

4. HIV and Hepatitis C in Kyrgyzstan

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Introduction

The epidemiological situation in the Kyrgyz Republic regarding HIV and hepatitis C infections presents a complex problem. There is an intensification of HIV and hepatitis C transmission pathways not only among vulnerable groups with risky behaviours but also among the general population, leading to an increase in the number of people living with these infections. The specifics of sexual behaviour and strategies for protection against unintended pregnancies and sexually transmitted infections play a significant role in the development of HIV/AIDS and hepatitis C epidemics in the country. In this chapter, we provide a comprehensive examination of the epidemiological conditions surrounding HIV/AIDS and hepatitis C in Kyrgyzstan. This includes a presentation of statistical data and a critical discussion of the response of the governmental healthcare system as well as international organisations and non-governmental organisations (NGOs). We also discuss the prevention programmes addressing HIV/AIDS and hepatitis C in Kyrgyzstan. In our discussion, we pay attention to the issue of stigmatisation and discrimination against vulnerable groups affected by HIV and hepatitis C.

HIV/AIDS and hepatitis C are medical and social issues with far-reaching consequences. The high level of stigma and discrimination against people living with HIV (PLWH) and those infected with hepatitis C, as well as the stigma against key population groups, complicates the response to the two diseases. This makes it more difficult to achieve key prevention objectives, such as reducing the incidence and mortality rates and preventing the further spread of HIV and hepatitis C in the country due to the inaccessibility of key population groups and their refusal to participate in testing, prevention, and treatment programs. The increase in the number of cases of HIV and hepatitis C transmitted through sexual contact indicates the duration of the latent stage of the development of these epidemics among injection drug users and the initiation of infection transmission within the general population. Therefore, preventive programmes, includ-

ing harm reduction programmes, remain a vital component of comprehensive measures to combat these epidemics in Kyrgyzstan.

The epidemiological situation in the Kyrgyz Republic regarding HIV and hepatitis C infections presents a complex problem. There is an intensification of HIV and hepatitis C transmission pathways not only among vulnerable groups with risky behaviours but also among the general population, leading to an increase in the number of people living with these infections. The specifics of sexual behaviour and strategies for protection against unintended pregnancies and sexually transmitted infections play a significant role in the development of HIV/AIDS and hepatitis C epidemics in the country. In this chapter, we provide a comprehensive examination of the epidemiological conditions surrounding HIV/AIDS and hepatitis C in Kyrgyzstan. This includes a presentation of statistical data and a critical discussion of the response of the governmental healthcare system as well as international organisations and NGOs. We also discuss the prevention programmes addressing HIV/AIDS and hepatitis C in Kyrgyzstan. In our discussion, we pay attention to the issue of stigmatisation and discrimination against vulnerable groups affected by HIV and hepatitis C.

HIV and hepatitis C are spread unevenly within Kyrgyzstan. The highest prevalence of HIV and hepatitis C are found in the Chui and Osh regions, as well as in the cities of Bishkek and Osh. The central parts of these regions are better covered by HIV and hepatitis C testing services. However, in other regions, the intensity of infection transmission is lower as these regions were impacted by the epidemic at a later stage. Additional research and strategies are needed to effectively combat these epidemics in Kyrgyzstan.

Hepatitis C, sometimes referred to as the ‘silent killer’ is a serious infectious disease that affects people’s health and lifestyles. This disease, caused by the hepatitis C virus (HCV), primarily targets the liver and can lead to chronic impairments in the organ’s function, including cirrhosis and liver cancer. Hepatitis C has a global presence and represents a significant threat to public health in various countries. HCV transmission occurs through contact with infected blood, which means there is a risk of infection through the use of contaminated injection needles, improper use of medical equipment, and blood transfusions. It is worth noting that many infected individuals are unaware of their status since the disease often progresses without noticeable symptoms. A deep understanding of HIV and hepatitis C is becoming increasingly important in the context of global healthcare,

requiring collaborative efforts from healthcare professionals, researchers, and society to combat and control these serious diseases.

Development of the HIV Epidemic in Kyrgyzstan

In the Kyrgyz Republic, the first case of HIV infection was recorded in 1987, involving a foreign citizen who was a student at the military school. According to the World Health Organisation (WHO) data, until 1996 Kyrgyzstan remained the only country in the Central Asian region without reported cases of HIV infection.

Between 1996 and 2000, 14 cases of HIV infection were registered among Kyrgyz citizens, most of them resulting from sexual transmission. After that, sporadic cases of HIV infection were observed, primarily among vulnerable groups. In most cases, infections occurred among Kyrgyz seasonal migrant workers who were infected while out of the country.

From 1987 to 2000, a total of 53 cases were registered, including 14 among citizens. However, significant growth in HIV infections began in 2000 (Sultanalieva et al. 2018).

From 2001 to 2006, the beginning of the HIV epidemic was observed in major regions of the country, including large cities such as Bishkek, Osh, and the regions of Osh and Chui. This epidemic primarily affected male injecting drug users (IDUs) aged 20 to 39.

Starting in 2001, there was a sharp increase in the spread of HIV infection in the country, with 149 cases among Kyrgyz citizens in 2001. The number of new infections that year was significantly higher than the total number of cases in the entire previous period of the epidemic. This increase was associated with an outbreak of HIV infection among IDUs, constituting 95.5% of the people living with HIV registered in 2001 (Mamadzhanov 2021).

From 2007, the HIV epidemic in Kyrgyzstan developed rapidly, affecting various social groups and transmission routes. The epidemic spread to the other six regions of the country, with an increase in HIV registration among women, particularly women of reproductive age. Cases of HIV infection in children, both through vertical transmission and parenteral transmission, were also identified. There was also increase in HIV transmission through sexual contact.

In the following years, there was a continuous increase in the registration of new cases, and the cumulative number of HIV infection grew annually.

The epidemic continued to affect various social groups and transmission routes. There were more cases of HIV infection in children. The transmission of HIV through sexual contact also increased.

The development of the HIV/AIDS epidemic started at the end of the 1990s.

In 2001, 9.5% of PLWH were women, but by 2010 this had increased to 30%.

In the last ten years, the number of women living with HIV increased by 77 times. However, in the last three years, it increased only 2.4 times, in January 2011. For the same reason, the number of cases of vertical transmission of HIV increased from 0% in 2005 to 2.4% of the registered cases of PLWH in 2010. The increase in the number of HIV-positive women and children indicated the transition of the epidemic from people who inject drugs (PWID) to the general population (Government of the Kyrgyz Republic 2012).

From 2011 to 2016, the total number of officially registered cases of HIV infection in the country more than doubled (from 3,270 cases in 2011 to 7,108 in 2016). According to WHO/UNAIDS estimates, in 2016 there were 8,307 PLWH in the country, which is 1.6 times higher than the official data (5,158). The number of women with HIV increased by 2.8 times (from 802 in 2011 to 2,313 in 2016 cumulatively). In 2011, approximately 30.7% of newly registered HIV cases were among women, while in 2016, this proportion increased to 41.8%, indicating a rise in the percentage of women living with HIV during that time period (Kyrgyz Republic Ministry of Justice 2017a, No. 852).

The changing nature of the HIV epidemic in Kyrgyzstan is reflected in the increasing number of infected women, leading to a change in the ratio of HIV-infected men and women and an increase in the proportion of women in the structure of HIV-infected people (Mamadzhanov 2020).

The existing infrastructure allowed for the identification of 83% of the estimated number of PLWH. Over the years, there has been a consistent pattern of change in the distribution of the main modes of HIV transmission. The proportion of cases resulting from sexual transmission has steadily increased, climbing from 81% in 2018 to 90% in 2022, while the percentage of cases attributed to injection transmission has notably decreased, dropping from 19% in 2018 to merely 4% in 2022 (Republican Center for Control of Bloodborne Viral Hepatitis and Human Immunodeficiency Virus 2022).

The HIV epidemic in Kyrgyzstan continues to evolve among key groups, especially among men who have sex with men (MSM), who account for up

to 10% of new cases each year. However, a larger proportion of the newly identified cases (around 80%) occurs among individuals who do not belong to key vulnerable groups (Kadyrkulova 2018).

What are the Drivers of the HIV Epidemic?

