

5. HIV and Hepatitis C in Uzbekistan

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Introduction

HIV and Hepatitis C remain significant public health challenges worldwide, affecting millions of people and requiring sustained attention from the global health community. While progress has been made in understanding and managing these diseases, specific regions, including Central Asia and, notably, Uzbekistan, face a number of challenges in addressing infectious diseases such as HIV and Hepatitis C. The country's distinct socio-economic and cultural landscape makes it a critical case study within the region, offering insights into the broader dynamics of the two epidemics in Central Asia.

Epidemiology of HIV/AIDS in Uzbekistan

The HIV/AIDS epidemic in Uzbekistan has traversed a complex trajectory over the past few decades. Initially, the epidemic was primarily driven by injecting drug use, a pattern common across the region due to its position on major drug trafficking routes from Afghanistan. This mode of transmission facilitated a rapid increase in HIV cases during the late 1990s and early 2000s, mirroring outbreaks in other Central Asian states and Eastern Europe. Notably, Uzbekistan experienced a significant surge in HIV diagnoses between 1999 and 2000, with people who inject drugs (PWID) and their sexual partners being the most affected groups. This period marked the beginning of what would become a persistent public health challenge for the country (Carr et al. 2005; Giyassova 2008).

By 2023, Uzbekistan had reported a total of 52,420 HIV cases, indicating a gradual yet persistent rise in the number of people living with HIV (PL-HIV). The demographic breakdown of these cases revealed a slight male predominance, accounting for 55% of the total cases. Despite the number of new HIV cases stabilising at approximately 3,000 per year, certain populations remain at heightened risk. These include men who have sex with men

(MSM), PWID, and sex workers, largely due to stigma, discrimination, and barriers to accessing prevention and care services (Igamberdiev 2023; The Joint United Nations Programme on HIV/AIDS [UNAIDS] 2020).

A concerning trend is the shifting pattern of transmission, from predominantly injection drug use to heterosexual contacts. This shift underscores the changing dynamics of the epidemic, necessitating adjustments in prevention and treatment strategies. Additionally, the HIV prevalence among key populations has shown variable trends: stable among MSM, fluctuating among sex workers, and declining among PWID. Such patterns highlight the need for targeted interventions and the importance of understanding the specific risk factors affecting each group (Igamberdiev 2023).

The genetic diversity of the virus in Uzbekistan further complicates the epidemic's landscape. The presence of multiple HIV-1 subtypes, notably CRF02_AG and A6, suggests varied transmission networks and the impact of regional mobility and migration on the epidemic's dynamics. This genetic diversity indicates the necessity for tailored public health strategies to address the specific challenges posed by different viral strains (Lebedev et al. 2022).

Risk Factors and Transmission of HIV

The HIV epidemic in Uzbekistan is influenced by a confluence of behavioural, sociocultural, and economic factors that heighten the vulnerability of certain populations to HIV infection. Initially, the epidemic was largely driven by the use of contaminated injecting equipment among people who inject drugs, a common risk factor across the Central Asian region due to its proximity to major drug trafficking routes. However, as the epidemic has evolved, sexual transmission has become increasingly predominant, with heterosexual contacts now accounting for the majority of new infections. This shift underscores the changing nature of the epidemic and the importance of adapting prevention strategies accordingly.

Several sociocultural and economic factors play crucial roles in facilitating the spread of HIV in Uzbekistan. Stigmatisation and discrimination against PLHIV and key affected populations, such as MSM, sex workers, and PWID, deter many from seeking testing and treatment services. This is exacerbated by legal frameworks that criminalise behaviours associated with HIV transmission, such as drug use and sex work, further marginalising these populations and limiting their access to healthcare services.

Economic inequality, poverty of a large proportion of the population, and labour migration also contribute significantly to the HIV epidemic in Uzbekistan. Many Uzbek migrants, particularly those working in Russia and Kazakhstan, engage in high-risk behaviours such as unprotected sex with multiple partners and drug use, in contexts where they have limited access to HIV prevention and care services. Upon returning to Uzbekistan, these migrants can potentially introduce new HIV infections to their regular partners, fuelling the epidemic's spread within the general population.

People who inject drugs are at a heightened risk of HIV infection due to the sharing of contaminated injecting equipment. The historical and geographic context of Uzbekistan, lying on the 'northern route' of drug trafficking from Afghanistan to Russia and Europe, has contributed to a significant drug-using population. While there has been a decline in HIV prevalence among PWID, they remain a key population due to the enduring risks associated with injection drug use.

MSM in Uzbekistan face significant societal stigma and legal sanctions, which discourage them from accessing HIV testing, prevention, and treatment services. The criminalisation of same-sex relations in Uzbekistan exacerbates the vulnerability of MSM to HIV infection by pushing their behaviours underground and away from the reach of effective intervention (Cheburashka 2024).

Sex workers in Uzbekistan operate in an environment of legal and social vulnerability. The criminalisation of sex work and the absence of legal protection for sex workers contribute to their increased risk of HIV. These individuals often face barriers to accessing healthcare services, including HIV prevention and treatment, due to stigma, discrimination, and fear of legal repercussions.

