



**ICAP**  
Global Health Action  
COLUMBIA UNIVERSITY  
Mailman School of Public Health

# ASSESSMENT OF THE MEDICATION ASSISTED THERAPY PROGRAM IN THE KYRGYZ REPUBLIC



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# Contents

Acronyms .....	4
<b>1. Executive summary .....</b>	<b>5</b>
<b>2. Introduction .....</b>	<b>7</b>
<b>3. Assessment goals and objectives .....</b>	<b>9</b>
<b>4. Methods .....</b>	<b>10</b>
4.1. Data collection methods and tools .....	10
4.2. Measurement of outcomes .....	11
4.3. Statistical analysis .....	12
4.4. Site selection .....	12
4.5. Assessment Team .....	13
<b>5. Description of MAT services in Kyrgyz Republic .....</b>	<b>14</b>
5.1. Overall structure and policy environment .....	14
5.2. Costing and funding .....	15
5.3. Supply management of commodities .....	16
5.4. Human resources .....	16
5.5. Infrastructure .....	17
5.6. Monitoring and Evaluation .....	20
<b>6. Results of evaluation .....</b>	<b>23</b>
6.1. Continuity of care and comprehensiveness of spectrum of services available to MAT patients .....	23
6.1.1. Proportion of patients on MAT with at least one complete clinical review in the last quarter .....	23
6.1.2. Proportion of MAT patients screened for Hepatitis C and Hepatitis B .....	23
6.1.3. Proportion of patients on MAT with at least one psychosocial counseling session during the last month .....	24
6.2. MAT adherence and support .....	24
6.2.1. Proportion of patients who remain free from non-prescribed opioids at six months after initiation of MAT .....	24
6.2.2. Proportion of patients on MAT remaining in care six months after initiation of MAT .....	25
6.2.3. Proportion of patients who remain free from non-prescribed opioids twelve months after initiation of MAT .....	25
6.2.4. Proportion of patients on MAT remaining in care twelve months after initiation of MAT .....	26
6.2.5. The average daily dosage of methadone received by patients enrolled in MAT three months or longer .....	26
6.3. Patients' satisfaction with the program and their own health status .....	27
6.4. Evaluation of patient behaviors (sexual, injection and criminal) .....	30
6.4.1. Proportion of patients on MAT with at least one sexual and drug related risk assessment completed during the last month .....	30
6.4.2. Drug use .....	30
6.4.3. HIV Risk Behavior .....	32
6.4.4. Criminal Behavior .....	34
6.5. Drug Use Related Expenses .....	34
<b>7. Limitations .....</b>	<b>36</b>

**8. Conclusions..... 37**

**9. Recommendations ..... 39**

**10. Attachments..... 40**

    ATTACHMENT I ..... 40

        Definitions and Sampling frame for patient level indicators..... 40

    Attachment II..... 42

        Paired sample test results for non-prescribed drug use ..... 42

## Acronyms

<b>AIDS</b>	Acquired Immune Deficiency Syndrome
<b>ARV</b>	antiretroviral drugs
<b>ART</b>	antiretroviral therapy
<b>CAR</b>	Central Asian region
<b>CDC</b>	Centers for Disease Control and Prevention
<b>C&amp;T</b>	care and treatment
<b>FMC</b>	family medicine center
<b>GFATM</b>	The Global Fund to Fight AIDS, TB and Malaria
<b>HIV</b>	human immunodeficiency virus
<b>IRB</b>	institutional review board
<b>MAT</b>	Medication-assisted therapy
<b>M&amp;E</b>	monitoring and evaluation
<b>MOH</b>	Ministry of Health
<b>NGO</b>	non-governmental organization
<b>OD</b>	outpatient department
<b>OI</b>	opportunistic infection
<b>OST</b>	opioid substitution therapy
<b>PEPFAR</b>	United States President's Emergency Plan for AIDS Relief
<b>PHC</b>	primary health care
<b>PLHIV</b>	people living with HIV
<b>PTDC</b>	pretrial detention center
<b>PWID</b>	people who inject drugs
<b>RAC</b>	Republican AIDS Center
<b>RNC</b>	Republican Narcology Center
<b>STI</b>	sexually transmitted infection
<b>TB</b>	Tuberculosis
<b>TA</b>	technical assistance
<b>UNAIDS</b>	The Joint United Nations Program on HIV/AIDS
<b>UNDP</b>	United Nations Development Program
<b>UNGASS</b>	United Nations General Assembly Special Session
<b>UNICEF</b>	United Nations Children's Fund
<b>UNODC</b>	United Nations Office on Drugs and Crime
<b>USG</b>	United States Government
<b>VCT</b>	voluntary counseling and testing

