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EXECUTIVE SUMMARY:

This report examines the intertwined challenges of drug use and imprisonment and their effect on health outcomes in Eastern Europe and Central Asia (EECA), with a specific focus on people who inject drugs. EECA countries exhibit some of the highest rates of incarceration in the world, largely driven by the criminalization of drug use. The harsh policies result in disproportionately high rates of incarceration among people who inject drugs, creating significant public health issues, including the spread of HIV, hepatitis C, and tuberculosis. This report synthesizes key findings from the region, explores effective interventions, and outlines strategic recommendations for improving health outcomes within criminal justice settings.

EECA has some of the highest rates of incarceration globally, especially for drug-related offenses. In particular, Ukraine has one of Europe's highest incarceration rates. The HIV epidemic in EECA is closely tied to the stringent criminalization of opioid use and resulting high rates of injection drug use among people in prisons, with prisons becoming focal points for the spread of HIV, hepatitis C, and tuberculosis.

The conditions within EECA prisons are challenging, exacerbating the health risks for incarcerated people, particularly those already vulnerable to infectious diseases. High prison populations, overcrowding, inadequate healthcare infrastructure, chronic underfunding contribute to poor living conditions and the spread of infectious diseases. Health services, particularly for HIV prevention and treatment, are inadequate, and prisons remain a critical site for addressing the HIV epidemic.



The criminal subculture in EECA prisons plays a significant role in shaping the success of public health interventions like opioid agonist therapy (OAT). Resistance to methadone treatment and stigma associated with drug use within the prison population makes it essential to account for social dynamics when implementing OAT programs. Addressing the interdependence between prison authorities, healthcare providers, and informal leaders within the prison population is key to overcoming these barriers and improving the uptake of treatment.

Opioid Agonist Therapy (OAT) is identified as the most cost-effective strategy for treating opioid use disorder and preventing new HIV infections in EECA. When scaled up, OAT reduces the risk of HIV transmission and enhances engagement with the HIV treatment cascade. Despite the evidence supporting its efficacy, OAT scale up has been slow, with only a few countries in EECA having established programs, mostly as pilot projects. Social and institutional barriers to the implementation of OAT need to be addressed to improve accessibility and uptake.

Successful integration of OAT programs within both the prison system and the broader community is essential. This includes ensuring a smooth transition from incarceration to community care, where continued treatment can prevent relapse, overdose, and further HIV transmission. Strategies such as the SET-R (Screening, Engagement, Treatment, Retention) approach show promise for scaling up OAT programs, but need to be adapted to the local context to improve their success.

The report emphasizes the importance of decarceration strategies, such as parole and probation, to reduce the high rates of incarceration for drug-related offenses. These strategies should be supported by robust community-based OAT services to ensure continuity of care and minimize the risk of reoffending. Developing a framework that aligns public health and public safety goals is crucial for ensuring the success of decarceration and rehabilitation efforts.



CONCLUSIONS AND RECOMMENDATIONS:

1. Criminal Subculture Considerations:

Address the influence of criminal subculture in prisons by implementing culturally sensitive strategies and promoting collaboration between prison authorities and informal leaders. This will help reduce resistance to OAT and other HIV prevention programs.

2. Scaling Up OAT:

Expanding access to OAT in both prison and community settings is critical for controlling the HIV epidemic and reducing the prevalence of opioid use disorder. The SET-R approach should be adapted to improve outcomes and ensure seamless transitions from prison to community care.

3. Clinical Independence and Healthcare Empowerment:

To enhance the effectiveness of OAT, clinical independence should be prioritized. Healthcare providers, particularly narcologists, need to be empowered to view OAT as a legitimate treatment for addiction, not merely as a tool for HIV prevention.

4. Decarceration and Reintegration:

Implementing decarceration policies, coupled with strong community-based OAT programs, is essential for reducing prison populations and supporting the reintegration of individuals into society. This should be done in a way that integrates public health and public safety priorities.



ABBREVIATIONS:

CJS Criminal Justice Settings EBP Evidence-Based Practices EECA Eastern Europe and Central Asia MoH Ministry of Health MoJ Ministry of Justice **OAT Opioid Agonist Therapy** OUD **Opioid Use Disorder PWID** People Who Inject Drugs SET-R Screen, Evaluate, Treat, Refer **SIZO Pre-Trial Detention Center ART Antiretroviral Therapy HCV** Hepatitis C Virus **HBV** Hepatitis B Virus TB **Tuberculosis**

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1. THE CONTEXT: PRISONS IN EECA

HEALTH AND DRUG USE

Imprisonment and drug use are intertwined worldwide.¹ Drugs, drug use, and incarceration are interconnected in several ways. People may be in prison for drug law offenses, for offenses related to drug use, or for offenses unrelated to drug use despite being drug users. Indeed the likelihood of committing a crime is up to eight times higher for people who use drugs.^{2,3}

This interconnection between imprisonment and drug use is especially stark in Eastern Europe and Central Asia (EECA), where drug use is highly criminalized, resulting in high incarceration rates (five of the top 10 worldwide)⁴ and concentrating staggering numbers of people who inject drugs with opioid use disorder (82%) and HIV (18%) in criminal justice settings.^{5,6}

The HIV epidemic in EECA is primarily concentrated among people who inject drugs, who account for 56% of new HIV infections^{7,8} with a high HIV prevalence among people who inject drugs (7.3-53.4%).⁹ People who inject drugs in this region mostly inject opioids (82%), with some stimulant use. While HIV incidence and mortality have decreased globally,¹⁰ they continue to increase in EECA,¹⁰ largely due to suboptimal HIV prevention and treatment.^{5,11}

Although concentrating people living with HIV and opioid use disorder in prisons increases HIV transmission risk, it also provides an opportunity for HIV prevention using opioid agonist therapies (OAT). Expanding OAT is a highly cost-effective approach, ¹² especially when paired with antiretroviral therapy (ART). ¹³ When implemented at scale, OAT plays a crucial role in controlling HIV epidemics by supporting both primary and secondary prevention efforts, including improved engagement across the full HIV treatment continuum. ^{14,15} While biobehavioral surveys in prisons show low ART coverage, and high prevalence of HIV, hepatitis C, and TB, only 3 countries in EECA have OAT, mostly as pilot studies. ^{5,6} OAT scale up has been challenging in EECA, where work explored the formidable social barriers to OAT in prisons outlining the overlap between organizational and inter/intrapersonal factors, undergirded by a deep-rooted criminal subculture. ¹⁶⁻²¹ Teasing out these influences has been crucial to understanding and addressing how to better deliver OAT in the criminal justice system, which remains challenging. ²²