Kyrgyzstan is home to a concentrated HIV/AIDS epidemic, with a disproportionately high percentage of the infections found among vulnerable groups, including PWID and MSM. A population-based bio-behavioural survey (BBS) found that the prevalence of HIV ranged from 13.3% to 25.9% among PWID and from 5.3% to 16.2% among MSM in Bishkek, the country's largest city (Republican AIDS Center/Centers for Disease Control and Prevention [CDC]/Pepfar 2021). This BBS study also identified key areas of prevention needs within the framework of the global '95-95-95' HIV treatment cascade, highlighting significant disparities in the accessibility and provision of services for these population groups at high risk of HIV infection. Viral HCV is a key co-infection, with estimates indicating that 67% of PWID were previously infected and 39% are currently infected with HCV.

According to AIDS Center data, there are approximately 16,900 MSM, 25,000 PWID, and 7,100 sex workers (SW) living in Kyrgyzstan, with varying geographical distribution (Regional Expert Group on Migrant Health 2023). According to data from the United Nations Development Programme (UNDP) (the principal recipient of the Global Fund in Kyrgyzstan), the coverage of prevention programmes among vulnerable groups is as follows: 85% for MSM, 68% for PWID, and 65% for SW. However, these data should be treated with caution as the estimates of vulnerable group size were conducted some time ago (in 2013 and 2016). In the past five years, the coverage of preventive programmes among PWID has not exceeded 17,000 clients (AIDS Center 2022).

The findings from the 2021 BBS encompassed estimations of the population size of PWID at locations representing more than 60% of the total coverage for preventive services in various regions such as Bishkek, Osh, Chui, and Osh. The estimated median number for these sites was 6,638. Similarly, in the same year, a BBS indicated an estimated population of 6,126 MSM in Bishkek according to data from the AIDS Center (Republican AIDS Center/CDC/Pepfar 2021). Insufficient legal awareness and knowledge results in the denial of generally accepted legal norms, violations

of established norms, and myths, prejudices, and stigmas that restrict access to prevention for populations at increased risk, leading to the hidden spread of HIV among these groups. The Law of the Kyrgyz Republic 'On HIV/AIDS in the Kyrgyz Republic' contains provisions for the protection against stigmatisation and discrimination. However, violations of rights and breaches of diagnosis confidentiality occur on a regular basis. The absence of documents, registration, and citizenship also hinders the realisation of the right to HIV prevention and treatment.

Stigma and discrimination against people living with HIV, which are prevalent in Kyrgyzstan, manifest in disrespectful treatment, disclosure of HIV status, and refusal to provide medical services. These are significant barriers to accessing HIV-related services. The refusal of representatives of vulnerable groups to undergo HIV testing and to participate in prevention and treatment programmes leads to the continued spread of HIV infection, delayed treatment seeking, and increased AIDS-related mortality. In 2015, for example, 15.2% of infections were discovered at an advanced stage of HIV infection (Kyrgyz Republic Ministry of Justice 2017a, No. 852). Some PLWH refuse antiretroviral treatment out of fear of disclosing their HIV status.

In order to reduce the level of stigma and discrimination to zero in government organisations providing HIV-related services to key groups of the population and PLWH, various studies have been conducted. Firstly, the Harm Reduction Network Association of Legal Entities conducted two national monitoring studies, 'The Index of stigma against PLWH', in 2018 and 2021 (Harm Reduction Network Association 2022). Secondly, the AIDS Centre and the Ministry of Health conducted two national studies (one basic and one monitoring study) on the level of stigma in relation to key groups, namely PWID, SR, MSM, TG (transgender people) and prisoners.

A strategic and communication plan was developed, aimed at reducing stigma and discrimination. In 2021, in partnership with NGOs (by agreement) and vulnerable groups, training on stigma and discrimination was provided to 50% of staff involved in HIV programmes, key ministries, and agencies. Efforts were also made to incorporate HIV-related disciplines into the curricula and postgraduate training programmes for pedagogical and other related programmes.

What are the Vulnerable Groups and Why?

Prevention initiatives, such as harm reduction programmes, continue to be essential elements in Kyrgyzstan's comprehensive approach to addressing the HIV epidemic among vulnerable populations. By 2022, there were 24 operational harm reduction sites across the country, including those run by NGOs and within the prison system. Fifteen NGOs offered services tailored to PWID, SW, MSM, and PLWH, complemented by two dedicated centres for PLWH and other vulnerable groups. Prevention programmes for vulnerable groups, including harm reduction programmes, remain one of the crucial components in the comprehensive efforts to combat the HIV epidemic in Kyrgyzstan. In 2022 there were 24 harm reduction sites across the country, as well as harm reduction programmes in NGOs and in the penitentiary system. Fifteen NGOs provided services for PWID, SW, MSM, and PLWH, and there were two centres for PLWH and other vulnerable groups. In 2022, more than 36,000 representatives of vulnerable groups were provided with HIV testing, harm reduction services, care, and support programmes. This activity was carried out with the support of the Global Fund, and since 2019, there has been a continued effort to provide care and support for PLWH through mechanisms of government social contracting.

The AIDS Center is developing an online (cloud) version of the electronic tracking system for HIV cases (AIDS Center 2023) and has also initiated the process of developing a unified information system for HIV prevention programmes that will integrate disparate databases and improve the accounting system and, accordingly, the ability to monitor the quantity and quality of services for PLWH, reduce duplication of medical services, and improve quality data (Republican AIDS Center/CDC/Pepfar 2021, p. 33). In 2022, the AIDS Center updated the clinical protocol for the pre-contact prevention of HIV infection (PREP). In 2021, the coverage of PREP totalled 68 cases, and by the end of 2022, this had increased to 266.

The southern regions of the Kyrgyz Republic are among the most affected areas in terms of HIV infection. Organisational and preventive measures to combat the HIV epidemic in these regions are insufficient and do not fully cover the primary drivers of the epidemic, which hinders the achievement of significant results in the fight against it. In these regions, the rate of HIV infection among the population is higher than the national indicator. The mortality and lethality rates of HIV-infected people in these regions are also 2.5 to 4.5 times higher than in the Republic (Mamadzhanov 2021, p. 7). The Osh region is characterised by a high population density

with a multinational composition, population instability due to internal and external migration, and high unemployment among young people. The current situation undoubtedly has an impact on the spread of the HIV epidemic.

The prevalence of HIV, according to data from the Republican Centre for the Control of Hematogenous Viral Hepatitis and Human Immunodeficiency Virus of the Ministry of Health of the Kyrgyz Republic as of 1st January 2023, is as follows (Republican Center for Control of Bloodborne Viral Hepatitis and Human Immunodeficiency Virus 2023b):

Table 1: HIV Prevalence in Kyrgyzstan (own compilation, based on data of the AIDS Centre)

Cities and Regions	Male	Female	Total
Batken	156	136	292
Bishkek	1,883	1,009	2,892
Osh city	883	408	1,291
Jalal-Abad	715	600	1,315
Issyk-Kul	268	152	420
Naryn	162	85	247
Osh region	991	780	1,771
Talas	103	75	178
Chuy	2,088	1,033	3,121
Total	7,249	4,278	11,527

The highest prevalence of HIV is observed in the Chui and Osh regions, as well as in the cities of Bishkek and Osh. The central parts of these two regions are better covered by HIV testing services. Residents in peripheral and remote villages often have to travel to the nearest family medical centre or AIDS centre for testing. The highest concentration of private laboratories is found in Bishkek and Osh. According to the prevalence of HIV by regions in the country, 50% of the country's laboratory equipment is concentrated in Bishkek, Osh, the Osh region, and the Chui region (Association Partnership network 2020).

In other regions of the Republic, the intensity of HIV spread is lower as these regions were impacted by the epidemic at a later stage.

Mamadzhanov (2021) ranked the different regions in the country based on the degree of the population affected by HIV infection, with three categories identified: high, moderate, and low.

The first zone consists of regions with a high prevalence. The city of Osh and the Chui region can be classified as high-prevalence areas. In these regions, the HIV prevalence rate among the population is higher than the national average (which is 143.2 ± 1.5 per 100,000 people) and stands at 382.3 ± 11.3 and 291.5 ± 5.6 , respectively. HIV mortality and fatality rates in these regions are also 2.5 to 4.5 times higher than the national average in Kyrgyzstan. The analysis shows that Osh City and the Chui region are characterised by intensive migration processes (both internal and external), a high level of unemployment, widespread drug use, and commercial sexual services among youth.

The second zone consists of regions with moderate prevalence. The zone includes territories like Bishkek City (161.4) and the Osh region (112.3), with prevalence rates among pregnant women of 0.024 (Bishkek) and 0.05 (Osh region). HIV mortality and fatality rates are lower than the national level in these areas. These regions account for 37% of HIV cases in the country, with 36.8% of the country's population residing there.

The third zone consists of regions with low prevalence. This zone includes districts in the other four regions of the Republic. The epidemic process began to intensify in these regions starting in 2006 to 2007.