Labour migrants constitute a particularly vulnerable group in the context of the HIV epidemic in Uzbekistan, influenced by a constellation of factors that increase their risk of HIV exposure and transmission. This vulnerability is underpinned by the socio-economic dynamics of migration, limited access to health services, and the often marginalised legal and social status of migrants in host countries.

Women and young people are particularly vulnerable to HIV infection due to a combination of biological, socio-economic, and religious factors. Gender-based inequality, including limited decision-making power in sexual relationships and economic dependency on men, increases women's vulnerability to HIV. Young people, including adolescents, are at risk due to

a lack of comprehensive sexual education and access to preventive services, which leaves them ill-equipped to navigate safe sexual practices.

Children are also vulnerable to HIV transmission. The sporadic information on children living with HIV in Uzbekistan suggests a growing concern, with reported cases rising from 2,500 in 2012 to 8,100 in 2021, indicating an urgent need for targeted interventions to support these children and their families (KUN.UZ 2022; O'zbekiston Milliy axborot agentligining [UzA] 2022; Institute for War & Peace Reporting [IWPR] 2012).

In conclusion, the HIV epidemic in Uzbekistan is shaped by a complex interplay of risk factors that include not only individual behaviours but also broader socio-cultural and economic dynamics. These factors contribute to the heightened vulnerability of specific populations to HIV infection. Addressing these risk factors requires a multifaceted approach that goes beyond health interventions to include social, legal, and economic reforms. Efforts must focus on reducing stigma and discrimination, reforming policies that criminalise key populations, enhancing economic opportunities, and providing targeted HIV prevention and care services. In addition, low levels of education, lack of sexual education, and the high prevalence of Muslims pose challenges for vulnerable groups (Sankar 2021).

Government and Public Health Response to HIV/AIDS

Uzbekistan's approach to combating HIV/AIDS is anchored in a series of national policies and strategic plans that prioritise prevention, testing, treatment, and care. Key among these efforts is the implementation of the Presidential Decree No. 14 'On measures to further strengthen systems for counteracting the disease caused by the human immunodeficiency virus', which underscores the government's commitment to addressing the epidemic through comprehensive and coordinated actions. Central to this strategy is the expansion of HIV testing and counselling services, enhancing the accessibility and quality of antiretroviral treatment (ART), and addressing the legal and social barriers that hinder effective HIV/AIDS prevention and care (Igamberdiev 2023).

A significant component of Uzbekistan's public health response to HIV/AIDS involves scaling up testing and treatment services. The country has made strides in increasing the availability of HIV testing, as evidenced by the expansion of testing coverage from 2,564,400 tests in 2013 to 4,137,000 in 2022. This increase in testing is crucial for early detection and linkage

to care, enabling individuals to access treatment sooner and improve their health outcomes while reducing the risk of onward transmission (Igamberdiev 2023).

The treatment landscape in Uzbekistan has also evolved, with efforts to align with international standards and improve treatment outcomes for PLHIV. The adoption of the World Health Organization's (WHO) ART guidelines and the expansion of treatment coverage represent significant steps forward. However, challenges remain in achieving the desired treatment targets and ensuring that a high percentage of those on treatment achieve viral suppression, a critical factor in managing the epidemic and preventing HIV transmission.

Despite these efforts, public health initiatives in Uzbekistan face challenges related to the criminalisation of behaviours associated with HIV risk, such as drug use, sex work, and being MSM. These legal barriers can deter individuals from accessing testing and treatment services due to fear of legal repercussions, underscoring the need for policy reforms that support rather than hinder HIV prevention and care efforts.

International collaboration and the involvement of non-governmental organisations (NGOs) are pivotal components of Uzbekistan's response to HIV/AIDS. Partnerships with international bodies, including the Global Fund to Fight AIDS, Tuberculosis and Malaria (GFATM) and the Joint United Nations Programme on HIV/AIDS (UNAIDS), have been instrumental in providing the financial and technical support needed to enhance the country's HIV/AIDS programmes. These collaborations have facilitated improvements in the national HIV/AIDS response, from strengthening health systems to implementing evidence-based interventions targeting key populations.

There are four NGOs working with key populations and PLHIV: 'ISHONCH VA HAYOT' (since 2003), 'ISTIQBOLLI AVLOD' (since 2001), the Republican Information and Educational Center 'INTILISH' (since 2001), and the Anti-Cancer Society of Uzbekistan. However, there is no data on how many clients they serve per year or any other statistical information.

Treatment and Healthcare Challenges

HIV testing is a cornerstone of effective HIV management, enabling individuals to know their status and access timely treatment. In Uzbekistan,

there is a network of 63 inter-district HIV laboratories and 15 regional AIDS centres. The requirement in the national HIV testing algorithm for confirmation through a series of tests, including a final confirmatory Western blot test, can delay diagnosis and increase costs, which may deter individuals from seeking testing (Ministry of Health of the Republic of Uzbekistan 2023). A household survey highlighted that less than half of women had been offered and undergone HIV tests during pregnancy, indicating gaps in the implementation of testing protocols (Uchaev et al. 2021).