CRIMINAL JUSTICE SETTINGS IN EECA

The conditions within EECA prisons are notably challenging, further exacerbating health issues for people coming in from the community who are already at high risk. High incarceration rates, particularly for drug-related offenses, and inadequate infrastructure to support large prison populations lead to poor living conditions and significant health risks for inmates, including the spread of infectious diseases like tuberculosis.^{23,24} Additionally, chronic underfunding hampers the quality of prison management and the provision of healthcare to inmates, leading to a cycle of deteriorating conditions and ineffective rehabilitation.²⁵

EECA has among the highest rates of incarceration worldwide, with harsh criminalization of drug use¹⁸⁸, possession, and supply leading to high incarceration rates of people who inject drugs. Ukraine has one of Europe's highest incarceration rates, due to harsh criminalization of drug use. Before the start of Russia's war on Ukraine in 2014, people who inject drugs made up close to a third of the prison population,.^{26,27} However, the prison population has significantly declined since then and, while access to treatment has improved, no nationally representative biobehavioral survey has been conducted among the prison population since then, and existing national statistics likely underestimate data on HIV and injection.¹⁸⁹ Criminal justice systems in EECA vary in terms of oversight (Ministry of Interior or Justice), staffing, crowding and prevalence of people who inject drugs, HIV, hepatitis C, and TB in prisoners.⁶ The criminal justice system is, however, complex, including police arrest, high numbers of unsentenced pre-trial detention (called 'SIZO' in EECA) detainees, and extended time in prisons.²⁸

COVID-19 in EECA prisons

External factors have also significantly impacted health in prisons in the EECA region. The COVID-19 pandemic introduced increased health risks and posed substantial logistical challenges in managing outbreaks within the confined and crowded prison environments. Measures to control the spread of the virus often led to restricted movement and limited access to external support services, adversely affecting the mental and physical health of inmates. COVID-19 caused serious logistical challenges and detrimental health outcomes in Ukrainian prisons. Additionally, amphetamine use increased, as did diversion of methadone from government OAT programs.²⁹ The pandemic brought to light critical systemic challenges, such as shortages of staff (including healthcare professionals), underscoring the importance of implementing effective personnel policies to address issues like low wages and inadequate working conditions for both civilian and uniformed personnel. At the same time, there were unexpected positive changes that reduced protocols and demonstrated potential for increased flexibility. For example, as a COVID safety measure, the Kyrgyz Republic allowed take-home dosing for the first time and Ukraine reduced demands on OAT patients and improved efficiencies for staff.³⁰

Russia's full-scale invasion of Ukraine

Russia's full-scale invasion of Ukraine has significantly worsened the conditions for drug users in prisons, exacerbating displacement and increasing incarceration rates, which strain already limited prison resources. Human rights activists report an increase in the mortality rate within prisons located in the temporarily occupied territories of Ukraine.³¹ Additionally, the disruption of supply chains and heightened security concerns have compounded these challenges. Consequently, there have been

international calls for responsive measures to protect the well-being of vulnerable populations, specifically people who inject drugs³²⁻³⁴ and people in prison.^{35,36}

Importantly, Russia's war has endangered the country's methadone and buprenorphine programs, which are essential to turning the tide of the HIV epidemic. The closure of methadone clinics following Russia's illegal annexation of Crimea in 2014 left 800 people without essential treatment, leading to relapse to opioid use, suicide, and fatal overdoses. The OAT programs have been shut down due to Russia's ban on this essential treatment in occupied territories, including the prison in Zaporizhzhia where the program was halted following the invasion. While some individuals have relocated and regained access to methadone, the domestic situation remains critical with the looming threat of further prohibitions. People in occupied prisons have been forcefully deported to Russia, losing access to TB treatments, ART, and OAT. Russian occupiers have targeted OAT patients, subjecting them to harassment, confiscation of their medications, and forced labor. The relocation of people in occupied prisons to western Ukrainian prisons, where they are less connected to local drug networks and criminal subculture, has led to increased participation in methadone programs, highlighting the potential of the war to disrupt social networks and introduce new opportunities for OAT introduction.

This situation underscores the urgent need for a comprehensive Western response that addresses Russia's threat to peace as a pressing public health issue, particularly given the potential for regional expansion of Russian anti-PWID policies considering the ongoing conflicts in Moldova and Georgia. The Western response must involve working closely with Ukrainian partners to formulate a strategy for OAT expansion in prisons, including returning people in prison who have been forcefully deported and ensuring uninterrupted supply lines of key medicines. Additionally, it calls on the international community to pressure Russia to relocate prisoners back to Ukraine and provide them with their TB, HIV, and OAT medications.



2. DRUG USE AND ITS CONSEQUENCES AMONG THE PRISON POPULATION

DRUG DISTRIBUTION AND CRIMINAL SUBCULTURE

As in all prisons worldwide, illegal drugs infiltrate prison environments through a variety of channels. Corrupt staff members may facilitate the entry of drugs by smuggling them in exchange for bribes. Visitors also play a role in introducing drugs, often using creative and clandestine methods to bypass security measures. Additionally, inmates may receive drugs through smuggling operations orchestrated by criminal networks.^{40,41}

Particular to the EECA region, however, is the ways in which the mechanisms of drug use and distribution within prisons are deeply intertwined with the style of prison governance, often reflecting a legacy of Soviet-era collectivist prisoner self-governance.²¹ A system of informal governance, driven by the principles of criminal subculture, emerges as a response to low levels of staffing, resources, and corruption within formal prison administrations, significantly impacting illicit drug distribution and state-led medication programs for opioid use disorder.^{21,42-44} Examining the distinct cases of the Kyrgyz Republic, Moldova, and Ukraine reveals how hierarchical prisoner societies and informal governance structures shape drug use practices and responses to methadone maintenance programs, highlighting the complex interplay between formal and informal prison authorities. A growing body of sociological literature has outlined how drug use and methadone use are subsequently divided along the hierarchies of prisoner subculture in prisoner society.^{17,20,21,45-49}

