Identification of barriers and facilitators in providing medication-assisted treatment for opioid users in Central Asia and China

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Abstract

Implementation of medication-assisted treatment (MAT) for opioid users in Asia has been slow to develop and is currently under-researched in the international drug policy field. On the basis of a systematic literature review and expert interviews, this article explores the barriers and facilitators in provision of MAT in Central Asian countries and Public's Republic China. To review the dynamics since 2011, we conducted a systematic literature review to complement informal expert interviews, and synthesize our results with the available statistical data and grey literature. Our review includes 42 selected articles and reports, and maps out the recent developments in MAT and related research in Kazakhstan, Kyrgyzstan, and China. The implications of this study suggest a need for future research to design better methods for successful scaling-up of access and integration of MAT for opioid users.

Introduction

There is a strong evidence that medication-assisted treatment (MAT) is effective in enabling people to reduce or cease injecting drug use, greatly reducing the risk of blood-borne viruses such as HIV. Methadone maintenance therapy has been associated with a significant reduction in the risk of HIV infection among people who inject drugs (MacArthur et al., 2012). MAT has shown wider health, economic, psychological and social benefits. World Health Organization (WHO) and the United Nations (UN) recommend that MAT should be provided as part of a comprehensive package for the prevention, treatment and care of HIV among people who inject drugs, along with additional interventions, such as needle and syringe programs (NSPs), HIV testing and counselling, antiretroviral therapy, targeted information, education and communication for people who inject drugs, and their sexual partners as well as vaccination, diagnosis and treatment of viral hepatitis and tuberculosis. But these interventions are only working if access to MAT is available, user-friendly, and supported not only by medical and psycho-social staff, but also by the community including local law enforcement agencies through accreditation of physicians and increase of competent treatment provision (Author, 2010).

In both Central Asia and China, the official numbers of registered people who use opioids and the estimated grey numbers differ vastly (Zabransky et al., 2014). Medication-assisted treatment, also known as methadone maintenance treatment, opioid-substitution treatment or opioid-agonist therapy, is a medical and psycho-socially supported intervention and a support tool for opioid users who suffer from negative consequences of opioid use. These treatment methods have shown to decrease the mortality and enhance the retention in treatment as well as reduce opioid use (Hedrich et al., 2008; Latypov et al., 2010; Mattick et al., 2009). Signing international treaties that foreground harm-reduction and human rights encourages, often even demands, that local healthcare professionals implement the suggested strategies in reducing the overdose rates and prevalence of infectious diseases by providing more effective harm-reduction (Csete et al., 2016; Harm Reduction International, 2014). However, the most recent evidence shows that funding of harm reduction measures such as MAT in low and middle-income countries has been visibly decreasing, leaving Central Asia and Eastern Europe with less than 27% of international donorship (Serebryakova et al., 2021). MAT is one such measurement, often provided with a long-term outpatient treatment option. Usually following an initial detoxification treatment, opioid users are then prescribed MAT to aid in navigating daily life and functionality, without furthering addictive components (Sordo et al., 2017; World Health Organization, 2014). MAT is also a more preferred term in this article, as it avoids suggesting that opioid use should be substituted with another

‘drug’ (National Institute on Drug Abuse, 2021). and offers a more neutral understanding of drug treatment for opioid use that might include other types of medications, too.

In its guidelines on psycho-socially assisted pharmacological treatment, WHO (World Health Organization, 2009) defines three general reasons for providing medication-assisted treatment for people who use opioids for:

- reducing or ceasing illicit opioid use
- preventing future harms associated with opioid use
- improving quality of life and well-being

In this article, we review how these goals have been achieved within numerous challenges, particularly in the selected countries where such treatment options are approached with caution.

In Central Asia, approximately 2,500 of around 400,000 opioid dependent people are on treatment with opioid agonists (mostly methadone). In the Kyrgyz Republic 1,450, and in Kazakhstan 353, respectively. Although there is MAT in prisons in the Kyrgyz Republic, access to the treatment is inconsistent and the number of inmates in treatment is limited. Nevertheless, MAT could play an essential role in the health system, although there is still massive opposition to this evidence-based treatment (Author, 2021).