Comprehensive epidemiological studies of HIV infection, particularly the factors of diagnosis or spread in the context of regions or cities, have not been conducted in Kyrgyzstan. Consequently, there are no recommendations for improving the HIV surveillance and prevention system in specific regions of the country.

The steps taken by Kyrgyzstan allow for the containment of the epidemic in a concentrated stage, in which the spread of the infection is among groups considered the most vulnerable. However, due to objective and subjective factors, including changes in transmission routes, increased migration processes, religious intensification, and a decrease in donor funding, there is a threat of the epidemic transitioning to a generalised stage and the registration of HIV cases among the general population (The Joint United Nations Programme on HIV/AIDS [UNAIDS] 2020).

HIV Policy in Kyrgyzstan

The main government agencies responsible for HIV in the Kyrgyz Republic include state institutions, international organisations, and non-governmental (non-profit) organisations. Over the past 10 years, a close collaboration between the government and the non-governmental sector has allowed for an effective mutual integration of HIV service delivery. The results of this integration include specific action plans for each actor, common indicators of joint activities, and the incorporation of social services into state medical institutions.

One of the primary state institutions responsible for the detection, treatment, and prevention of HIV spread in the country is the Republican Centre for the Control of Hematogenous Viral Hepatitis and HIV of the Ministry of Health of the Kyrgyz Republic.

The governmental HIV/AIDS service system was established in 1989 and has been working at the national and local levels since then. It implements and adapts international experience, builds partnerships, and coordinates programmes for HIV treatment and prevention. It is currently named the Service for the Control of Hematogenous Viral Hepatitis and HIV. HIV treatment services are provided by the Republican Centre for the Control of Hematogenous Viral Hepatitis and HIV, which oversees eight regional and local centres that provide consulting, diagnostic, and treatment for PLWH throughout the country. The provision of antiretroviral therapy (ART) for PWLH has been delegated to healthcare organisations in primary healthcare (PHC).

The Kyrgyz governmental HIV/AIDS service system has been accumulating and analysing data on the current epidemiological situation for more than 30 years. Based on the information obtained, HIV prevention and treatment programmes have been developed. It shapes national HIV policy, establishes a legislative framework, mobilises human and technical resources, and contributes to effective dialogue with civil society leaders, government, and international organisations.

Moreover, the National Coordination Committee for Combating HIV/AIDS, Tuberculosis, and Malaria was formed under the Government of the Kyrgyz Republic (Kyrgyz Republic Ministry of Justice 2011). The Committee includes representatives from all institutions and organisations involved in the response to HIV/AIDS. In 2019, boards of trustees were established in each regional AIDS centre and other healthcare organisations. This

measure helps ensure the efficiency and transparency of decisions made, improve the quality of services provided, and targets the use of funds.

Cooperation Between Government Institutions and International Organisations

Since 2004, Kyrgyzstan has received financial and technical assistance from the Global Fund to Fight AIDS, Tuberculosis, and Malaria in addressing various medical and social issues related to HIV infection. Despite a nearly twofold reduction in funding, the Global Fund remains the primary donor, covering 48% of the budget of the government programme on HIV for the period of 2017 to 2021 (Eurasian Harm Reduction Association [EACB] 2021).

The programme activities of the AIDS Centre have been implemented with the technical and financial support of various international organisations, including UNAIDS, UNICEF, USAID, CDC, WHO, ICAP, UNDP, AFEW, and AIDS Centre. The Central Asian Regional HIV/AIDS Programme (CARHAP), funded by DFID, supports harm reduction programmes for HIV. CARHAP financed 43 projects primarily in the Bishkek, Osh, Chui, Osh, Jalal-Abad, and Batken regions, as well as the penitentiary sector from 2006 to 2010 (Government of the Kyrgyz Republic 2012). The programme's activities ended in 2012.

In addition to the grant component, CARHAP provided technical assistance to the National Coordination Committee for Combating HIV/AIDS, Tuberculosis, and Malaria under the Government of the Kyrgyz Republic. It also supports advocacy activities for harm reduction programmes related to HIV, enhances the capacity to beneficiaries, and promotes the development of the monitoring and evaluation system for HIV prevention programmes, including financial monitoring.

The German KfW Development Bank has facilitated the purchasing of equipment for laboratory services for HIV diagnosis in healthcare institutions. Under the KfW grant, 34 laboratories in healthcare institutions were equipped with diagnostic equipment (Government of the Kyrgyz Republic 2012).

The German Technical Cooperation (GIZ) project (2010–2018) focused on two key areas: supporting medical organisations and educational programmes on health issues. A small aspect of the programme supports the civil sector.

USAID initiated a new five-year regional project called 'HIV and Tuberculosis Dialogue' in 2009. This project provided technical assistance and training to improve access to quality HIV and tuberculosis prevention services for populations at high risk of infection. In 2010, USAID also introduced the 'Quality Healthcare' project, in which HIV and tuberculosis prevention issues were key components.

The AIDS Foundation East-West (AFEW) has implemented a project to enhance the interaction between HIV/tuberculosis services in Central Asia and works with NGOs and correctional facilities. This project introduced social support programmes in the country for the first time.

The Joint United Nations Programme on HIV/AIDS (UNAIDS) addresses HIV issues at the policy level. UNAIDS supports legislative changes to create a favourable environment for promoting HIV prevention in collaboration with partners, especially with vulnerable groups. UNAIDS works on enhancing the capacity of both national partners and vulnerable groups. It supports partners in developing strategic documents and assists the country with strategic data.

The Main Legal Norms Related to HIV in Kyrgyzstan

In the Kyrgyz Republic, in accordance with international standards, specific legislative acts have been developed and are in effect to regulate the procedures for HIV medical examination and subsequent treatment.

The fundamental legal documents regulating the diagnosis and treatment of HIV in Kyrgyzstan are the 'Law on HIV/AIDS in the Kyrgyz Republic', as well as the 'Rules for Medical Examination for the Detection of the Human Immunodeficiency Virus, Medical Record Keeping, and Monitoring of Individuals with Positive or Suspicious HIV Test Results in the Kyrgyz Republic' (Kyrgyz Republic Ministry of Justice 2005); the 'List of Workers, Professions, Jobs, and Positions Subject to Mandatory Medical Examination', approved by the Government's Resolution No. 296 of 25th April 2006 (Kyrgyz Republic Ministry of Justice 2006); the 'Regulations on Psychosocial Counselling Related to HIV', approved by the Government's Resolution No. 683 of 20th October 2017 (Kyrgyz Republic Ministry of Justice 2017); the 'State Programme to Overcome HIV Infection for 2017–2021'; the 'Guidelines for Laboratory Diagnosis of HIV Infection in the Kyrgyz Republic' and the 'Methodological Guidance on Laboratory Diagnosis of HIV Infection'; the 'Standard Operating Procedures for Labor-

atory Diagnosis of HIV Infection' (Order of the Ministry of Health of the Kyrgyz Republic No. 637 dated 26th November 2014) (Ministry of Health of the Kyrgyz Republic 2014); and other orders of the Ministry of Health aimed at expanding testing, including the organisation of rapid testing.

As a result of representatives of civil society the implementation of state programmes to overcome HIV, the improvement of the legislative framework, the interaction of state structures, representatives of civil society, international organisations are getting stronger and it is possible to keep the spread of HIV infection in the country at a low level.

The Law on HIV/AIDS in the Kyrgyz Republic defines the legal framework for preventing the spread of HIV/AIDS within the territory of the Kyrgyz Republic, ensuring a system of measures to protect the rights of people living with HIV/AIDS, the safety of Kyrgyzstan's citizens, and national security in accordance with international law.

A new Government Programme to Overcome HIV has been adopted for the years 2022 to 2027. In this new programme project, under the first strategic direction focused on providing a comprehensive package of services for the diagnosis, treatment, care, and support of HIV, measures are outlined to ensure access to testing services, not only for vulnerable groups but also for migrants and their close contacts, people facing difficult life situations, and those living in remote regions of the country. Additionally, the programme highlights measures to improve the laboratory diagnostic structure as regards HIV, including equipping healthcare organisations and NGOs with appropriate equipment, technical support, and staff training, as well as the introduction of modern methods for the laboratory diagnosis of HIV. The fourth strategic direction, aimed at ensuring the sustainability of HIV programmes, involves implementing measures to procure expensive or unavailable medical devices through international organisations, optimising testing, diagnosis, and treatment schemes.