In the Kyrgyz Republic, the formal prison administration introduced a methadone treatment program in 2008, setting a unique precedent in the region. This program made Kyrgyz Republic one of the few to offer methadone treatment in prisons (and the only country in Central Asia).⁵⁰ This initiative shifted the role of informal prisoner governance from expanding for-profit drug markets to maintaining order within the prison community. Consequently, the informal prisoner leaders established a monthly ritual of distributing methadone for free in all prisons, and daily in exchange for work. Heroin distribution, previously led by prisoners, transformed into a form of mutual aid that reinforced informal social order and the rules of the criminal subculture.^{20,42,48,51} Unlike competitive



market mechanisms, heroin distribution within Kyrgyz prisons became a communal activity, fostering social cohesion, establishing the legitimacy of the informal government, and presenting a significant challenge to the government-controlled methadone maintenance program.²¹

In Moldova, drug use in prisons follows hierarchical lines. High-status inmates inject Subutex (buprenorphine), while lower-status inmates inject stimulants. Unlike in Kyrgyz Republic, the illegal drug market in Moldova generates direct income for informal authorities. Informal prisoner authorities in Moldova distribute drugs during organized gambling events, where participants receive Subutex and alcohol, and unpaid gambling debts lead to severe consequences. According to interviews, about half of the inmates in a prison by Chisinau use drugs, with 70% of them using opioids such as Subutex, methadone, or fentanyl plasters. The prison administration relies on informal leaders to provide essential services, leading to a delicate balance of power and the formal administration's adherence to informal rules regarding drug use.

In both Kyrgyz Republic and Moldova, drug use in prisons is stratified along hierarchical lines, with the middle-class (Muzhiki) using heroin in Kyrgyz Republic and Subutex in Moldova, while the lower class in both countries primarily uses methadone and other available substances. Unlike in Kyrgyz Republic, higher-status inmates in Moldova use opioids and engage in drug distribution, reflecting a decline in the moral code that traditionally prohibited such behaviors. Additionally, Moldova enforces a hard ban on stimulants for all inmates.

In Ukraine, studies align with other data indicating that the criminal code prohibits drug use, enforced through ostracization by higher-caste individuals. Prisoner society is clearly hierarchical, with drug use reflecting these divisions. However, there is a shift toward Western models of prison governance, reducing the power of informal authorities. Despite this, drug use among prisoners varies significantly depending on factors such as whether they are in government-controlled or prisoner-controlled facilities, the latter allowing for greater enforcement of the criminal code. In some prisons, regardless of caste, drugs may be accessible through staff, whereas in others, higher-caste prisoners are less likely to use due to adherence to the criminal subculture's unwritten rules, while lower-caste prisoners have more leeway to use. The drug situation in Ukraine is notably dynamic, influenced by recent government reforms, the country's vast size and regional diversity, ongoing Russian attacks, and the continued introduction of methadone treatment that could alter patterns of drug use.

In the Kyrgyz Republic, Moldova, and Ukraine, prison drug use is stratified along hierarchical lines, with middle-class inmates using heroin in Kyrgyz Republic, Subutex in Moldova, and methadone being newly introduced in Ukraine but met with distrust. Unlike in Kyrgyz Republic, higher-status inmates in Moldova use opioids and engage in drug distribution, reflecting a decline in the moral code that prohibits such behaviors, while Ukraine's thieves' code strictly enforces drug prohibitions for high-caste prisoners. Lower-class inmates in both Kyrgyz Republic and Moldova primarily use methadone and other available substances, with Moldova enforcing a hard ban on stimulants. In Ukraine, despite a shift towards Western prison governance models and reduced informal authority power, drug use remains intertwined with hierarchies, with lower-caste prisoners experiencing more flexibility.

Drug Use Patterns

There is a cyclical relationship between drug use and incarceration. Drug addiction often leads to criminal behavior, resulting in imprisonment. Within prisons, continued drug use perpetuates health problems and hinders rehabilitation. Upon release, the cycle often resumes, with previously incarcerated people falling back into substance abuse and reoffending.⁴⁰ This cycle underscores the need for comprehensive drug treatment and support services, such as "seamless service delivery systems," which integrate treatment for SUDs throughout every touchpoint of the criminal justice system including linkage to care after release into the community.⁵²

Studies and surveys reveal a high prevalence of drug use within prison populations in the EECA region. People who inject drugs make up over one-third of people in prison in EECA, with figures possibly reaching 50–80% in certain countries within the region. S3-55 Randomly sampled biobehavioral surveys documenting drug use were carried out in Azerbaijan, Ukraine, Moldova, and Kyrgyz Republic from 2012 to 2016 by a research team at Yale University, which allowed an opportunity to obtain nationally representative scientifically rigorous data on drug use among prison populations. In the Kyrgyz Republic, 35.4% of participants reported injecting drugs in their lifetime. The prevalence is likely much higher, as about half of the prison population is infected with hepatitis C, a virus typically spread through injection drug use. In Azerbaijan lifetime injection prevalence was also 30% but, in Ukraine, it was close to half of all people in prisons.

Although global data is scarce, within-prison drug injection seems to be widespread and presents considerable challenges. Gathering accurate data on drug injection within prisons is difficult, as reporting such information could incriminate incarcerated individuals, leading to potential criminal

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charges or disciplinary actions.⁵⁷ Due to the difficulties of inquiring about proscribed practices within prison conditions, most studies on within-prison drug injection are retrospective.

Many people cease using and injecting drugs while incarcerated. However, some prisoners may start using drugs or change their method of drug administration if their preferred substance is unavailable.⁵⁸ People who inject drugs tend to inject less frequently within prison,59 but the risk of HIV transmission is significantly higher as compared to communities due to the shared use of scarce sterile injection equipment.40

In a convenience sample of newly released people from prison in Ukraine diagnosed with HIV, (56.8%) reported within-prison drug injection, among whom close to 75% shared injecting equipment.³⁵ Opioids were the drugs most commonly used in the month before incarceration (73.7%), but stimulants were also common. In the Kyrgyz Republic, however, a rare chance arose to inquire about within-prison drug injection with incarcerated individuals. Thirty percent of randomly sampled people in prison reported lifetime withinprison drug injection, with over a third of them initiating injection in prison. The overwhelming majority, 86%, of all incarcerated people who inject drugs reported injecting in prison. These findings are consistent with the range of findings from prison populations elsewhere. 60,61 Policies forbidding needle and syringe programs in the region, poor HIV screening, and low antiretroviral therapy coverage⁶² lead to sharing of injecting equipment⁶³ and may exacerbate HIV and hepatitis C transmission. 53,55,62

Despite the presence of effective HIV prevention programs such as methadone



maintenance treatment and needle and syringe programs in prisons, there are still high levels of within-prison drug injection in the Kyrgyz Republic, including initiating injecting in prison and sharing injection equipment, potentially increasing risk of HIV and hepatitis C transmission. Consistent with the global literature, there are higher rates of equipment sharing within prisons compared to the community, underscoring the critical importance of promoting continuous utilization of risk reduction services, such as needle and syringe programs throughout incarceration and during the reintegration process into society. Even though needle and syringe programs and methadone treatment have been accessible in the Kyrgyz Republic for more than ten years, research has highlighted ongoing drug injection and equipment sharing, suggesting that while these services are being used, injection practices remain prevalent. Qualitative studies are essential to explore the social reasons why individuals may not access available programs despite their availability.