China kicked off a methadone maintenance program as the main component of the harm reduction strategies starting from 2003. During the pilot phase from March to June 2004, the first eight MAT clinics were set up in five provinces. After the positive results, there was a rapid expansion. At the end of 2006, 320 MAT clinics were opened in 22 provinces, caring for 37,345 people who use drugs. After that, expansion continued. MAT has become an important aspect of the rehabilitation of opioid dependent people in the community. By the end of 2016, a total of 773 MAT clinics had been set up in 29 out of 34 provinces of the state including 24 mobile clinics, to improve access for the rural population with around 160,000 clients with an estimated 1.5 million heroin users (Lee & Newman, 2017).

These improvements suggest a need for a more in-depth understanding of how various factors – facilitators and barriers – could explain the intermittent and fluctuating provision of MAT in the two regions. In general, facilitators of MAT are defined in fourfold: 1) *availability* (provision, medications), 2) *accessibility* (range of providers, opening hours, geographical coverage), 3) *affordability* (reimbursement schemes), and 4) *acceptability* (stigma, stakeholders’ perception of MAT) (European Monitoring Centre for Drugs and Drug Addiction (EMCDDA), 2021). In turn, barriers to MAT are understood as mediated by local and national legal frameworks, policies, drug use prevalence and types of drugs, treatment quality control, as well as overall socio-economic situation (EMCDDA, 2021). In combination, both facilitators and barriers can also be categorized as institutional, programmatic, attitudinal, and systematic (Grella et al., 2020). In this article, we aim to qualitatively analyze the complexity of these factors across all latter four dimensions by mapping out the changes (see the figures 1 and 2) of the past decade through the published empirical evidence.

Key indicators per country

Central Asia is among the top regions for high opiate consumption marking 0,9% of the population (United Nations Office on Drugs and Crime (UNODC), 2020). The region also has the highest numbers for injection drug use in carceral settings reporting one in five people who had injected a drug at least once during the imprisonment (UNODC 2020). Similarly, according to unofficial statistics, at least 10 million people are believed to use drugs in China, of which 1,3 million are opioid users (Harm Reduction International, 2014). Restrictions applied to the provision of MAT have led to inconsistent results. This was evidenced in individual country profiles.

The development and implementation of MAT in *Central Asia* has been stagnating in the past few years. The implementation is accompanied by strong media and other public campaigns against this type of drug treatment and harm reduction measures, which had been claiming that MAT will lead to a “new type of addiction”, that people who use drugs are “poisoned with a dangerous drug” referring to methadone, or that this treatment intervention is another form of “Western imperialism” etc. Against this background, the local governments and Ministries of Health and Internal Affairs have been very cautious in implementing MAT reflecting the skepticism that is still dominating Central Asian drug policy landscape. We believe that this opposition widely communicates the influence from Russia against MAT, too (Author, 2021).

Despite the above cited challenges, implementation of MAT has undergone several successful stages, too, even if small in scale. In the early 2010's we saw an increase in access to opioid substitution treatment in *Kazakhstan* (World Health Organization, 2012) with methadone as the only medication prescribed in MAT programs since 2015. The medication is distributed to healthcare institutions and costs less than one US dollar (informburo.kz, 2017) per a single dose, whereas the heroin in the black-market costs around 23 US dollars. As of December 31 2019, there were 296 people in treatment, which is only 0.3% of the estimated 94,600 people who use opioid drugs (Abishev, 2020), including 235 men and 61 women. As of July 7, 2021, 326 people were enrolled in the program, 117 of whom were HIV patients (azattyq.org, 2021). For 2019, 44 people were enrolled in the program. However, evidence shows that strong anti-MAT propaganda in Kazakhstan is among the main barriers to scaling-up of the treatment, often misinformation making a louder argument rather than evidence of the positive effects from treatment implementation (Parsons et al., 2014).