In accordance with the WHO recommendations, the clinical protocols for HIV treatment and testing approaches are regularly reviewed in Kyrgyzstan. On 25th September 2020, new clinical guidelines for the treatment of HIV and comorbid conditions was approved by the Kyrgyz Ministry of Health (Order No. 759, 2020). In 2021, additions to this guidance were submitted for approval. In addition to the new guidance, previously approved clinical protocols and instructions include: 'Guidance on the Evaluation of Laboratory Diagnosis of HIV Infection' and 'Instruction on the Laboratory Diagnosis of HIV Infection in the Kyrgyz Republic'.

The goal of these protocols was to expand testing by non-governmental organisations and testing based on epidemiological and clinical indications, as well as testing for citizens entering the country.

HIV rapid testing is actively carried out among vulnerable groups. Algorithms for the use of rapid tests in healthcare institutions and by NGOs were developed and approved for this purpose. Changes to clinical protocols, updates to laboratory diagnostic instructions, and the allocation of funds from the state budget for the procurement of ARV drugs and HIV diagnostic tools have allowed for the expansion of state purchasing of tests and reagents for HIV diagnosis.

As a result, the Republican Centre for AIDS fully funds the tests needed for routine testing among the general population, including blood services, maternity institutions, and the testing of sexual partners. Despite significant progress having been made in terms of ensuring the availability of HIV testing services, the sustainability of diagnostic measures among vulnerable groups is still at risk.

In 2020–2021, screening and rapid testing for these groups were carried out with funding from donor organisations. Recently, however, the funding from the Global Fund and other donors was decreased. This, in combination with the limitations of the country's budget, means that there is a substantial risk that the testing of vulnerable population groups will have to be reduced in scope.

Thanks to civil society's activism and the support of international donors, Kyrgyzstan became the first country in the Eastern Europe and Central Asia (EECA) region to legislatively establish all nine HIV prevention measures for people who inject drugs, including the introduction of prevention services in places of detention. Criminal and administrative legislation related to drug trafficking are being reformed.

It is important to note that in 2019, a revision of national protocols and guidelines for the diagnosis, treatment, care, and social support of PWLH was initiated. All necessary ARV drugs were included in the List of Vital Medicines and Medical Devices. The main aim of this list is to facilitate the registration of high-quality ARV drugs. A comprehensive campaign to revise the registration, reporting, and accounting procedures related to HIV is also underway. As part of this campaign, updated algorithms for the registration of HIV cases, deaths, and more, as well as unified or consistent accounting and reporting forms for all stakeholders at all levels, are being reviewed and developed.

Kyrgyzstan continues its efforts to increase access to medical and social services for vulnerable groups and PLWH. As part of the implementation of the WHO 'Test and Treat' strategy, HIV testing, treatment, and care are being introduced in all healthcare systems at the secondary and primary levels. Primary healthcare physicians conduct rapid testing, screening for HIV based on clinical indications, and other assessments, prescribe and distribute ARV medications, and treat opportunistic infections. Seminars and training sessions are held to educate primary healthcare doctors on HIV diagnosis and treatment. Additionally, healthcare aides are being integrated into healthcare organisations to facilitate the delivery of medical and social services to people living with HIV and vulnerable groups, and to encourage their participation in prevention programmes.

NGOs have played a significant role in Kyrgyzstan's response to the HIV epidemic. Often, they were the first to advocate for the need to implement prevention programmes, emphasising the importance of the epidemic at the political level. The rapid spread of the HIV/AIDS epidemic in Kyrgyzstan since 1992/1993 contributed to the emergence of new NGOs at the local and national levels.

Thanks to non-governmental organisations in Kyrgyzstan, it has become possible to gain access to hard-to-reach groups of the population, involve them in preventive work, take their needs into account, and test modern technologies and methods for preventing the spread of HIV/AIDS in the country.

During the period of 2006 to 2010, 16 clinics for anonymous services were established within NGOs and state structures. These clinics provide diagnostic and treatment services for sexually transmitted infections (STIs) to vulnerable groups. In 2009 to 2010, 9,606 people applied and received services at syringe exchange points. However, out of those who applied, only 85.4% underwent testing for sexually transmitted infections and subsequently received treatment.

Since 2017, Kyrgyzstan has implemented a new system of state financing for socially relevant projects. All NGOs working with PLWH can participate in the state grant competitions. In the years 2019 to 2021, six NGOs working with PLWH in seven regions of the country received state funding. The effectiveness of NGO activities was monitored during visits by conducting surveys of service recipients.

Kyrgyz NGOs working in the field of HIV/AIDS differ significantly in terms of programme direction, target audience, size, financial capability, and strategy. The most obvious distinction exists between NGOs operat-

ing at the national level and local-level NGOs. The largest and most well-known NGOs are based in the cities of Bishkek and Osh.

Currently, the majority of NGOs in Kyrgyzstan combine their work on human rights and social activities, providing a range of services. However, representatives of NGOs believe that the lack of state prevention programmes in Kyrgyzstan might soon become a problem of national scale. Since 1997, nearly all necessary measures in this direction have been implemented with the support of international donors. The government of Kyrgyzstan has contributed only 5% of all expenses during the entire period (1997–2023).

The implementation of activities within the framework of the state social order with the involvement of NGOs and the private sector will help achieve the set goals while making more efficient use of state resources.

The participation of NGOs in the national response to HIV is also provided for in departmental documents. Thus, according to the Order of the Ministry of Health ‘On the introduction of HIV testing by rapid testing among vulnerable groups of the population’ (Ministry of Health of the Kyrgyz Republic 2012), a number of NGOs were involved in rapid testing and consulting in various regions Kyrgyzstan. Later, the number of participating NGOs increased, with the adoption of the Ministry of Health’s order on ‘Expanding HIV Rapid Testing among Vulnerable Population Groups’ (Ministry of Health of the Kyrgyz Republic 2014).

NGOs, collaborating with PLWH and MSM at sentinel sites, establish positive relationships with target groups and are familiar with the local context. This facilitates the conducting of bio-behavioural research. NGOs also participate in formative assessments of PWLH and MSM in Kyrgyzstan to plan methods for implementing integrated HIV programmes and actively disseminate research results. NGO staff provides access to social and medical services, referring or accompanying clients to specialists. They actively participate in the service delivery algorithm, including involving PWLH and their communities in HIV-related prevention, treatment, and support programmes.

In general, the NGOs are currently actively involved in organising and implementing social support for PWLH in the observation and treatment programme for HIV infection. Their focus includes the formation of adherence to treatment, social assistance, and support. The organisation provides advisory services on reproductive health, family planning, and the diagnosis and treatment of STIs. Additionally, they distribute condoms and other contraceptives to women living with HIV. One of the crucial tasks of NGOs

is to conduct pre-test and post-test counselling and voluntary testing for HIV infection, as well as providing redirection and support in healthcare organisations. NGOs also carry out various initiatives, including the organisation of self-help groups, peer-to-peer counselling, and 'Patient School' to maintain adherence to ART in PWLH.

Some NGOs go beyond healthcare and provide psychological, social, and legal support to PWLH and children affected by the epidemic. They also play a significant role in research, participating in monitoring studies and conducting integrated bio-behavioural studies among key population groups (LUIN, CP, MSM, TG, prisoners). This includes assessing the number and gender composition of key population groups and monitoring the level of stigma and discrimination against people living with HIV and key population groups.

Thus, in the Kyrgyz sector, NGOs and organisations working in the field of HIV/AIDS perform various functions: they actively combat the HIV epidemic, provide healthcare services, and focus on HIV prevention (Stöver/Shadymanova 2022). They address the HIV epidemic, focus on healthcare, and emphasize HIV prevention. However, their work varies significantly depending on their target groups. Some NGOs primarily work in youth-oriented HIV prevention, while others specialise in serving vulnerable groups such as injection drug users, commercial sex workers, and MSM.

Epidemiological Situation of HCV in Kyrgyzstan

According to the WHO, around 58 million people worldwide suffer from chronic HCV, with approximately 1.5 million new infections occurring each year. This disease contributes significantly to mortality, primarily due to liver cirrhosis and hepatocellular carcinoma (primary liver cancer). Despite the existence of direct-acting antiviral drugs that can cure HCV in over 95% of cases, access to diagnosis and treatment remains inaccessible in many parts of the world (WHO 2023). Currently, there is no vaccine for hepatitis C, but the disease can be successfully treated with antiviral medications. Early detection and proper treatment help prevent serious liver damage and improve long-term health.