One reason to explain the continued injection alongside methadone treatment was revealed through qualitative studies: in Kyrgyz prisons, injection of other substances (non-opioids) in combination with methadone treatment was common. Patients in prison who receive methadone often resorted to injecting crushed Dimedrol (diphenhydramine or Benadryl) tablets, an over-the-counter antihistamine banned within the prison, in order to experience euphoria. According to research participants, injecting Dimedrol has been associated with serious physical and mental health problems, including psychosis and skin infections, including social relegation within the prison hierarchy. The visible scars from Dimedrol injections have strengthened the perception that methadone is harmful, thus leading to a preference for heroin over methadone among the prison population.⁴⁷

The period following release from prison is critical, with a heightened risk of relapse and overdose. Former inmates, often returning to the same environments that contributed to their initial drug use, face significant financial and social challenges and return to drug injection. The lack of support and continuity of care, especially with linkage to OAT after release, exacerbates the risk of fatal overdoses shortly after release. People released from prison in the region face significant stigma, quickly relapse into drug use, form new injection networks, and are frequently targeted by police. Modelling from Ukraine suggests that the prison risk environment has an effect beyond prison. After release, models project that the risk within prison contributes to both HIV and TB transmission in the community. A study from the Lancet indicates that providing OAT to 50% of incarcerated individuals who inject drugs in Ukraine and ensuring they remain in treatment for 12 months post-release is the most effective strategy to reduce HIV incidence nationally over the next 15 years, highlighting the significant impact of continuous, evidence-based OAT.

been crucial to understanding and addressing how to better deliver OAT in the criminal justice system, which remains challenging.²²

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3. HEALTH PROBLEMS OF PEOPLE WHO USE DRUGS IN PRISON

People who use drugs in prison confront a complex array of health challenges that profoundly impact their well-being during incarceration and beyond.

GENERAL HEALTH:

Understanding the syndemic nature of chronic diseases in prisons is crucial for developing targeted interventions to improve health outcomes among inmates.⁶⁵ Incarceration, social problems, mental illness, SUDs, and infectious diseases combine in overlapping and reinforcing ways. That is, individuals who use drugs often enter prison with deteriorated health, which is further aggravated by the stressful incarceration environment and other co-morbidities. Syndemics, where overlapping and mutually reinforcing problems result from social determinants of health, exacerbate issues such as co-occurring chronic medical issues (hypertension etc.), co-infection with TB and HIV, and high rates of mental health disorders, which reduce adherence to medications like ART and anti-TB drugs.⁶⁶ For example, any incarcerated person with depression has 1.6 times greater odds of also having a substance disorder than those who do not have depression.⁶⁷ There is therefore a need for comprehensive healthcare interventions to address these complex medical needs effectively.

Integrated care models, which create a "one stop shop" for addiction treatment, infectious disease treatment, HIV pre-exposure prophylaxis, and behavioral health services, have been recommended for those recently released from prison or on probation to improve healthcare outcomes overall, including reducing the incidence of infectious diseases. A study of 296 people who inject drugs in Ukraine found that those receiving co-located healthcare had significantly higher quality healthcare scores and were more likely to engage in care compared to those receiving siloed care. Improving the health of criminal justice-linked populations depends on effectively identifying health needs, providing quality care in custody, and integrating prison health services into the broader community healthcare system.

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INFECTIOUS DISEASES:

HIV incidence and mortality are increasing in EECA despite global decreases,⁷⁰ largely due to suboptimal HIV prevention and treatment.^{5,71} The high prevalence of HIV among people in prison and widespread sharing of injection equipment create an extremely high-risk environment for HIV and other blood-borne infections in EECA prisons. It is crucial to address punitive drug policies and the absence of effective addiction treatment or harm reduction in prisons to reduce HIV transmission and treat SUDs. Evidence suggests a risk of transmission to sexual partners, potentially leading to a generalized epidemic.⁷²

Ukraine, where there were an estimated 317,000 people who inject drugs in government-controlled areas in 2020 with a 19% HIV prevalence, showing a gradual decreasing prevalence among people who inject drugs. ^{191,192} The last nationally representative biobehavioral survey in 2012 showed a 19.8% HIV prevalence among the prison population but the prison population has significantly decreased and testing and treatment outcomes have improved. ¹⁹³ Government testing from 2018 found an HIV prevalence of 6.7%. More than a third of people who inject drugs in Ukraine, according to the latest round of IBBS, reported being incarcerated throughout their lives, with over half reporting having used drugs in prison. ¹⁹⁴

According to the last round of nationally representative biobehavioral studies in Central Asia and the Caucasus approximately a decade ago: in Azerbaijan, the prevalence rates in prisons were 3.7% for HIV, 38% for HCV, 3.7% for syphilis, and 2.7% for HBV. Additionally, nearly three-quarters of individuals were aware of their HIV status. Nearly half of the individuals incarcerated in the Kyrgyz Republic tested positive for HCV, with 10% also testing positive for HIV and 6% for HBV. Moreover, the HIV treatment cascade in Kazakhstan, Kyrgyz Republic and Tajikistan generally encompasses low levels of case identification, ART prescription and viral suppression. OAT coverage is similarly low, reaching just 0.2%, 4.6%, and 2.8% for the 120,500, 25,000, and 22,500 individuals who inject drugs, respectively. Due to the changes in prison populations, treatment and testing changes for infectious diseases, and access to harm reduction services, a new round of such biobehavioral surveys is strongly recommended



PSYCHIATRIC COMORBIDITY:

SUDs and psychiatric disorders intersect among people in prisons; half of those with a psychiatric disorder also have an SUD.⁶⁶ Many individuals turn to drugs as a coping mechanism for untreated psychiatric disorders, while prolonged substance abuse can exacerbate or precipitate psychiatric issues. Anxiety, depression and post-traumatic stress disorder are prevalent among incarcerated people who use drugs, and higher than in the general population, necessitating integrated treatment approaches that address both SUDs and psychiatric disorders.^{76,77} In prisons worldwide, high rates of psychiatric disorders increase infectious disease-risk behaviors, ^{78,79} are associated with ART non-adherence, ⁸⁰ and lower rates of HIV viral suppression.^{79,81,82} But behavioral health services in prisons are insufficiently scaled to meet the needs of incarcerated people who use drugs. A systematic review found the best evidence for cognitive behavioral therapy and mindfulness-based trials ⁸³ and a meta-analysis found that in pre-post studies, mindfulness-based interventions reduced substance use⁸⁴ in prisons.