With some differences in the scale of the implementation, similar situation is observed in the *Kyrgyz Republic*. The MAT had been implemented quite early in the country beginning in 2002 and has been part of the comprehensive treatment options for opioid users in the country, including detoxification (permanently and on an outpatient basis); short-term detoxification analogues of MAT for persons with dependence on drugs; outpatient rehabilitation; complex provision of services with TB and HIV infections (“Single Window Model”). Today, a total of 24 MAT sites are working in the country out of which 15 are within the healthcare organizations and 9 are incorporated in the penal system. There are still difficulties: Restrictions in access and possibility of receiving legal aid for patients (Author, 2021).

The scale of the MAT distribution and drug treatment policy in the neighboring China, however, differs drastically. Within 13 years after commencing the methadone treatment in 2003, the Chinese government authorized the opening of 773 MAT clinics in 29 provinces of the country (Chen & Zhao, 2019), that provide both methadone and buprenorphine in the program (Harm Reduction International, 2014). *China* has made significant progress towards implementing and enhancing harm reduction programs in recent years. The country has launched a treatment with methadone and was scheduled to serve more than 160,000 heroin users by the end of

the 2018; there are similar ambitions for increasing the availability needle and syringe programs around the country and to increase the number of voluntary counselling and testing (VCT) sites, especially in high prevalence areas and have explored interventions that increase the uptake of VCT among people who use drugs; and the role of the NGOs is an emerging, though underused, means to provide HIV-related outreach services among this marginalised group. In such a large country there are many barriers to overcome before complete implementation of a comprehensive and far-reaching harm reduction strategy. China is well on its way towards achieving its goals (Chen & Zhao, 2019; Sullivan et al., 2014).

Methods

Charting the development of MAT in China and Central Asia involves a calculated approach to big data of local and national statistics, reports, personal communications, expert knowledge, and grey literature to provide a detailed overview. Following the slow progress in the adaptation and only a partial implementation of MAT in both regions, our purpose was to raise a number of possible research directions and provide a synthesis of the available data for a discussion. Data specifying the exact numbers and treatment methods, including the statistics and the means of obtaining them in China are generally classified information^[1]. Publicly available data comes from international organizations such as the Global Fund, WHO, and UNODC who carry out annual monitoring. In this paper, we reviewed the literature in accordance to three dimensions: relevance to the topic, type (empirical or review), and methodology. To address the gaps in obtaining the relevant data and insider knowledge, we used both systematic literature review and qualitative expert interview methods as the basis for our analysis.

Expert interviews were conducted in two forms: written communication and via video-chat platforms (e.g. Skype / Zoom) through June to September of 2021. All interviews were structured as the experts were given a set of six questions (see below after figure 1) to answer and elaborate on the local situation. Most of the experts either solicited data from local sources and organizations or provided technical reviews of the available literature in the local languages.

The search strategy for the systematic review involved an initial broad search on Web of Science and PubMed to retrieve peer-reviewed research and review articles published in English between 2011 and 2021. The broad search performed via Google Scholar also helped to identify relevant, supporting grey literature including international reports, local government reports, national epidemiological statistics, and NGO reports. The data range was purposely wide in order to capture the historical and developmental aspects of MAT for opioid users in these countries and specifically identify key themes in regards to barriers and facilitations. Keywords searched between February and April 2021 were as follows: opioid substitution therapy, opiate-agonist treatment, methadone maintenance treatment, medication-assisted treatment, opioid use in China, opioid use in Central Asia. Combinations of these terms were used to focus and refine the search.

The initial search on Web of Science and PubMed revealed 6,019 results for the following key terms “opioid substitution treatment OR opioid agonist therapy OR methadone maintenance treatment OR medication-assisted treatment”. A refined search in both databases yielded a total of 528 articles mentioning China and 69 mentioning Central Asia. Results for China were used in the similar combination and order, but further filtered with ‘addiction’ OR ‘opioid use’ OR ‘drug policy’ terms. All initial results were then further refined with ‘research article’, ‘legislation’, ‘practice guidelines’ categories and then filtered according to full-text availability. After the

duplicates were removed, and the search was refined to include only publications on MAT for opioid use, a total of 42 publications were included in the study (see flow chart below).