# 1. Executive summary

In September 2010, ICAP at Columbia University received funding from the US Centers for Disease Control and Prevention (CDC), under the President's Emergency Plan for AIDS Relief (PEPFAR), to work with the Ministries of Health (MOH) and other governmental and non-government partners to strengthen HIV care, treatment and prevention services in Kazakhstan, Kyrgyzstan, Tajikistan, and Uzbekistan (the SUPPORT Project).<sup>1</sup> The Assessment of medication assisted therapy (MAT) projects in the Kyrgyz Republic is an integral part of the SUPPORT Project's work plan and results of this assessment will be used for provision of technical support to improve MAT.

The purpose of this assessment was to collect information on the scale and quality of the existing MAT services for people who inject drugs (PWID) in the Kyrgyz Republic, and to identify any gaps in such services. The assessment results will be presented to the MOH and other stakeholders in order to plan, coordinate and implement interventions to improve opioid drug dependence treatment, particularly MAT, in the Kyrgyz Republic. The information will also be used by ICAP to guide the development of strategies and activities aimed at advancing HIV prevention services in the region.

The protocol and data collection tools were developed jointly by ICAP teams in New York and Almaty. Prior to their use in the field, the teams consulted stakeholders and made revisions based on their feedback. The assessment included a mixture of qualitative and quantitative research methods, including interviews with MAT patients, PWID, MAT staff, key stakeholders and healthcare service users, as well as medical record reviews. A review of prior assessments conducted by other agencies was also performed.

Key findings of the Assessment include:

1. The MAT program (locally more frequently referred to as opiate substitution therapy, or OST), funded under Global Fund for AIDS Tuberculosis and Malaria (GFATM) grants for the Kyrgyz Republic, clearly demonstrates the feasibility and efficacy of prescription of methadone to treat opioid dependence.
2. The legislation of the Kyrgyz Republic is favorable for the introduction of MAT as a standard of care for treatment of opioid dependence and HIV prevention among people who inject drugs.
3. Outcomes of the MAT project in Kyrgyzstan include reduction in non-prescribed (illicit) opioid use, criminal activities, and HIV-risk behavior. MAT also helped to improve patients' perception of their health.
4. Enrollment in the program is associated with significant reductions in patients' spending on non-prescribed psychoactive substances, resulting in reductions of social harms caused by criminal activities associated with the need to find money for the drugs.
5. Methadone-based MAT may be provided in the Kyrgyz Republic at a very low cost: in 2012, the cost of a daily dose of methadone was only USD 0.28 per patient.
6. The MAT sites outside of the capital experience a great lack of technical guidance. Insufficient attention is paid to the training of nurses – in a number of MAT sites the nurses did not have any formal MAT training.

<sup>1</sup> SUPPORT is a five-year initiative funded by the U.S. Centers for Disease Control and Prevention (CDC) under the President's Emergency Plan for AIDS Relief (PEPFAR). The SUPPORT Project is led by ICAP at the Mailman School of Public Health at Columbia University and will be implemented in four countries of Central Asia (Kazakhstan, Kyrgyzstan, Tajikistan, and Uzbekistan) during 2010-2015. This Project is intended to provide technical assistance to strengthen facility-based HIV prevention, care, support and treatment services, including improvement of HIV related laboratory services, as well as to improve strategic information systems (surveillance, M&E, and informatics).

7. The current monitoring and evaluation system for MAT in the Kyrgyz Republic has a number of deficiencies, including those related to the collection and analysis of data from the MAT sites, and does not afford proper evaluation of the quality of the services provided, patients' satisfaction with the program, and MAT's impact on their sexual, drug use, and criminal behaviors.
8. The existing infrastructure of organizations providing MAT and their material capacity hinder the quality provision of MAT and require improvement.
9. Despite a significant reduction in injecting non-prescribed substances in comparison with the period before MAT, some patients continue injecting psychoactive substances (PAS), mostly Dimedrol (Diphenylhydramine).
10. Collaboration with other healthcare and social services that target drug users is poor. For example, there is a lack of cooperation with needle exchange programs, even when they are located next door to the MAT sites.
11. A system for social adaptation and employment of MAT patients is lacking.
12. PWID and patients report that the interference of law enforcement services precludes their participation in MAT.