Over the past decade, global mental health efforts have often overlooked EECA countries, highlighting a critical need for increased funding and attention to address regional mental health challenges effectively.⁸⁵

From 1990 to 2019 in EECA, general psychiatric beds decreased by 33.8%, while forensic psychiatric beds increased by 24.7% and residential facility beds by 12.0%. Concurrently, prison populations rose by 36.0%, notably in lower-income and former Soviet Union countries. The increase in prison populations alongside a decrease in psychiatric beds raises concerns about the institutionalization of individuals with mental health issues within the criminal justice system in the region. Prisons are often ill-equipped to provide appropriate mental health treatment, leading to poorer outcomes for these individuals and exacerbating issues of overcrowding and inadequate mental health care within correctional facilities.

Before the full-scale invasion, half of all people who inject drugs in Ukraine met the clinical criteria for major depressive disorder. The war has likely worsened these conditions. OAT is the best evidence-based treatment for opioid use disorder in people who inject drugs, yet factors like psychological distress and ongoing drug use are the two major contributors to OAT discontinuation. Treatment discontinuation has profoundly negative impacts as it raises the likelihood of overdose by 3.2-fold, increases psychological distress and suicide 5-fold, and heightens the risk of HIV transmission by 59%. Thus, the psychological distress from the full-scale invasion has especially heightened consequences for people who inject drugs on OAT, especially in the absence of providing evidence-based mental health and psychological support services.

WOMEN'S HEALTH NEEDS:

Female people in prison who use drugs face specific health challenges and vulnerabilities requiring specialized attention, including reproductive health issues, pregnancy complications, and heightened risks of sexual abuse. 91 Globally, women in prison have higher prevalence of HIV and SUDs compared

to men, yet they are more likely to receive inadequate treatment.⁹² Prison healthcare for women should focus on trauma-informed care, reproductive health services, and providing support for survivors of gender-based violence.

In a study involving 220 female people in prison from Azerbaijan, Kyrgyz Republic, and Ukraine, higher HIV prevalence among women compared to men was observed in both prison and community settings. Many women reported prior substance use and psychiatric disorders, including drug injection and alcohol use disorders. Half of the participants experienced symptoms of anxiety and depression. Among those testing positive for HIV (11.8%), a significant proportion had low CD4 counts and minimal access to antiretroviral therapy, with Ukraine showing the highest HIV prevalence (88.5%) and elevated rates of hepatitis C. Kyrgyz Republic exhibited higher rates of syphilis among female prisoners compared to Azerbaijan and Ukraine.⁹³



4. HEALTH AND SOCIAL RESPONSES TO DRUG PROBLEMS IN PRISON

POLICIES AND REGULATIONS:

EECA countries share Semashko healthcare system, characterized by a multi-tiered network of specialized services with top-down regional management, which struggles with implementing evidence-based practices. Despite major socioeconomic and political transformations in the past 30 years, healthcare systems in these regions remain rigid, poorly financed, and hierarchical, posing unique challenges for modern healthcare delivery. 98,99 Notably, only a few countries like the Kyrgyz Republic and Moldova have adjusted their systems, and Ukraine introduced a new National Healthcare System in 2019, prioritizing ambulatory care based on successful integration of methadone into primary care. 100 Unique challenges to implementation in this environment, including in prisons, much of which was observed in Ukraine, include no tradition of using evidence-based practices, hierarchical and authoritarian reporting structures, lack of or outdated guidelines or treatment protocols, poor access to new



information, and low levels of teamwork (i.e. collaboration).¹⁰¹⁻¹⁰⁶ One study from EECA suggests that integration across specialties and increased focus on patient-centered care is crucial for change, ¹⁰⁷ while another from Latvia suggested that teamwork (i.e., collaboration) is a crucial outcome for settings transitioning from the Semashko.¹⁰⁸ Other studies indicate that having a powerful change leader who champions systemic healthcare change may be the most effective element for process change.^{102,103}

The organization of prison healthcare is crucial for ensuring equitable health outcomes and addressing public health challenges, particularly in EECA due to a legacy of self-governance and distrust between prison officials and inmates. The mechanisms of prison healthcare delivery often fall outside general healthcare systems, leading to increased health inequities for incarcerated individuals compared to the community. This separation poses significant challenges for effective HIV testing, treatment, and prevention. Protecting the health of prisoners is inherently linked to protecting public health, making the alignment of prison healthcare with public healthcare essential for meeting HIV treatment and prevention goals. However, a unified strategy for European prisons has not yet been established. The principle of 'equivalence of care,' which dates back nearly four decades, advocates for incarcerated people to receive the same healthcare as the general population. Integrating prison health management into public health ministries could enhance professional independence and care quality, and in EECA, could increase the uptake of OAT by separating medical staff from distrusted prison officials. For instance, Ukraine has moved prison healthcare to the Ministry of Justice, and Moldova is in discussions to transfer jurisdiction to the Ministry of Health. More research is needed to



develop a roadmap for this transition, learning from countries like Italy and France that have already integrated prison healthcare into their health ministries. Despite logistical challenges, organizations like WHO, the UN, and the Council of Europe support aligning prison healthcare with national health policies. A growing consensus favors integrating prison medicine into the general health system, with the potential for positive effects on patient outcomes, healthcare provider efficiency, reduced costs, and improved care continuity. Effective integrated care in EECA prisons should include comprehensive services for infectious diseases, addiction, and mental health.