In 2021, a total of 2,090 cases of viral hepatitis were registered in Kyrgyzstan, compared to 4,805 cases in 2020, indicating a 2.3-fold decrease in hepatitis incidence. Of all the registered cases in 2021, hepatitis A, which can

be transmitted through environmental factors such as water, food, ‘unclean’ hands, and everyday objects, accounted for 91.6%; hepatitis B constituted 5.7%; and hepatitis C made up 2.5% (Ministry of Health Department of Disease Prevention and State Sanitary 2022).

In Kyrgyzstan, there are 34 laboratories for HIV diagnosis that also now provide HCV diagnostic services for free. At the end of 2022, the government allocated 276 million Kyrgyz Som for laboratory diagnosis, vaccination, and treatment of viral hepatitis. Rapid tests and vaccines are available to all patients in need. In this regard, a free rapid testing programme was conducted between 15th September and 31st December 2022 in the cities of Bishkek and Osh, as well as in the Chui region. Since the beginning of 2023, rapid tests have been conducted before vaccination with ‘Regevak B’ (Republican Center for Health Promotion and Mass Communication 2023), and more than 31,000 people have undergone rapid testing for all types of hepatitis, identifying 830 new cases of hepatitis. These cases are confirmed using PCR and Iffar methods to determine viral load and subsequent treatment (Sputnik Radio Kyrgyzstan 2023).

The hepatitis C virus is a blood-borne virus. The main modes of transmission include the re-use or inadequate sterilisation of medical equipment, such as syringes and needles in healthcare facilities, transfusion of untested blood and blood products, and the sharing of injection equipment among drug users. This results in a higher prevalence of hepatitis C among people who inject drugs, three times higher than the prevalence of HIV (WHO 2017).

More than half of acute hepatitis C cases are linked to drug use, which is why this disease is often referred to as drug users and hepatitis in literature. Scientists attribute the peculiarities of hepatitis development in drug users to the toxic impact on the liver and changes in the immune system. Infection with hepatitis viruses occurs in the first year of drug use when the toxic impact on the liver is still minimal, and clinical symptoms are primarily caused by the viruses. Alcoholism, inadequate nutrition, and toxic impurities also contribute to liver damage in drug addiction (Global Commission on Drug Policy 2013).

Drug users become infected during the injection of narcotic substances, using the same needle, leading to a cycle of injection drug use. Over time, those who use psychotropic drugs experience impaired thinking and analysis and a weakened self-preservation instinct, leading to careless adherence to hygiene rules and the use of already-used syringes, ignoring the risk of infection transmission (Martínez-Pérez et al. 2021).

Over time, as the transmission of the hepatitis C virus through medical procedures has decreased, this virus has increasingly become associated with drug injection. This leads to reduced sympathy for individuals suffering from hepatitis C due to the widespread perception of drug addiction as a manifestation of weak character. In places where the ‘war on drugs’ is being waged, these beliefs are reinforced by the criminalisation and incarceration of drug users (Global Commission on Drug Policy 2013).

Hepatitis C is mainly transmitted through the injection of narcotic substances using shared needles, and limited access to sterile instruments is linked to drug policies and law enforcement actions. In Kyrgyzstan, according to the WHO, more than 100,000 people suffer from chronic hepatitis C infection, which constitutes a significant part of liver disease-related mortality. Even among those who are aware of their condition, at least 220,000 people are affected by hepatitis C (Zheenalieva 2022).

Based on the statistical data from the Republican Medical Information Centre, over a period of five years (2010–2015), 1,429 newly diagnosed cases of chronic hepatitis C were registered in Kyrgyzstan (Tobokalova et al. 2016). Unofficial estimations claimed that approximately 6%–10% of Kyrgyzstan’s population was infected with the hepatitis C virus by the beginning of 2016 (Miroshnik 2015). According to the study by Botheju and colleagues (2019), the prevalence of HCV varied within different groups in Kyrgyzstan, ranging from 0.8% to 5.0% in the general population, with a median of 2.0%; from 0.0% to 35.0% in populations at intermediate risk, with a median of 7.0%; and from 4.0% to 33.3% in non-specific clinical populations, with a median of 8.0%. Among people who inject drugs, the HCV prevalence ranged from 17.0% to 60.4%, with a median of 46.4% (Botheju et al. 2019). The price for hepatitis C treatment in Kyrgyzstan ranged from 15,000 USD to 20,000 USD (Miroshnik 2015).

Co-infection of HIV and hepatitis C often occurs among injecting drug users. Co-infection is exacerbated by repressive drug policies that limit access to prevention programmes and alienate vulnerable groups from healthcare services, which also affects the treatment of both infections (Deryabina/El-Sadr 2017).

To improve the outcomes of HIV and HCV co-infection treatment, it is necessary to intensify the fight against HIV and hepatitis, such as by running informational campaigns and ensuring access to rapid testing.

HCV Testing

The WHO recommends that testing, medical care, and treatment for people with chronic hepatitis C be carried out by qualified doctors and nurses, even if they are not specialists in the field, using a simplified service delivery system, including the decentralisation, integration, and redistribution of functions. These services can be provided through government healthcare institutions, primary healthcare, harm reduction services, and even in prison settings, ensuring wider access and convenience for patients (WHO 2017). Routine testing for viral hepatitis B and C should become part of the healthcare and prevention system (Sputnik Radio Kyrgyzstan 2023).

The Kyrgyz Government, in collaboration with the WHO and its partners, conducts various initiatives to address viral hepatitis. These include advocating for routine hepatitis B and C testing as part of healthcare systems, promoting evidence-based prevention and treatment methods, particularly tailored for individuals who inject drugs like cocaine and amphetamines. Technical and informational support is provided to mobilize resources for implementing harm reduction measures, and efforts are made to establish a collaborative network for developing effective healthcare policies. A critical step would be the inclusion of medications for the treatment of hepatitis B and C (as well as hepatitis D) in national lists of essential and life-saving medicines for which expenses are reimbursed. This would contribute towards ensuring the availability of quality treatment at the national level (WHO 2017).

Stigmatisation

Stigmatisation occurs when people look down on others or treat others unfairly because of certain conditions or illnesses. In the case of viral hepatitis, especially chronic hepatitis B and C, stigmatisation is a big problem. It can stop people who have these conditions from seeking diagnosis and medical help. To help these people, it is important to overcome stigmatisation, get access to treatment individuals in need of help, and provide testing. Additionally, we need to raise awareness among both the general public and healthcare professionals. It is also crucial to develop ways to track what people know about hepatitis B and C and how they access healthcare ser-

vices. Many people do not know much about hepatitis C, and this creates challenges for dealing with the growing epidemic.

Repressive drug control policies and careless attitudes and discrimination on the part of medical workers (Martínez-Pérez et al. 2021) push drug users away from support programmes. For many drug users, hepatitis C remains an inevitable evil.

In Kyrgyzstan, the pervasive fear of encountering law enforcement hampers both harm reduction and HIV prevention initiatives, particularly among PWID. Stigma and discrimination contribute to their hesitation in engaging with syringe service programmes (SSPs) (Deryabina/El-Sadr 2017) and undergoing HIV testing for fear of potential disclosure of their positive HIV status. Discriminatory treatment from healthcare providers and the fear of revealing their drug use status, especially near drug treatment centres, pose substantial obstacles to accessing drug treatment. These challenges underscore the necessity for a more compassionate and health-oriented approach to addressing the complex issues at the intersection of drug use, stigma, and HIV prevention (Smith et al. 2022).

Many People Who Use Drugs Are Put in Jail

Imprisonment creates additional risks for people who use drugs. At the same time, the lack of programmes to prevent diseases in places of detention can lead to outbreaks of viral infections among this vulnerable group of people. This contributes significantly the spread of hepatitis C among drug users. Also, since hepatitis C is more common and easier to spread than other types of hepatitis. This shows that the ‘war on drugs’ does not work and has negative consequences, making people at risk feel like they are bad and alone. Hepatitis C among drug users can be stopped and treated, but we need to change drug policies.

The Hepatitis C Epidemic is Not Getting Sufficient Attention

The hepatitis C epidemic in Kyrgyzstan does not receive the attention, resources, or support that it needs. Access to hepatitis C treatment for drug users is insufficient. As a result, this situation is causing significant damage among this vulnerable population group. Because the government’s efforts to control and monitor hepatitis C are slow, the activities to improve

prevention and treatment do not always work. To effectively respond to hepatitis C, Kyrgyzstan needs to strengthen harm reduction approaches.