Figure 1. Flow chart of the literature selection criteria

(insert about here)

In the final selection, we included studies that directly examined the effects of MAT on long-term opioid use in five countries. Search results have been categorized according to the following themes: (a) study duration; (b) data collection methods and sample size; (c) participants – population cohort; (d) treatment – MAT involving methadone, buprenorphine, codeine, and morphine; (e) policy indicators and harm-reduction; and (f) retention rates. We then analysed the selected articles on the basis of the following six questions: 1. What development and changes are visible in the demographics of MAT enrolment in the last ten years?

1. How are the MAT services structured in terms of provision, referral of patients, facilitation of access, dosage of methadone, and the actual progress of the treatment (including the number and the kind of staff e.g. narcologists/medical doctors, nurses, social workers, NGO activists etc.)?
2. Why only methadone is being prescribed?
3. What were the reasons for the decrease in the number of patients?
4. What impact did law enforcement, medical considerations, general political climate and other, external factors have with regard to MAT development?
5. Which role did NGOs play with respect to psycho-social support of MAT patients?

[1] Personal communication with a research associate in drug treatment program at Shanghai Mental Health Center.

Results: Identifying Barriers And Facilitators

The results of the literature review have shown that there is scarcity of studies and available empirical knowledge on the development of MAT programs in Central Asia more than in China. Most studies from Central Asia report on short-term internationally sponsored MAT programs for opioid users, while Chinese studies report on nationally adapted strategies. Studies included in the review have looked at MAT implementation both within the context of prevalence prevention (e.g. prisons, HIV/AIDS prevention) as well as drug treatment programs (e.g. methadone-maintenance treatment). However, these were the majority of studies where MAT programs were not the sole focus of the studies, rather an element in a bigger context. Narrowing the studies down to only those that reviewed the efficiency of MAT program in drug treatment settings and that measured the above listed six criteria in the provision of MAT.

Often treated as the main measure of successful treatment outcome, retention rates were calculated in all studies included in this review. In general, enhancement of retention rates in China is seen through optimization and diversification of treatment by targeting innovative counselling models and digitization of monitoring

systems (Marienfeld et al., 2017). Recent studies on outcome measures have reported only 25% retention in the example of Shanghai Centres for Diseases Control (Zhang et al., 2019). It should be considered, however, that only methadone has been approved in China despite the ongoing trials testing the effectiveness of buprenorphine/naloxone for opioid users (Dong et al., 2019; Lucas et al., 2012). Other studies have also shown that patients reported side-effects and poorer physical health under buprenorphine, prone to frequent relapses (Shen et al., 2019). One reason for a decrease of patients might be that the Methadone dosage is too low, because “a large body of research has demonstrated that a higher methadone dosage is more effective to promote treatment compliance and reduce heroin use, and under-dosing is one of the predictors for treatment dropout” (Lee and Newman, 2017). It is also mentioned by Chinese experts, that providers with negative attitudes toward people who use drugs, confusion of treatment objectives and misunderstanding of the comprehensive treatment strategy (including psychological counselling and support) were more likely to be associated with bad treatment consequences. Negative attitudes may play a role by affecting the interaction between the providers and clients (Chen and Zhao, 2019). Nevertheless, China has made a leap forward in scaling-up the MAT by incorporating patient-centred clinical technologies such as the use of smartphones for easy recovery access (see Schulte et al., 2017) although access to smartphones and potential law enforcement involvement remain the main barriers for this method. China could substantially benefit from the long-term experiences with Methadone-Maintenance-Treatment in Hong Kong (see Lee & Newman, 2017). Table 1. below shows the link between barriers (white) and facilitators (blue) as well as the retention rates in the treatment.