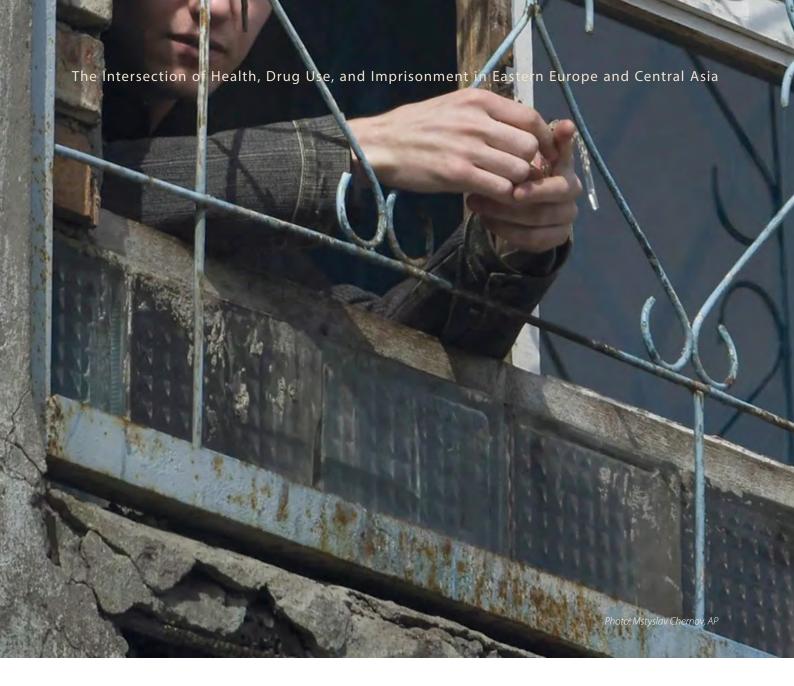
Legal frameworks across EECA often do not meet human rights standards, despite high HIV prevalence in prisons, particularly in ensuring access to evidence-based addiction and HIV services within the criminal justice system. Regional policies vary widely: Despite high HIV prevalence in prisons, legal frameworks in EECA often fail to meet human rights standards for providing access to evidence-based addiction and HIV services within the criminal justice system. Regional policies show significant variation: Moldova, Armenia, and Kyrgyz Republic offer OAT throughout incarceration, while Georgia, Lithuania, Latvia, Estonia, and Ukraine provide it upon entry to police lock-up with supervised opioid withdrawal. Conversely, Belarus, Azerbaijan, Tajikistan, and Kazakhstan restrict this therapy to community settings, and Russia, Uzbekistan, and Turkmenistan do not offer it at all. These discrepancies in legal mandates result in uneven healthcare distribution. In Ukraine, recent revisions to national drug policies have improved access to addiction treatment and harm reduction programs, including the removal of requirements for two failed "detox" attempts before starting OAT and allowing treatment in various healthcare settings, including prisons, along with take-home dosing after six months of sobriety. 100,112,113

As a steppingstone to decarceration, the criminal justice systems in EECA introduced probation in 2016 to move individuals with HIV or at risk for HIV to community settings, creating new touchpoints for HIV prevention in a setting not yet linked to OAT.

DRUG TREATMENT AVAILABILITY:

Over 50 years of research confirms that OAT using either maintenance with methadone or buprenorphine is the most effective treatment for opioid use disorder. OAT reduces drug injection, crime, HIV and HCV transmission, overdose, and psychological distress, and increases quality of life, employment, relationships and engagement in HIV care. OAT Moreover, prison-based OAT and needle and syringe programs reduce injection and equipment sharing within prisons. Scaling-up OAT is the most effective HIV prevention strategy for people who inject drugs with opioid use disorder, yet uptake remains suboptimal in EECA. OAT scale up now exceeds 50% in most Western European countries, yet individual, clinical, healthcare delivery and structural factors often undermine scale up in EECA, emphasizing the need for better implementation strategies. Relative to other countries, the HIV care continuum in Central Asia, for example, is the poorest world-wide primarily due to suboptimal OAT coverage, with coverage even lower or simply unavailable in prisons. Ambitious 95-95-95 UNAIDS targets cannot be achieved in EECA unless OAT is adequately scaled up, including in criminal justice settings, which would greatly improve the HIV continuum in EECA.

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In the EECA region, OAT was primarily introduced for HIV prevention rather than treatment, as required by external funding organizations, ¹²² and this legacy still remains. It is having difficulty being perceived as treatment for addiction, as myths and negative stereotypes about it are prevalent among both patients and providers ^{19,123-128} and the within-prison context may limit OAT scale up. ^{47,129-132}

OAT must be prescribed by Narcologists (addiction treatment specialists) in specialized treatment centers that primarily treat opioid use disorder in Narcology hospitals that prioritize detox and counseling, which is mostly ineffective. OAT, a primarily outpatient treatment, is not aligned with the Semashko healthcare system dominated by hospital-based services. OAT implementation in this region was impeded because the implementers (Narcologists) did not perceive that OAT was consistent with treatment and "recovery", but they were forced to implement it as "HIV prevention" and not for treatment of opioid use disorder.

OAT in prison is free, but support varies from external donors (GFATM, PEPFAR) or by the MoH. All countries require people who inject drugs to register as "drug users" before receiving OAT, and registration is often linked to employment or working restrictions.

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CHALLENGES AND CONSIDERATIONS:

Prisons as Amplifiers of Disease:

Criminalization policies of drug use that favor incarceration over treatment concentrate people (e.g., people who inject drugs) with or at increased risk for HIV in prisons (and in probation). When prevention and treatment services are limited, health deteriorates and in the case of HIV (and hepatitis C), within-prison transmission occurs, which is common in EECA. 5,16,129,135,136 Moreover, as most prisoners transition to the community, a transition for many that is challenging and extraordinarily dangerous, it is associated with high overdose rates for people who inject drugs in the absence of OAT. For people living with HIV, they have especially low linkage to and retention in HIV care and substantially heightened mortality. HIV transmission, but can be reduced by 60% if linked and retained on OAT. Consequently, adequately scaling up OAT in prisons may be a crucial target for reducing HIV transmission and death but scale up has been slow or non-existent.