Fear and Stigma Make Risks Worse

Focusing on law enforcement makes people scared of getting arrested or hurt by the police, but it does not stop drug use. Instead, it makes the risk of getting diseases like hepatitis C even worse and causes other problems that could have been avoided. The main result of this kind of policy is that people who use drugs are afraid to get help from important healthcare programmes. For example, police officers often go to service programmes that help drug users to find easy ways to catch possible criminals. This is a big deal, especially in countries where owning needles and syringes is against the law or where they can be used as evidence of being involved in a crime.

Despite an increase in public awareness, most governments still underestimate the importance of this area of public health and do not pay enough attention to the connection between it and harsh drug policies. The system for monitoring the hepatitis C epidemic is not well-developed, and efforts in effective prevention and treatment access are not achieving the success that has been seen in the fight against HIV. To overcome the hepatitis C epidemic, it is necessary to optimise and expand existing harm reduction methods. However, even among leading donors who support harm reduction approaches, hepatitis C remains a less noticeable public health issue.

A policy that focuses on enforcement does more harm than good. People who manage large drug markets and profit from them rarely come under the scrutiny of law enforcement. Instead, regular drug users or small-scale drug dealers become victims of the 'war on drugs'. These groups often become targets for law enforcement personnel, who often evaluate their effectiveness based solely on the number of arrests and sometimes engage in corruption and extortion for personal gain.

An emphasis on enforcement methods does not reduce drug consumption and increases the risk of spreading hepatitis C and having other harmful consequences. It discourages people who use drugs from seeking help from healthcare programmes. Places of incarceration become high-risk areas for the spread of HIV and hepatitis C, and they often deny access to necessary prevention and treatment methods, such as opioid substitution therapy and the provision of sterile injection equipment. These problems

escalate in compulsory drug detention centres, where human rights violations continue despite clear signs of issues.

People who use drugs and live with hepatitis C often face a double stigma that hinders them from accessing testing, treatment, and support. This stigma can also prevent them from disclosing their hepatitis C and drug use status to healthcare workers. It is essential to combat this stigma and consider drug addiction as a chronic relapsing condition rather than a social evil. Such approaches should also include actions to prevent the criminalisation and unlawful detention of people who use drugs as this complicates their access to healthcare and support. These issues should be addressed within the framework of effective efforts to combat the HCV epidemic among drug users (Global Commission on Drug Policy 2013).

Even when support services for people who use drugs are available, these services are constantly under threat of arrests and legal prosecution by the police, which negatively affects the situation as many people are afraid to seek help. Even with the availability of hepatitis treatment for the general population, drug users often face stigmatisation and discrimination, which hinders their access to necessary medical care. Healthcare programmes are rarely adapted to meet the unique needs of drug users, despite it being well known that these individuals can successfully utilise integrated communicative services.

Strengthening efforts to create more user-friendly services leads to greater engagement and contributes to effective hepatitis prevention and liver disease prevention. Some programmes targeting drug users are limited and rely on external donor sources. Governments should reallocate resources from repressive policies to public health-oriented ones.

The level of hepatitis C transmission through medical procedures has decreased, but the infection is now associated with injection drug use, which reduces sympathy for these people. The harm reduction approach aims to reduce the negative consequences of drug use. Key goals include preventing the spread of infections, reducing the risk of overdose, and mitigating social consequences such as poverty and criminality.

Needle exchange programmes, opioid substitution therapy, informational education, medical assistance, and safe injection rooms are part of comprehensive measures. It is also essential to reduce or eliminate criminal punishment for drug-related offenses. Co-dependent individuals, such as family members and friends, also play a crucial role in providing support.

Governments should focus on public health-oriented policies, including the decriminalisation of drug use. Harm reduction programmes should be

expanded to make them more accessible. Hepatitis C prevention includes safe injections, needle and syringe exchange, blood donor testing, improving the competence of healthcare staff, and using barrier methods for sexual contact. Given the absence of a vaccine, special attention should be given to high-risk groups, including drug users and people with HIV infection.

The comprehensive set of measures also includes promoting a healthy lifestyle, preventing the initiation of drug use, supporting social programmes, and distributing sterile injection equipment, including low dead space syringes. It also ensures the availability of addiction treatment, including opioid substitution therapy, risk assessment for new injection methods, and integrated services for people who use injection drugs, including testing for viral hepatitis and HIV.

Projects and NGOs

In the fight against hepatitis, the Kyrgyz Ministry of Health approved a target programme in 2016 and began vaccinating new-borns in 2021. Currently, there are no cases of hepatitis B and C among children and young people up to 23 years of age, thanks to this vaccination programme. However, some cases are possible due to vaccine refusals.

In an interview, the Director of AIDS Centre Umutkan Chokmorova said, 'The treatment of hepatitis B and C includes taking tablets, and the cost varies depending on the patient's condition. 270 million Kyrgyz Soms were allocated to combat hepatitis C, and by the end of the year, the number of affected individuals can be accurately determined' (Sputnik Radio Kyrgyzstan 2023).

HIV transmission reduction has been significant in Kyrgyzstan: vertical transmission decreased from 39% in 2016 to 2.7% in 2023. It is expected that this situation will be sustained, if people responsibly manage their health and take medication (Sputnik Radio Kyrgyzstan 2023).

The Soros-Kyrgyzstan Foundation also actively supports projects aimed at reforming the public healthcare system and expanding access to medical services for vulnerable groups. This is achieved by involving representatives of civil society in the decision-making process. The foundation also focuses its efforts on developing the potential of civil society and advancing legal aspects related to HIV (Government of the Kyrgyz Republic 2012).

Since the beginning of 2010, the foundation has been actively working to support palliative care and the treatment of viral hepatitis C.

Various UN agencies have also contributed to the fight against HIV infection. UNAIDS coordinates the efforts of UN agencies in this area. UNFPA works with youth on HIV and reproductive health issues and provides condoms. UNICEF supports HIV prevention and treatment for children. UNODC conducts HIV prevention programmes among drug users. UNESCO has developed a regulatory legal framework and strengthens the human resources of HIV prevention programmes within the education system. WHO has contributed to health policy and standards in healthcare, prevention, treatment, and care, as well as medical aspects of HIV and blood safety (Government of the Kyrgyz Republic 2012).

UNDP implements the 'Support to the Government in Responding to the HIV/AIDS Epidemic' programme. This programme is aimed at creating a favourable political environment and building the capacity of national partners. It also provides legal services, fights stigma and discrimination, improves legislation, and trains medical and non-medical workers in HIV-related areas. UNDP's role is crucial as the main recipient of the Global Fund to Fight AIDS, Tuberculosis, and Malaria (GFATM). It intends to utilize funds to enhance the capabilities of key GFATM sub-recipients and vulnerable community groups during the execution of the 10th round of the GFATM grant spanning from 2012 to 2016.

In 2010, the Healthcare Improvement Project (HIP/USAID) and PEP-FAR for Central Asian Republics were launched. The project also implemented an external quality assessment programme for the laboratory diagnosis of infectious diseases, including HIV and HIV-associated infections, viral hepatitis B and C, syphilis, and others. However, these assessments face financial difficulties due to a lack of funding.

Three quarantine plasma chambers were purchased and installed in the Republican Osh and Jalal-Abad Blood Centres. Unfortunately, the chamber in the city of Osh remained non-functional for three years due to the lack of power cables (Ministry of Health of the Kyrgyz Republic 2012).

Despite the existence of a donor database and the conditions for plasma quarantine, as well as improvements in quality control programmes for HIV and viral hepatitis testing, the threat of transmission of transmissible infections such as HIV, HBV, HCV, syphilis, and others still remains. In this regard, special attention should be given to the selection of donors with low behavioural risk and limiting the clinical use of blood and its components.

The proportion of individuals who inject drugs and are HIV-positive remains relatively stable at 14.6%, similar to the rate in 2009 at 14.3%. Notably, there is a high prevalence of viral hepatitis C, affecting 50.4%

of people living with HIV, indicating risky drug use practices. Syphilis is also prevalent, affecting 6.6% of HIV-positive individuals, while among prisoners, the rates are 37.5% for HCV and 3.5% for syphilis. These findings suggest slow changes in the behaviour of this demographic group as reported by UNAIDS in 2012 (UNAIDS 2012).

Furthermore, the minimum service package is often unavailable due to limited resources. Often, only one service is provided, and there are interruptions in service delivery, which contributes to the resumption of risky practices. The integration of services for harm reduction, the provision of ART, care, and patient support remains inadequate. Harm reduction approaches in small towns and rural areas leave much to be desired, and gender aspects are not adequately considered within harm reduction programmes. Additionally, there are insufficient adequate assessments of the number of people living with HIV covered by prevention programmes.