Based on the findings of the Assessment, the following recommendations are provided for improving the treatment of opioid dependence, specifically MAT, in Kyrgyz Republic:

1. Further expand the MAT program, improving access to the therapy in remote areas of the country, where there is a need for such therapy. Special attention should be paid to the expansion of MAT in penitentiary institutions.
2. Improve the provision of technical assistance to the MAT sites through selection, training, and involvement of specialists in addiction psychiatry and narcology from medical institutions to serve as technical advisors.
3. Continue infrastructural improvement of the narcology centers, ensuring the provision of a full range of services in a confidential environment. Equip MAT sites with automated dispensers to improve the quality of services and prevent the diversion of methadone for illegal purposes.
4. Improve monitoring and evaluation procedures for MAT, ensuring the collection and analysis of data related not only to program implementation, but also related to MAT patient outcomes.
5. Increase the participation of non-governmental organizations and MAT patients in promotion of MAT to PWID and their families. The expertise and experience of NGOs must also be used in the provision of psychosocial support to MAT patients and their families.
6. Enhance interactions between MAT sites and HIV and tuberculosis harm reduction and treatment programs. Identify ways to provide comprehensive care for MAT patients with HIV and tuberculosis as a "one stop shop" model.
7. Develop a mechanism to ensure that MAT patients get free screening for viral hepatitis in accordance with Ministry of Health guidelines.
8. Scale-up comprehensiveness of MAT including improvements in provision of counseling to patients, people who inject drugs (PWID) and their relatives; development of peer-support groups and increase interaction between medical and social services for PWID.
9. Improve activities aimed at building enabling environment for operation of MAT programs, reduction of stigma and discrimination by medical personnel and legal assistance to MAT patients.



## 2. Introduction

Central Asia is one of few regions in the world where the HIV epidemic remains clearly on the rise. Currently, the Kyrgyz Republic (also referred to as Kyrgyzstan) faces a concentrated epidemic with the most common mode of transmission being through syringe and needle sharing among PWID.<sup>2</sup>

Kyrgyzstan is located on a major drug trafficking route from Afghanistan, resulting in the availability of relatively inexpensive heroin and a high prevalence of drug use in the country. Rapid diffusion of drug use along these trafficking routes, coupled with widespread migration, has created an environment that is increasingly conducive to the spread of HIV, as well as hepatitis, tuberculosis (TB), and other sexually transmitted infections (STI). The high prevalence of unsafe injecting practices combined with risky sexual behaviors, such as inconsistent condom use among the general population and PWID, increase the potential for the rapid spread of HIV.

According to the Republican AIDS center data from 2011, injection drug use remained the primary reported mode of transmission among newly registered HIV cases (60.2%). As in previous years, men constituted the majority of registered HIV cases (69.7%).

According to UNODC data from 2006, the estimated number of PWID in Kyrgyzstan was 25,000 people, which is 3.5 times higher than the number of PWID officially registered with the drug addiction treatment services. In prisons, the number of incarcerated PWID officially registered with the narcology services is 413 (5% of the total prison population). According to a study conducted by AIDS Foundation East-West in 2008, an estimated 19% of the prison population are PWID. The high prevalence of hepatitis C (HCV), HIV, and syphilis among PWID are indicative of risky drug use and sexual behavior: sentinel surveillance data from 2010 shows that HCV prevalence among PWID was 53.7%, HIV 14.3% and syphilis 12.7%; and among incarcerated people, 37.5%, 13.7% and 3.5% respectively.

