of substance use treatment and HIV primary care services for drug users and a particular lack of women-centered services

Our review shows little integration of HIV prevention services with substance use treatment. For example, a 2009 U.S. report noted that only 11–12% of injectors who had been tested for HIV were tested in substance use disorder treatment programs.⁵⁰ Yet, a U.S. study in substance use disorder treatment programs demonstrated that offering HIV testing on-site increased the uptake of testing.⁶⁴ Medication-assisted treatment for opioid and alcohol dependence is effective in reducing substance use and improving HIV engagement.^{65,66} A major challenge is the scarcity of medication-assisted treatment for stimulant users as well as the lack of women-centered and family-based treatment approaches in many countries.⁶⁷ Studies in Europe show that the ratio of men to women in substance use treatment is higher than the ratio of men to women drug users.⁶⁸ In many developing countries services tailored to the treatment and care of women drug users are limited and stigma can make treatment access even more difficult. In addition, the lack of implementation of evidenced-based substance use treatment is a major factor in preventing substance users from engaging in and benefitting from HIV care.

Fourth, our review suggests the positive association between structural interventions and HIV treatment outcomes

Universal health coverage, for example, can help marginalized groups secure access to health care services on a non-discriminatory basis. The low HIV prevalence among IDUs in Australia, for example, is partly attributed to the early introduction and national-level coverage of NSPs.²⁶ In contrast, the U.S. only has 200 NSPs, clustered mostly in the west and northeast.⁶⁹ The U.S. has seen a decrease in HIV incidence among IDUs (from a high of almost 35,000 infections/year in the late 1980s to 3,900 new infections in 2010) but these numbers are still substantial.⁷⁰ Unfortunately, the ban on federal funding for NSPs has recently been reinstated.

Sex crime is decriminalized in regions of Australia and the HIV prevalence among female sex workers is low (0.037%).⁷¹ In Ukraine, community empowerment interventions combined with equitable access to expanded ART have been proposed as a means of averting as many as 17% of new HIV infections among female sex workers.⁷² Such interventions focus on addressing the structural, individual and contextual factors that influence HIV infection, including sex worker organization and mobilization, community-led peer education, and HIV/STI screening and treatment.

HIV-related stigma is strongest among vulnerable groups, such as women, trans women, sex workers, and IDUs.⁷³ Little attention has been paid to HIV-related stigma and discrimination from healthcare providers, particularly in low-resource countries with burgeoning HIV epidemics, even though HIV-positive individuals frequently report discrimination and stigma in healthcare settings.⁷⁴ Such attitudes can adversely affect progress through the care continuum.⁷⁴

Conclusion

Many countries have employed the HIV care continuum approach. HIV treatment as prevention has been largely successful in places with equitable access to ART for all populations, including women drug users (e.g., Australia). While this approach can monitor the HIV epidemic at a population level, it may mask the unique challenges that women drug users face in proceeding through the HIV care continuum. Specifically, there is a risk that this continuum masks co-morbidities, co-infection with Hepatitis C, mental health issues, and social issues such as medical mistrust, living with domestic violence, poverty, unemployment, education, and having encountered discrimination, and racism. Also, the intersection of female sex work, drug use and HIV combined with legislation (i.e., criminalization of sex work and drug use and federal ban on needle exchange in U.S., etc.) perpetuates and exacerbates the stigmatization and marginalization of HIV-positive women drug users, which also further limits their access to HIV care, drug treatment and other critical social services. Our review points to the need for further data (e.g., disaggregating continuum of care data by gender, mode of transmission, and the intersection of gender and mode of transmission), integration of services, and the reform of social policies that are critical to ensuring that ART can be accessed and maintained by HIV-positive female drug users and other marginalized populations.

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Table 1

HIV Continuum of Care and Structural Factors by Country*

Country	HIV prevalence Adults aged 15–49 ¹	% of virally suppressed HIV+ people	National-level HIV prevalence female drug users	% of virally suppressed HIV+ female drug users	Country-wide ART Guidelines	Available National-Level Care Continuum Indicators (i.e., test, link, engage, on ART, viral suppression)	Presence of criminalization Laws (drug possession & Sex work)	Availability of drug use prevention & treatment (i.e. NSP, OST, MMT)
Argentina	0.5%	31% ²	2.9% ²	No available data	Universal	All	Yes	NSP ^{3,4}
Australia	0.2%	71.8% ⁵	1% ⁵	No available data	Universal	All	Yes/No (varies by region)	NSP, OST, SIS ^{6,7} (Supervised injection sites)
Ukraine	0.8%	No available data	No available data	No available data	WHO Guidelines	Tested	Yes	NSP, OST ^{8,9}
United States	0.6%	30% ¹⁰	9% ¹¹	No available data	Universal	All	Yes	NSP (limited), OST,
Vietnam	0.4%	No available data	No available data	No available data	CD4 < 350 cells/mL	Tested, linked, on ART	Yes ¹²	NSP, MMT

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