Nevertheless, Kyrgyzstani NGOs devote less focus to HCV compared to HIV, while the Ministry of Health and medical Organisations actively engage with HCV in Kyrgyzstan.

Prevention

To ensure effective treatment, a uniform approach is applied in handling individuals with chronic viral hepatitis, involving disease assessment, regular monitoring of the patient's health status, and evaluating medication side effects. Specific focus is given to patients at advanced stages of liver disease. The next important step involves taking measures to control common coexisting conditions and concurrent infections that may accelerate the progression of liver disease or increase the risk of reinfection with viral hepatitis. Among such measures, controlling the use of alcohol and psychoactive substances is crucial.

A comprehensive set of measures for prevention and harm reduction among individuals who inject drugs includes needle and syringe exchange programmes (NSPs), opioid substitution therapy (OST), and other evidence-based methods for treating drug dependence, as well as targeted informational, educational, and communication-based activities for those who use injectable drugs.

Progress in the fight against viral hepatitis requires increasing vaccination coverage, especially among high-risk groups such as prisoners, men who have sex with men, and sex workers.

Early diagnosis plays a vital role in preventing complications and virus transmission. To achieve a reduction in disease incidence, it is necessary to implement comprehensive measures, including treating viral hepatitis, opioid substitution therapy, and harm reduction strategies.

A comprehensive set of harm reduction measures related to injection drug use is described in a technical guide developed by the WHO, UNAIDS, and UNODC. This set of measures covers a wide range of actions aimed at reducing the transmission of both HIV and hepatitis viruses, considering their common transmission route, namely through blood (WHO 2017).

Governments should also improve the quality and accessibility of data on hepatitis C and strengthen epidemiological surveillance and programme evaluation systems. This, in turn, contributes to increasing awareness among policymakers and the public about the scale of this epidemic.

In 2012, the WHO released the 'Prevention and Control of Viral Hepatitis Infection Among People Who Inject Drugs' guide, which operates based on six key principles: human rights compliance, healthcare access, justice accessibility, service acceptability for people who use drugs, health literacy, and integrated service delivery. This guide emphasises the importance of using a comprehensive harm reduction approach to combat hepatitis B and C, HIV, and tuberculosis. It includes needle and syringe exchange programmes, opioid substitution therapy (which is also effective in HIV prevention), and targeted education, prevention, diagnosis, and treatment of viral hepatitis (WHO 2017).

It is important to note that in the absence of a hepatitis C vaccine, providing sterile injection equipment and opioid substitution therapy become primary prevention methods capable of preventing the spread of the infection among people who use injection drugs. Over time, as the transmission of the hepatitis C virus through medical procedures has decreased, its connection with injection drug use has become more apparent. Attention should be given to providing support for people who use drugs and are living with hepatitis C so that they can access testing, treatment, and support while feeling free from stigma and discrimination.

Conclusion

In conclusion, Kyrgyzstan faces regional disparities in the prevalence of both HIV and HCV, with the highest concentration of cases in the Chui

and Osh regions, particularly in the cities of Bishkek and Osh. While central areas have better access to testing services, peripheral and remote villages face challenges, contributing to regional variations in testing availability. Mamadzhanov's (2021) categorisation of high-, moderate-, and low-prevalence zones offers a nuanced understanding of the epidemic, with high-prevalence areas characterised by elevated infection rates, migration, unemployment, and risk behaviours among youth. Moderate-prevalence zones demonstrate lower infection rates and better HIV-related indicators, while low-prevalence regions experienced a later onset of the epidemic. Epidemiological studies on HIV and HCV lack granularity at the regional level, hindering targeted interventions. Even though containment efforts have been successful, new challenges such as rising migration rates and reduced funding levels pose a risk of increasing the epidemic.

Kyrgyzstan's response involves collaborative efforts with state institutions, international organisations, and NGOs. The Republican Centre for the Control of Hematogenous Viral Hepatitis and HIV oversees testing, treatment, and prevention, with the National Coordination Committee ensuring coordination. Financial assistance from international organisations sustains programmes, and legal frameworks guide protocols. The 2022–2027 government program emphasises comprehensive services. Despite strides in clinical protocols and expanded testing, challenges persist. Collaboration with international organisations enhances Kyrgyzstan's response, with initiatives supported by the German Development Bank, USAID, and UNAIDS. Despite challenges, Kyrgyzstan has made strides in revising clinical protocols, expanding testing, and integrating HIV services into primary healthcare.

NGOs play a crucial role in outreach, testing, and support for vulnerable groups affected by HIV and HCV, bridging healthcare gaps and addressing stigma. Challenges include sustaining diagnostics, reduced funding, and potential prevention gaps. Continuous legislative revision, NGO involvement, and comprehensive services are vital.

The text underscores HCV's global impact, with Kyrgyzstan experiencing a decrease in incidence. Government funds support diagnosis, vaccination, and treatment, but challenges persist, including HCV's association with injection drug use and stigma hindering access to treatment.

Comprehensive measures for HCV include harm reduction, needle exchange, and opioid substitution, shifting from enforcement-focused to public health-oriented drug policies. Various organisations, including the

Kyrgyz government and NGOs, play a crucial role in effective prevention and treatment for both HIV and HCV.

Challenges like stigma and discrimination require destigmatisation, increased awareness, and integrated harm reduction services. Inclusion of HCV treatment in essential lists, support from organisations like the Soros-Kyrgyzstan Foundation, and collaboration with UN agencies are crucial. Optimising harm reduction, improving policies, and expanding access to treatment are recommended for both HIV and HCV.

In conclusion, addressing the complexities of HIV and HCV requires a comprehensive strategy encompassing medical, social, legal, and economic dimensions. Kyrgyzstan demonstrates a firm commitment to safeguarding its citizens' health by integrating HIV/AIDS and HCV initiatives into its long-term national development plan. This approach is in harmony with the UN Sustainable Development Goals, emphasizing essential aspects like healthcare access, education, gender equality, and partnerships to achieve these goals effectively.

Kyrgyzstan has made significant strides in reducing hepatitis incidence, bridging gender gaps, and fostering collaborations with international bodies, underscoring its dedication to SDG objectives. However, continual efforts are vital to effectively reach key populations, educate the public, and uphold partnerships to sustain progress against HIV and HCV. The country's dedication and collaborative efforts among stakeholders play a pivotal role in achieving desired outcomes not only within Kyrgyzstan but also in broader global health initiatives.

Bibliography

- AIDS Center (2022): Situation on HIV infection in the Kyrgyz Republic. www.aidscenter.kg/statistika/?lang=ru, 21.02.2024.
- AIDS Center (2023): Situation on HIV infection in the Kyrgyz Republic as of 01.01.23. www.aidscenter.kg/wp-content/uploads/2023/03/01.01.2023.pdf, 21.02.2024.
- Association Partnership network (2020): Results of a market study of diagnostic test systems for identifying and monitoring the treatment of HIV infection in Kyrgyzstan in 2018-2019. www.aph.org.ua/wp-content/uploads/2021/09/Kyrgystan_AnalysisOfHIVDiagnostics.pdf, 26.02.2024.
- Botheju, Welathanthrige S.P./Zghyer, Fawzi/Mahmud, Sarwat/Terlikbayeva, Assel/El-Bassel, Nabila/Abu-Raddad, Laith J. (2019): The epidemiology of hepatitis C virus in Central Asia: Systematic review, meta-analyses, and meta-regression analyses. In: Scientific Reports 9, No. 2090. DOI: 10.1038/s41598-019-38853-8.