In 2022, the ART was provided to approximately 45,000 patients in Uzbekistan. There are significant gaps in achieving the '90-90-90' targets set by UNAIDS: in 2020, the HIV care cascade in Uzbekistan was '83-67-59', demonstrating a major gap in reaching the declared targets with ART coverage at the level of 55% of PLHIV estimate. The government's efforts to increase public funds for HIV treatment have led to improvements in coverage, but challenges remain in ensuring that all PLHIV can access and adhere to ART (Normuratova 2022).

Most patients are transiting to dolutegravir-based regimens; currently there are 13 treatment regimens used. Uzbekistan's AIDS service is moving away from nevirapine and instead buying more FDC. The AIDS service has adopted the 2019 WHO ART treatment protocol. All pregnant women on ART are on B+ (GFATM data).

Hepatitis C in Uzbekistan

Hepatitis B and C infections are highly prevalent in Uzbekistan and are a priority of the Ministry of Health's agenda. In 2016, an estimated 2.5 million people were living with hepatitis B and 1.3 million with hepatitis C in the country (WHO 2022). Despite the scale of this public health issue, data on the spread of the hepatitis C virus (HCV) in Uzbekistan is difficult to obtain. Epidemiological data is usually published through the National Information and Analytical Center for Drug Control under the Cabinet of Ministers of the Republic of Uzbekistan. In addition, the Central Asia Drug Action Programme (CADAP) collected data on the spread of HCV in Uzbekistan.

The data on HCV prevalence among PWID in Uzbekistan varies widely. The last CADAP Country Report from the year 2018 mentioned that HCV infections had been decreasing continuously between 2005 and 2017: From

53,7% in 2005, to 36,5% in 2007, to 28,5% in 2009, to 20,9% in 2011, to 21,8% in 2013, to 15,7% in 2015 and to 12% in 2017 (Central Asia Drug Action Programme [CADAP] 2018, p. 10).

The article “The epidemiology of hepatitis C virus in Central Asia: Systematic review, meta-analyses, and meta-regression analyses” by Botheju et al. (2019), however, states that HCV prevalence is much higher. The authors argue that HCV prevalence in the general population ranged from 6.4% to 13.1%, and was 51.7% among PWID. It is therefore difficult to obtain a reliable picture of the spread of hepatitis C among the drug-using population in Uzbekistan.

Data on available treatment for HCV in Uzbekistan is also limited. In 2022, the WHO announced that the Uzbekistan government has scaled up viral hepatitis response to the national level, and passed a presidential decree offering free or subsidized treatment to all those infected with chronic hepatitis C (WHO 2022). In 2021, the government has introduced free testing in seven regions of the country. Between 2022 and 2025, an expected 2 million people in the country were screened for viral hepatitis B and C. Despite political efforts to control HCV, Uzbekistan remains a country with a very high HCV prevalence.

Discussion and Conclusion

The fight against HIV/AIDS and Hepatitis C in Uzbekistan, while marked by significant efforts and some progress, presents a complex landscape of successes and ongoing challenges. The analysis of current approaches, remaining obstacles, and potential strategies for improving outcomes highlights the multifaceted nature of the epidemic and the need for comprehensive, integrated strategies to address it effectively.

Despite the progress made, significant challenges remain in the fight against HIV/AIDS in Uzbekistan. Stigma and discrimination continue to hinder access to and uptake of HIV testing and treatment services, particularly among key populations. The criminalisation of behaviours associated with HIV transmission, such as drug use, sex work, and MSM, exacerbates this issue, creating barriers to effective prevention and care.

Improving outcomes in the response to HIV and Hepatitis C in Uzbekistan requires a multipronged strategy that addresses both the direct impacts of the two epidemics and the underlying factors that contribute to vulnerability and transmission. Key strategies can include:

- *Enhancing prevention efforts*: Expanding access to comprehensive sexual education and prevention tools, such as condoms and pre-exposure prophylaxis, particularly among key populations and young people. Tailoring prevention efforts to address the needs of labour migrants and leveraging digital platforms for education and outreach can also enhance impact. The promotion of harm reduction programmes is needed.
- *Improving access to testing and treatment*: Simplifying the HIV testing process and expanding the availability of rapid and self-testing options can facilitate early diagnosis.
- *Addressing legal and social barriers*: Reforming laws that criminalise behaviours associated with HIV risk and implementing policies that protect the rights and dignity of people living with HIV are critical for reducing structural discrimination. Good education, including sexual education and family-planning skills, is needed. It is crucial to work with religious leaders to combat family discrimination against women and increase their autonomy and independence. Engaging communities and building capacity among healthcare providers to offer non-discriminatory, supportive services can further enhance access to care.
- *Improving data transparency and accessibility*: Uzbekistan currently critically lacks good data and research on key aspects related to the HIV epidemic. A plan for community-led, international, and expert-led research needs to be developed and implemented. Data collected by the government of Uzbekistan should meet standards that allow for more in-depth study of the problem: openness, accountability, relevance, and disaggregability.

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