Table 1. Overview of the most cited barriers and facilitators to MAT access and retention
(insert about here)

The above summary shows the overall results for each country, however, some indicators such as reduction of infectious diseases or opioid use were not always the case in specific circumstances despite the presence of MAT programs. In addition, the figure also shows more barriers and less facilitators, which suggests that further research is needed to study more efficient scaling-up methods in both regions. The implementation and successful MAT coverage of the vulnerable populations are highly dependent on the local conditions and national policies (World Health Organization, 2014). Previous studies focusing on Central Asia have uncovered a number of difficulties in the provision of MAT, citing systemic, socio-economic, political and societal opposition among other factors (LaMonaca et al., 2019; Latypov, 2010; Parsons et al., 2014).

Key findings from qualitative interviews

The experts in *China* report a similar operation of the MAT clinics being located in the community or mental health institute (for example in Shanghai, MAT clinics located in mental health institutes). Opiate dependent patients must register and receive physical examination if they want to get the treatment. The doctor will evaluate their withdrawal symptoms, and provide methadone to patients based on the evaluation results.

Patients are expected to visit the clinic every day to receive their daily methadone dose, and use methadone only on the site. In China, patients are not allowed to take methadone back home. Each MAT clinic has 5 to 7 staff, including a doctor, a nurse, and security staff. Unlike Kyrgyzstan and in some cases in Kazakhstan, social workers in China are not required in MAT clinics, but they are allowed to work together with methadone clinics, provide counselling or service to patients, if needed.

According to our expert interview, while methadone is the most widely used medication in MAT program, there are some exceptions, like Shanghai Mental Health Center. Trained personnel there also provide buprenorphine for patients, but it is usually understood as a substitute treatment, not maintenance. While the reasons for this disparity in the use medications are not clear, experts suggest that the use of buprenorphine is not only for medical reasons, but also for policy reasons, since in China, people who use drugs are defined as both patients and criminal offenders. In addition, early observations, cue that the number of MAT patients is decreasing in China, while the government does not plan to extend and develop the MAT clinics or diversity in treatment any further.

The development with MAT clinics and medications in Central Asia offers slightly different policy implications. Per our expert interviews, there are 24 MAT sites in the *Kyrgyz Republic* as of January 2021. All MAT sites are funded by the Global Fund (GFATM), Center for Disease Control (CDC) and with minimal involvement of the Ministry of Health of Kyrgyz Republic. As a rule, these sites are located in family medical centers at the primary healthcare level, in medical institutions that provide treatment services for HIV/AIDS and tuberculosis, or in correctional colonies. All MAT sites report basic data on the number of patients registered as people who inject drugs or as diagnosed with addiction.

According to the standards and the staff list of these MAT sites, each site has a capacity for approximate 50 patients and includes a doctor (narcologist, psychiatrist), a nurse, a psychologist/psychotherapist, a social worker, and a cleaner. Experts report these sites to be generally understaffed with nurses oftentimes performing the function of a social worker, which invariably reduces the quality of social work provision. Patients are admitted for MAT treatment according to following algorithm:

1. Determining if the individual meets admission criteria: *a)* if there is an opioid dependence syndrome and *b)* confirmation of injection of illicit opioids and active opioid use at the time of referral
2. Determining the presence of contraindications: *a)* ensure that the patient is informed and counselled about the MAT, *b)* obtain informed consent for treatment
3. Introducing the patient at the Special Advisory Committee (SAC) meeting and obtaining approval from the SAC to admit the patient to the maintenance therapy program
4. Signing a contract between the patient and the supportive care provider
5. Entering the patient data on the national narcological registry: *a)* recording patient's medical history as part of the program

According to the recent state report on the “Main indicators of MAT for current patients by the Republic from January 2017 until June 2021” found that at the beginning of the year 2021, there were a total of 1190 patients, including 96 women, enrolled in the local MAT programs. For the period from January 1 2017 until June 9 2021, 2115 people, including 141 women, were registered dead as a result of opium use. 1,114 patients dropped out of the program during the reporting period, 21.4% of them by death. 1,437 patients were enrolled in the program

during the reporting period, of whom 34.2% were primary enrollees. At the end of the reporting period, 871 patients were enrolled in MAT, of whom 50% were between the ages of 30 and 44, 42% were unemployed, 53% had high school education, and 58% were single or divorced.