- Deryabina, Anna/El-Sadr, Waafaa (2017): Uptake of needle and syringe program services in the Kyrgyz Republic: key barriers and facilitators. In: *Drug and Alcohol Dependence* 1, No. 179, pp. 180–186.
- Eurasian Harm Reduction Association (EACB) (2021): Kyrgyz Republic: Assessing the sustainability of the response to HIV among key populations in the context of the transition from Global Fund support to government funding. www.eecapplatform.org/wp-content/uploads/2022/06/tmt-assessment-report-kyrgyzstan-ehra-2021-rus.pdf, 26.02.2024.
- Global Commission on Drug Policy (2013): The War on Drugs and Its Negative Impact on Public Health: The Hidden Hepatitis C Epidemic. www.globalcommissionondrugs.org/wp-content/uploads/2016/03/GCDP_HepatitisC_2013_EN.pdf, 21.02.2024.
- Government of the Kyrgyz Republic (2012): About the State program on stabilization of epidemic of HIV infection in the Kyrgyz Republic for 2012-2016 [No. 867, 29 December 2012]. www.cis-legislation.com/document.fwx?rgn=57985, 26.02.2024.
- Harm Reduction Network Association (2022): Study Report People Living with HIV Stigma Index 2.0 Kyrgyz Republic. www.stigmaindex.org/country-reports/#/m/KG, 22.02.2024.
- Kadyrkulova, Zhainagul (2018): Labour migration in Kyrgyzstan. In: *International Journal of Humanities and Natural Sciences* 2, pp. 186–189.
- Kyrgyz Republic Ministry of Justice (2005): Rules for Medical Examination for the Detection of the Human Immunodeficiency Virus, Medical Record Keeping, and Monitoring of Individuals with Positive or Suspicious HIV Test Results in the Kyrgyz Republic [No. 296, 25 April 2006]. www.cbd.minjust.gov.kg/act/view/ru-ru/57394/10?mode=tekst, 22.02.2024.
- Kyrgyz Republic Ministry of Justice (2006): List of Workers, Professions, Jobs, and Positions Subject to Mandatory Medical Examination [No. 296, 25 April 2006]. www.cbd.minjust.gov.kg/act/view/ru-ru/57396?cl=ru-ru, 22.02.2024.
- Kyrgyz Republic Ministry of Justice (2011): Regulations on the Country Coordination Committee to Combat HIV/AIDS, Tuberculosis and Malaria [No. 617, 06 October 2011]. www.cbd.minjust.gov.kg/95360/edition/400147/ru, 22.02.2024.
- Kyrgyz Republic Ministry of Justice (2017): Regulations on Psychosocial Counseling Related to HIV, approved by the Government's Resolution [No. 683, 20 October 2017]. www.cbd.minjust.gov.kg/act/view/ru-ru/11649, 22.02.2024.
- Kyrgyz Republic Ministry of Justice (2017a): Program of the Government of the Kyrgyz Republic to overcome HIV infection in the Kyrgyz Republic for 2017-2021 [No. 852, 30 December 2017]. www.cbd.minjust.gov.kg/11589/edition/1146000/ru, 22.02.2024.
- Mamadzhanov, Alisher (2020): Current trend in the spread of HIV infection in the Osh region. In: Mamaev, T./Mamaeva, T./Durusbekov, A./Abdykarova, A./Mamadzhanov, A. (eds.): *Bulletin Osh State University*. Osh: State University, pp. 104–111.
- Mamadzhanov, Alisher (2021): Epidemiological features of HIV infection and measures for its prevention in a region with a high prevalence of the population [Dissertation] [unpublished].

- Martínez-Pérez, Guillermo Z./Nikitin, Danil S./Bessonova, Alla/Fajardo, Emmanuel/Bessonov, Sergei/Shilton, Sonjelle (2021): Values and preferences for hepatitis C self-testing among people who inject drugs in Kyrgyzstan. In: BMC Infectious Diseases 21, No. 609. DOI: 10.1186/s12879-021-06332-z.
- Ministry of Health Department of Disease Prevention and State Sanitary (2022): Epidemiological situation of viral hepatitis in the Kyrgyz Republic. www.dgsen.kg/deyatelnost/upravlenie-profilaktiki-infekcionnyy/jepidemiologicheskaja-situacija-virusnogo-gepatita-v-kyrgyzskoj-respublike.html, 21.02.2024.
- Ministry of Health of the Kyrgyz Republic (2012): Kyrgyzstan Country Report on Progress in Implementing the Global Response to HIV Infection 2012. www.ghdx.healthdata.org/record/kyrgyzstan-country-report-progress-implementing-global-response-hiv-infection-2012, 22.02.2024.
- Ministry of Health of the Kyrgyz Republic (2014): Collection of standard operating procedures for laboratory diagnosis of HIV infection [No. 637, 26 November 2014]. Bishkek: Ministry of Health of the Kyrgyz Republic.
- Miroshnik, Marina (2015): Patients with hepatitis C at the stage of cirrhosis will be able to be cured in Kyrgyzstan. www.kaktus.media/doc/330194_bolnye_gepatitom_s_nastadii_cirroza_smogyt_izlechitsia_i_v_kyrgyzstane.html, 25.02.2024.
- Regional Expert Group on Migrant Health (2023): Assessment of the current Situation: Kyrgyzstan. Secondary Data Analysis. www.ecuo.org/wp-content/uploads/2016/12/Otsenka-situatsii-analiz-vtorichnyh-dannyh-13-MB.pdf, 22.02.2024.
- Republican AIDS Center/Centers for Disease Control and Prevention (CDC)/Pepfar (2021): Bio-behavioral HIV survey and population estimate among men who have sex with men and people who inject drugs in the Kyrgyz Republic. BBS MSM AND PWID IN KG. www.aidscenter.kg/wp-content/uploads/2022/07/BBS-MSM-2021-OnePager-2-1.pdf, 21.02.2024.
- Republican Center for Control of Bloodborne Viral Hepatitis and Human Immunodeficiency Virus (2023b): HIV prevalence by regions of Kyrgyzstan, 2023. www.aidscenter.kg/?lang=ru, 25.02.2024.
- Republican Center for Control of Bloodborne Viral Hepatitis and Human Immunodeficiency Virus (2022): HIV prevalence by regions of Kyrgyzstan. www.aidscenter.kg/?lang=ru, 22.02.2024.
- Republican Center for Health Promotion and Mass Communication (2023): A vaccination campaign against hepatitis B is starting in the Kyrgyz Republic. www.saksalamat.kg/v-kr-startuet-kampaniya-po-vakcinacii-protiv-gepatita-v/, 25.02.2024.
- Smith, Laramie R./Shumskaia, Natalia/Kurmanalieva, Ainura/Patterson, Thomas L./Werb, Dan/Blyum, Anna/Algarin, Angel B. et al. (2022): Cohort profile: the Kyrgyzstan InterSectional Stigma (KISS) injection drug use cohort study. In: Harm Reduction Journal 19, No. 53. DOI: 10.1186/s12954-022-00633-5.
- Sputnik Radio Kyrgyzstan (2023): Treatment for hepatitis B will now be free of charge in Kyrgyzstan – doctor. www.ru.sputnik.kg/20230321/gepatit-b-gepatit-c-lechenie-analizy-kyrgyzstan-1073721326.html, 25.02.2024.

- Stöver, Heino/Shadymanova, Jarkyn (2022): Syringe Exchange Points in the Penitentiary System of Kyrgyzstan. In: Pape, Ulla/Stöver, Heino/Michels, Ingo Ilja (eds.): *Social Work and Health in Prisons. Studies from Central Asia and China*. 7th ed., Baden-Baden: Nomos, pp. 235–256.
- Sultanalieva, M.U./Aidarov, Z.A./Makhmanurov, A.A./Mamatov, S.M. (2018): HIV / AIDS, as a global problem in Kyrgyzstan. In: *Bulletin of KSMA named after I.K. Akhunbaev*, No. 5–6, pp. 19–24.
- The Joint United Nations Programme on HIV/AIDS (UNAIDS) (2012): *Country Progress Report on the Global HIV Response [Kyrgyz Republic]*. Reporting period: January 2010 – December 2011. Date of submission: March 31, 2012. www.unaids.org/sites/default/files/country/documents/ce_KG_Narrative_Report_0.pdf, 22.02.2024.
- The Joint United Nations Programme on HIV/AIDS (UNAIDS) (2020): *Country Progress Report – Kyrgyzstan. Global monitoring of the AIDS epidemic*. www.unaids.org/sites/default/files/country/documents/KGZ_2020_countryreport.pdf, 22.02.2024.
- Tobokalova, Saparbu T./Zairova, Gulzada M./Bekenova, D.S./Nogoibaeva, Kalys A. (2016): Problems of liver cirrhosis in the origin of chronic viral hepatitis in Kyrgyzstan. In: *Bulletin of the Kyrgyz-Russian Slavic University* 16, No. 3, pp. 134–137.
- World Health Organization (WHO) (2017): *Action plan for the health sector response to viral hepatitis in the WHO European Region*. www.who.int/europe/publications/item/97892289052870#:~:text=The%20goal%20of%20the%20Action,comprehensive%20prevention%2C%20recommended%20testing%2C%20care, 22.02.2024.
- World Health Organization (WHO) (2023): *Hepatitis C*. www.who.int/ru/news-room/fact-sheets/detail/hepatitis-c, 22.02.2024.
- Zheenalieva, Gulnara (2022): *Features of clinical and laboratory characteristics of comorbid chronic hepatitis C [Dissertation]*. www.vak.kg/wp-content/uploads/2022/06/Avtoreferat-Zheenalieva-G.M._russ.pdf, 26.02.2024.