Barriers to OAT scale up:

Studies identified multi-level factors (client, staff and administrator barriers) to OAT adoption 53,113,124,137 and have studied the processes (champions, organizational structures and climate, personal health beliefs) by which evidence-based practices are integrated into prisons and/or probation. 53,56,137,142,143 Despite its proven efficacy, OAT was viewed negatively by both patients and providers in Ukraine. 123,125,126 In Ukraine, incarcerated individuals do not consider OAT a form of recovery, and prison staff have negative perceptions of the treatment. 124 posing obstacles to its implementation and acceptance. More than half of people who inject drugs expressed opposition to making methadone maintenance treatment accessible in prisons. In Kyrgyzstan, less than a fifth of incarcerated individuals receiving methadone continued treatment after release. Other likely barriers in the region include name-based registries and police harassment that discourage treatment entry. Laws and police enforcement that target people who inject drugs attending OAT may also influence its uptake and retention. Other potential client and program barriers likely exist and will require further exploration. Among staff, they found an "identifiability" effect among staff that worked directly with prisoners that was correlated with OAT interest 154 and, over time, was correlated with most of the scale up. 124

Understanding and addressing criminal subculture influence on OAT scale up:

Criminal subculture in prisons (i.e., *vorovskoi mir* in EECA and "gangs" in North America),^{43,155} is prevalent throughout the prison systems in EECA, where life is dictated by extralegal principles. Criminal subculture emerges when living conditions (i.e., access to basic needs) are unmet by the state. After the collapse of the Soviet Union, criminal leaders filled the societal vacuum and enforced their own moral code, justice system, and economy, which resulted in a social hierarchy with outcasts excluded from communal support. This subculture, underpinned by an antagonism between formal authorities (prison officers and doctors) and informal prisoner leaders, continues today and varies regionally in its level of influence. Importantly, participation in OAT can result in losing one's status in the hierarchy and social exclusion.^{18,21,45} Health systems often bypass these structures, but criminologists caution against overlooking their impact, as it impedes successful implementation of

reforms.⁴² There is evidence that these subcultural practices extend into the community and could affect HIV prevention, yet their influence on probation is unknown.⁴⁸ Studies show that collaboration between clients and officers is critical,¹⁵⁶ but there is tension between officers' punitive role, on the one hand, and the opportunity to promote public health through treatments like OAT, on the other. The principles of criminal subculture may compound this tension, making clients less likely to report illegal substance use and miss opportunities for OAT initiation. Underpinned by criminal subculture, strained relationships between patients and criminal justice system staff have undermined scale up of OAT in EECA prisons.^{17,44,49,129,157}

Criminal subculture significantly influences methadone treatment uptake in prisons throughout the region. In Ukraine, methadone treatment, newly introduced as a medical treatment into prisons, is mistrusted and perceived as an official version of 'street methadone,' the synthetic illegal opioid most commonly used. Research on the criminal subculture in Ukrainian prisons is consistent with findings from other EECA countries, such as Moldova and the Kyrgyz Republic, outlining how these subcultures can hinder the implementation of methadone treatment programs in correctional facilities. 17,49,157 This distrust may also stem from the prison subculture's inherent suspicion of uncontrollable activities, as observed in Kyrgyz Republic and Moldova. The criminal code is strictly enforced among high-caste prisoners, limiting their engagement in methadone treatment, while lower-caste individuals experience more flexibility and are more likely to join the program (albeit in small numbers). Enrollment in or continuation of methadone treatment leads to a demotion in the prisoner hierarchy, which can signify a loss in both social and material capital for the person demoted. Both informal and formal governance within the prison contribute to these drug use hierarchies. Importantly, it is common for the formal prison administration depends on the informal prison governance (criminal subculture)—and the enforcement of methadone's low status—to address security and resource challenges. The evolution of the prison subcultures across EECA has varied, however. For instance, in Georgia, significant economic reforms and anti-corruption measures effectively diminished the influence of the criminal subculture and prison hierarchies.⁴²

FUTURE DIRECTIONS:

Active detection:

Implementing SET-R (Screen, Evaluate, Treat, and Refer) in prisons can transform disease detection from active surveillance—an important feature of understanding and treating the burden of infectious diseases. Passive surveillance relies on medical professionals to report cases to public health agencies, often resulting in delays and missed instances due to reporting structures. Active surveillance through SET-R, however, involves proactive engagement by public health staff, who screen, identify, and follow up on cases directly with incarcerated individuals or by reviewing medical records, and refer them to treatment. This proactive approach ensures a more comprehensive and timely detection of infectious diseases providing possibilities for earlier intervention and improving overall health outcomes in prison settings. Successful implementation of SET-R in probation may require a more detailed understanding of potential barriers of client-officer interactions and criminal subculture influence to optimally implement SET-R and achieve desired HIV prevention goals.²⁹

SET-R has been developed as an implementation tool to facilitate evidence-based practice (EBP) scale up,¹⁵⁹⁻¹⁶¹ including OAT, to control the HIV epidemic. Pilot testing of SET-R in probation, done by researchers in Ukraine, successfully linked and retained clients on OAT.¹⁶² SET-R, however, has not yet been integrated into probation so it can be sustainably performed by officers. *Thus, understanding how to scale up OAT within probation could be especially effective*^{163,164} *to simultaneously tackle HIV and opioid use disorder in people who inject drugs*.^{1,165}

Scaling up OAT:

Scaling up OAT (and HIV services) in prison with linkage to the community could be an especially effective ^{12,166} strategy for tackling the syndemics of incarceration, HIV and opioid use disorder among people who inject drugs in EECA. Incarceration offers a chance to initiate methadone treatment, but ensuring a smooth transition to community-based methadone programs after release is essential for effectively reducing new HIV infections among people who inject drugs.6 For many people returning from prison to the community, the transition from prison is dangerous, ¹³⁷ with high overdose and death rates, low OAT coverage, ¹⁶⁷ and poor engagement in care post-release. ¹⁶⁸⁻¹⁷⁰ Studies show that optimizing OAT dose within prison to be correlated with post-release linkage to OAT. ¹⁷¹⁻¹⁷³

In the absence of decriminalization in EECA, decarceration strategies using community supervision (i.e., probation and parole) are newly underway due to the high rates of incarceration, unparalleled levels of addiction, 174 concomitant infectious diseases, 5,157,175,136 and ineffective implementation of recommended evidence-based practices in prisons. Community supervision, a key component of the criminal justice system, represents neither the risk (and enabling) environment of the prison nor the community. Rather, it acts as an intermediary space where criminal justice-involved persons interact with probation officers to ensure *public safety* (i.e., avoid re-offending). Probation is increasingly viewed as good public health (i.e., diagnosis and treatment of addiction and infectious diseases). OAT, successfully integrated into probation, could treat opioid use disorder, and prevent the transmission of blood-borne viruses like HIV and HCV as well as reduce crime. How probation officers and clients interact, however, may undermine aligning public safety with public health unless implementation of OAT is effectively introduced and tailored to this unique touchpoint. There is an inherent conflict between officers who can and should inquire about substance use and support their clients to initiate OAT, yet the officers' superiors may expect them to violate their client's freedom when their clients report "illegal" opioid use. Consequently, models offering culturally sensitive scale up of OAT in criminal justice systems like probation have great potential for reducing HIV transmission regionally, but little is known about how this should be done.