Table 1. below shows this analysis in terms of acceptance rates to treatment and termination of treatment whether voluntarily or enforced.

Figure 2. National statistics on the MAT provision in Kyrgyzstan^[1].

(insert about here)

The reasons for termination of the treatment and potential reduction of patients enrolling in MAT are manifold. These include low motivation of injecting drug users themselves, environmental factors that lead to unpreparedness to stay in therapy for a long time and abstain from concurrent use of illegal drugs. Experts also report that the majority of MAT clients use the program as an "alternate airfield" meaning if the drugs of choice are not available, many prefer to enroll into the program as an alternative way of drug use. Other reasons for discontinued treatment include transition of clients to other psychoactive substances (NPS), lack of trust and myths about methadone being a poisonous drug that are spread among people who inject drugs and the general population, which negatively affect the motivation to seek treatment with methadone. This lack of motivation is also often accompanied with punitive intervention practices of law enforcement bodies (often detaining patients on the site for no reason).

In addition, mandatory registration at drug treatment centers, with consequent serious restrictions in job market, obtaining a driver's license, the risk of losing custody of children, and the threat of confidentiality also contribute to avoiding MAT altogether. There is also evidence of lack of psychosocial support according to individual needs and unknown state of affairs regarding financing and unresolved tasks of transferring the data to the department of the Ministry of Health. Finally, stigma and discrimination and lack of engagement from the side of organizations working with people who inject drugs, to motivate potential patients to enroll in MAT, are often due to insufficient knowledge and understanding of the real benefits of MAT programs.

Our review of academic and grey literature shows that in *Kazakhstan*, there are more than 1,500 non-governmental organizations (NGOs) that receive government funding are registered on the official websites of the NAO "Center for the Support of Civic Initiatives" and public procurement of the Republic of Kazakhstan. More than 200 NGOs are registered on the official website of the NAO "Center for the Support of Civic Initiatives" (cisc.kz, 2021). The mission of the NAO "Center for Civic Initiatives Support" is to assist NGOs in the implementation of social projects of the state.

According to NAO, the "Center for Support of Civic Initiatives" for 2017-2021 covers a total of 308 projects, of which 84 (27.3%) are aimed at promoting civil society, 55 (17.8%) support for youth policy and children's initiatives, 54 (17.5%) are for the protection of rights and legal interests of citizens and organizations, 16 (5.2%) focus on achieving goals in education, science, information, physical culture and sports, and finally, 8 (2.5%) are in the field of health and promotion of healthy lifestyles (cisc.kz, 2021).

These initiatives are complemented with the analysis of the official website of public procurement of the Republic of Kazakhstan in 2021 shows 1826 procurement announcements on the state social order (goszakup.gov.kz, 2021). According to the Law of the Republic of Kazakhstan "On the State Social Order, Grants and Awards for NGOs in the Republic of Kazakhstan" of 12 April 2005, the state social order is a form of social programs, social projects, functions of central and (or) local executive bodies transferred for implementation in a competitive environment, aimed at solving problems in the social sphere, performed by NGOs from budgetary funds.

The analysis of our expert interviewees showed that the state social procurement announcements counts (1.1%) out of 1,826 announcements which were aimed at preventing HIV infection and drug addiction. Only one announcement (0,05%) out of these refers to providing support for people who use drugs. For social support of this cohort and on the implementation of measures on prevention among people who inject drugs for 2021, there are no projects with budget funding, and with only three projects are being implemented (in Almaty) from a foreign donor organization (infonpo.gov.kz). This overview provides initial insight into possible barriers and facilitators affecting the overall MAT environment in the country.

The MAT program in Kazakhstan has been in pilot mode since 2008 and is funded by the Global Fund. This year, the program has been renewed until 2023 with the agreement signed between the Ministry of Health of Kazakhstan and the Global Fund signed a grant agreement (azattyq.org, 2021). However, the anti-MAT propaganda in Kazakhstan receives the state's support along several central arguments of the opponents. There is a strong opinion that harm reduction programs, including MAT, is imposed by the West as it also mostly funded by Western money coming through non-governmental organizations (Hieromonk et al., 2007). Opponents tend to believe that a new type of drug business is created in the country under the cover of this program (mk-kz.kz, 2019) and that research and clinical trials of methadone in Kazakhstan were conducted in violation of legal requirements and in favor of OST (mk-kz.kz, 2019; Hieromonk et al., 2007). Experts report that the program has yet to achieve its goal of full re-socialization of people who use drugs (mk-kz.kz, 2019). A review of grey literature suggests that there is also a concern that the methadone program may lead to mass unrest (akzhol.kz, 2017), as these fears were reignited following a failure of methadone supply in Temirtau with patients showing "withdrawal" symptoms manifested in aggression, depression, pain, and disruption of family relationships (zakon.kz, n.d.). Other opponents lead by the example from Russia and Uzbekistan who refused the MAT program. The familiar fear of promotional effect of the use of methadone leading to heavier forms of drug with more devastating consequences remains as popular. Despite these oppositions in society at large and in government cabinets, the Ministry of Health adopted a new order in 2019 approving the "Roadmap for the Implementation of a Supportive Substitution Therapy Program for Opioid Dependents in the Republic of Kazakhstan for 2019-2020".

[1] Table provided by Zhyldyz Bakirova, Deputy for Medical Work of the Republican Center for Narcology

Conclusion

Despite the WHO-recommended low-threshold approach to MAT in all countries, the enrolment and eligibility criteria in both Central Asia and China remain complicated (Chen & Zhao, 2019; Latypov et al., 2010; Yan et al., 2013). The most recent review of the MAT in Central Asia shows that these barriers identified a decade ago continue to persist to this day (Author, 2020). Under 5% of the injecting drug user cohort have been covered by

the intermittent MAT in all Central Asian countries, albeit the treatment has been terminated in Uzbekistan completely since 2009 (Author, 2021). In China, the situation varies generally from province to province, although there are general barriers such as lack of psychological counselling and misconceptions about MAT among the staff and the patients (Wang et al., 2014).

As before, the political will in both regions and adequate funding remain the central prerequisites for achieving success in harm reduction measures (UNODC, 2020). The Global Fund is the main donor (60%) of harm reduction measures in the regions with NGOs receiving the most amount of financial support and community organizations, although to a lesser degree (Serebryakova et al., 2021). Our data and analyses showed that in both China and Central Asia, there are similar barriers in accessing effective MAT. At its core, these barriers often come from strict state and institutional regulations preventing easy access, which is partially explained by ongoing distrust in the effectiveness of harm reduction policies. This article, hence, showed that struggling to integrate crucial harm reduction measures and medication-assisted treatment of drug use, local governments face challenges of preserving the prohibitionist laws and therefore, enforcing resultant zero-tolerance drug policies, all the while trying to adapt to changing global drug control landscape which increasingly promotes harm reduction as a basic human right. While Western donors operate on the basis of international consensus on human-rights-based harm reduction approaches, of which MAT is one part, they often fall short in adjusting the programs in culturally-appropriate ways and with consideration of local political and social discourse. Hence, the above discussed political barriers preventing a better and successful implementation of basic harm reduction programs are not only challenging for local governments, but are also responsibilities for better functioning international cooperation and global sustainability goals.

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Declarations

Declaration of interests and funding

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Data availability statement

The authors confirm that the data supporting the findings of this study are available within the article. Additional supplementary materials can be shared upon request.

Tables

Please see the supplementary files section to view Table 1.

Figures

Figure 1

Flow chart of the literature selection criteria

Figure 2

National statistics on the MAT provision in Kyrgyzstan .

Supplementary Files

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- [Table1.jpg](#)