Successful implementation of OAT requires tailoring strategies to local context, considering available resources, expertise, and cultural norms. This adaptation is crucial for effectiveness. However, such adaptation must be recognized as essential for ensuring sustainability and introducing effective practices that are specific to the local context.176 Adaptation must include often-overlooked *implementation strategies* (i.e. who dispenses methadone and *where* it is dispensed in the prison) that shape patient-provider relationships in ways that, locally, within Kyrgyz prisons, for example, produce methadone into a drug of addiction.177 Ethnographic observation and coaching through NIATx has potential to guide implementers on how to navigate implementation strategies (including *where* and *how* interventions are delivered) to optimize evidence-based interventions. NIATx is a framework designed to help organizations effectively implement evidence-based interventions, particularly in

addiction treatment. At its core, NIATx focuses on process improvement through a combination of ethnographic observation and coaching. This approach helps implementers understand the unique context of their organization and community, so they can navigate the complexities of introducing new interventions.

A key factor to consider is the impact of the region's Soviet healthcare legacy. The healthcare systems in EECA are still influenced by the rigid, vertical structure of the Semashko model, which tends to limit collaboration and teamwork. In Ukraine, for example, group cohesion has been observed to develop through joint learning efforts, although this process is not straightforward, with varying outcomes among participants. Creating communities of practice in this context could help improve understanding of implementation processes and guide solutions to other healthcare issues in the region, such as HIV and TB, especially as teamwork and cohesion evolve. Leveraging collaborative learning methods, like NIATx, to enhance regional expertise and advocacy skills, while also gaining insights into implementation pathways, will be crucial for ensuring the long-term success of OAT programs.¹⁷⁸ Research using NIATx suggests that OAT dosing optimization,¹⁷⁹ expanding to new sites, provision of fee-for-service OAT outside government programs (i.e., pharmacies, private clinics),¹⁸⁰ promoting integrated care programs, ^{113,179,181,182} transition to primary care ^{100,112} and scale up in prisons ^{6,89} are promising practices that can emerge through collaborative learning and to markedly scale up OAT.

Probation as a stepping stone to decarceration:

To reduce incarceration, Moldova and Georgia introduced probation in 2016 and 2021, respectively. Probation in EECA is mostly staffed by attorneys with increasing numbers of social workers. Though clinical services are legislatively mandated in prisons, they do not apply to probation. JCOIN (The Justice Community Opioid Innovation Network) is a U.S.-based initiative that focuses on improving the integration of opioid use disorder treatment within criminal justice settings, including probation systems. Yet, despite current JCOIN efforts, probation has mostly failed to integrate opioid use disorder and HIV treatment. Because OAT was introduced in EECA for HIV prevention rather than treatment, it is difficult for patients and providers to understand it as addiction treatment 124,184 and this may limit OAT scale up. 157,177,47 In probation, Moldova only has methadone as OAT while most OAT in Georgia is buprenorphine. HIV prevalence in people who inject drugs also varies.

A pilot screening, brief intervention, and linkage to treatment study (MAT-LINK) adapted for probation in Ukraine found high prevalence of HIV and opioid use disorder, combined with high OAT uptake, even without the brief intervention, creating a more expedited link to treatment. The opportunity with de-carceration efforts is to ensure access to trans-institutionalized persons in probation to better align public health (i.e. HIV prevention) with public safety (i.e. probation). Several studies point to the importance of the relationship between probation clients and officers as a key to the success of evidence-based practices in probation. First, a tension exists between public safety and public health in this hybrid criminal justice system/community setting. Clients may be hesitant to report opioid use that could result in incarceration, while probation officers may view drug use as a crime and are reluctant to support OAT. Second, there is evidence criminal subculture extends to the community setting, albeit less strongly, and may influence OAT scale up. 77,20,46,47,51,187 When criminal subculture is present, more tailored approaches to facilitate OAT are needed. 157

CONCLUSIONS:

This report has explored the multifaceted issues surrounding drug use and its impact on health within prison settings, highlighting effective interventions, regional strategies, and areas for further research. The following conclusions synthesize the main insights and themes discussed:

Accounting for Criminal Subculture:

Understanding the profound influence of criminal subculture in EECA prisons is crucial for the effective implementation of OAT. To improve uptake, it is essential to address the mistrust and social repercussions faced by high-caste prisoners who enroll in methadone treatment. Implementing culturally sensitive strategies and fostering collaboration between prison authorities and informal leaders can mitigate resistance and promote the acceptance of OAT within the prison hierarchy.

Linkage to OAT and Scale up:

OAT in both prison and community settings is imperative to reduce HIV transmission and improve health outcomes among people who inject drugs. Successful models, such as the SET-R approach, should be adapted and expanded to ensure seamless transitions from incarceration to community-based care. Enhancing community-based OAT services and integrating them with probation systems will support sustained engagement in treatment and reduce the risks of overdose and HIV transmission post-release.

Ensuring Clinical Independence:

To enhance the effectiveness of OAT, clinical independence must be prioritized, ensuring that narcologists and other healthcare providers can operate without undue influence from criminal justice or political systems. Training and empowering healthcare professionals to view OAT as a legitimate treatment for addiction, rather than solely a preventive measure for HIV, will improve perceptions and acceptance among both patients and providers. Establishing independent oversight and support systems for OAT programs will further ensure their integrity and sustainability.

Prioritizing Decarceration:

Implementing decarceration strategies, such as probation and parole, is essential to reducing the high rates of incarceration among people who inject drugs in EECA. These strategies should be coupled with robust community-based OAT programs to ensure continuous care and reduce recidivism. Creating a holistic framework that integrates public health and public safety objectives will enhance the effectiveness of decarceration initiatives and aid in the rehabilitation and reintegration of individuals into society.

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EASTERN AND CENTRAL EUROPEAN AND CENTRAL ASIAN COMMISSION ON DRUG POLICY (ECECACD)





ECECACD is aimed at bringing an informed, science-based discussion about humane and effective ways to reduce the harms caused by drugs and drug control policies to people and societies in the ECECA region.

Our goals:

- Review the approaches, policies and law enforcement practices in the countries of the region
- Provide evaluation and scientific evidences regarding different national responses to the drug problem
- Develop achievable and evidence-based recommendations for constructive legal and policy reforms in the region

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Perception of drugs in Central and Eastern Europe and Central Asia: overhaul needed (2021)

Guiding Principles Towards Effective and Humane Drug Policies in Eastern and Central Europe and Central Asia (2023)



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