Medication assisted therapy (MAT), more widely known in the region as opioid substitution therapy (OST), is a rigorously evaluated and evidence-based medical intervention to treat opioid dependence that consists of prescription of methadone or buprenorphine as a replacement for illicit opioid narcotics, such as heroin. Research to date has generated a great amount of evidence demonstrating that MAT in combination with psychosocial support produces the best outcomes in terms of reduced frequency of illicit drug use and injections, decreased criminal behavior and improved social functioning.<sup>3</sup>

The MAT program in Kyrgyzstan started in 2002 as a pilot project in two cities (Bishkek and Osh) with funding by the Soros Foundation. Later, the Ministry of Health approved the expansion of the MAT program to other regions of the Republic, with funding provided by the Global Fund to Fight AIDS, Tuberculosis and Malaria (GFATM). According to Republican Narcology Center data, as of May 1, 2012, 1,100 patients were receiving MAT in twenty sites across the Kyrgyz Republic.

Interim assessments of the MAT project in Kyrgyzstan were carried out by the World Health Organization (WHO)<sup>4,5</sup> at the request of the Ministry of Health. In these assessments, it was concluded that the provision of MAT to patients with opioid dependence resulted in the following positive outcomes as compared to the period before the MAT:

<sup>2</sup> WHO, UNAIDS, UNICEF. (2011). Global HIV/AIDS Response – Epidemic update and health sector progress towards Universal Access – Progress Report. Geneva.

<sup>3</sup> WHO/UNODC/UNAIDS (2004). Substitution maintenance therapy in the management of opioid dependence and HIV/AIDS prevention: Position Paper

<sup>4</sup> Moller L, Karymbaeva S, Subata E, Kiaer T. (2009). Evaluation of patients in opioid substitution therapy in the Kyrgyz Republic, WHO Europe.

<sup>5</sup> Subata E, Moller L, Karymbaeva S, (2009). Evaluation of opioid substitution therapy in the Kyrgyz Republic, WHO Europe.

- Significant reduction in heroin use
- Improved quality of life and perception of one's health
- Reduction in crime
- Reduction in syringe and needle sharing

The current assessment aimed to build on the findings and lessons learned from previous studies, and produce reliable evidence-based data to inform the development of improved drug dependency treatment services in the Kyrgyz Republic.

### 3. Assessment goals and objectives

The purpose of this assessment was to collect and analyze data indicating the extent to which the MAT program in the Kyrgyz Republic complies with the minimal recommendations developed by World Health Organization for psychosocially assisted pharmacological treatment of opioid dependence<sup>6</sup> and the Principles of drug dependence treatment.<sup>7</sup>

The overall goal of this assessment was to provide data to inform improvements in opioid drug dependence treatment, particularly MAT, services in the Kyrgyz Republic.

Specific objectives included:

1. Describing the existing models of providing MAT to PWID.
2. Assessing the quality and efficacy of the current MAT models.
3. Identifying the existing capacity building needs to improve quality, efficiency and effectiveness of the drug dependence treatment systems in general, and MAT specifically.
4. Providing specific and feasible recommendations to MOH for improving quality, efficiency and effectiveness of the drug dependency treatment systems in general, and MAT specifically.

Data collection activities in the Kyrgyz Republic were carried out between April and June 2012.

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<sup>6</sup> WHO. (2010). Guidelines for the psychosocially assisted pharmacological treatment of opioid dependence

<sup>7</sup> UNODC, WHO. (2008). Principles of drug dependence treatment. Discussion Paper.

## 4. Methods

### 4.1. Data collection methods and tools

The assessment was conducted using qualitative and quantitative research methodologies including: i) systematic review of relevant documents; ii) semi-structured interviews with key stakeholders and staff involved in the provision of MAT at narcological centers; iii) semi-structured interviews with opiate dependent persons not in treatment, as well as MAT patients; iv) MAT site/narcological facility assessments; and v) medical chart review. Information was triangulated across the various data collection methodologies to assess the outcome measures described below. The following data collection methods were employed:

- a. **Document review:** The assessment team reviewed all available relevant written documents, protocols, reports and standard operating procedures (SOPs) relating to provision of MAT including: national clinical guidelines related to drug dependence treatment and management of HIV in PWID; training reports and program implementation reports; presentations and reports from assessments conducted by other agencies; routine patient monitoring tools, such as registers or forms for drug dependence treatment services, outpatient registers, and electronic databases; data dissemination reports; and official MOH statistical reports.
- b. **Semi-structured interviews with key stakeholders:** The assessment team conducted interviews with stakeholders representing a wide range of positions and responsibilities within the narcological system to gather qualitative information about the structure and components of treatment provision.
- c. **Semi-structured interviews with staff involved in provision of MAT:** The assessment team also conducted semi-structured interviews with staff involved in the provision of drug dependency treatment services at the site level, including staff of narcological dispensaries, pharmacists, nurses, and narcologists at MAT sites. The interviews were used to collect more detailed information on treatment and care processes and existing challenges.
- d. **Interviews with patients receiving MAT:** The assessment team conducted individual interviews with MAT patients (Family Medicine Center (FMC) #8: n=49; Kara-Suu: n=20; Sokoluk: n=40; pretrial detention center (PTDC) #5: n=12; Kara-Balta: n=39; Osh: n=31; Prison#47: n=55). Patients were eligible if they had been enrolled in MAT for more than 3 months. MAT staff provided general information about the purpose of the assessment to eligible patients, and those who were interested were invited to meet with a member of the assessment team to receive more detailed information. After providing informed consent, each patient was interviewed using a standardized questionnaire that was based on validated research instruments used in other countries, in particular by a multi-center collaborative study on OST led by WHO.<sup>8</sup>
  - I. **Treatment Perceptions Questionnaire (TPQ).**<sup>9</sup> The TPQ was utilized to assess patients' satisfaction with MAT services, and their experiences with MAT and other drug dependency treatment services, including their perception of the quality and acceptability of these services.

<sup>8</sup> Robert A., et al. (2009). WHO Collaborative Study on Substitution Therapy of Opioid Dependence and HIV/AIDS. Protocol.

<sup>9</sup> Marsden J., et al., (2000) Assessing client satisfaction with treatment for substance use problems and the development of the Treatment Perceptions Questionnaire (TPQ). *Addiction Research*; 8:455-70

- II. **Opiate Treatment Index (OTI).**<sup>10</sup> The OTI was used to measure clinical outcomes of MAT. The OTI is a validated drug dependence treatment outcome assessment tool recommended by WHO that measures six treatment outcomes: drug use, HIV risk-taking behavior, social functioning, criminality, health status, and psychological functioning. Due to the time it takes to complete this assessment, only the following sections of OTI were utilized: Drug use and Criminality. In addition, questions developed by the investigators related to patients' overall satisfaction with their health and their drug related expenses in the last 30 days were added to this part of the questionnaire.
- III. **HIV Risk Questionnaire-Short Version (HRQ-Short).**<sup>11</sup> Risks associated with drug use and sexual behaviors were assessed by using a short version of the HIV Risk Questionnaire provided by its developer.<sup>12</sup> The HRQ-Short Version assesses the frequency with which injecting drug users have participated in specific injecting, sexual and other risk-practices in the previous month that may expose them to blood borne viruses. The instrument consists of seven questions measuring frequency of HIV risk behaviors focusing on sexual and drug use practices.

In addition, through semi-structured interviews, detailed information was collected on: accessibility of drug dependency treatment services; personal experiences using narcological services; perceived quality of services; cost considerations; potential and actual reasons that could lead to drop outs from treatment; factors that could improve uptake and adherence to MAT; unmet needs related to drug dependence and HIV-related treatment services; and perspectives on improvement of services, to evaluate the level of acceptability and satisfaction with existing services.

- e. **Interviews with PWID not receiving MAT:** Interviews with PWID (n=10 at each site) were conducted at all of the MAT sites. Interviewers collected information about respondents' knowledge about MAT, their attitudes to this type of intervention, data about accessibility of narcological care and HIV prevention services for PWID, PWIDs' perspectives regarding barriers to narcological care and HIV prevention services, as well as potential ways to improve the current situation.
- f. **Facility audit:** The assessment team conducted facility audits that included an assessment of providers' building characteristics, including geographical location; distance from public transportation lines; conditions of waiting areas and rooms for counseling and treatment (including infection control measures); and provisions for storing and dispensing MAT medicines and other commodities.
- g. **Patients' charts and registries review:** Medical charts and registers were reviewed by the assessment teams to assess the scope and the quality of existing MAT services.

## 4.2. Measurement of outcomes

The following components of the MAT service delivery system were assessed during literature review, facility audits and interviews with medical staff and PWID:

<sup>10</sup> Darke Shane, et al. (2000). The relationship between suicide and overdose among methadone maintenance patients. Technical report #100. NDARC, <http://ndarc.cms.med.unsw.edu.au/sites/ndarc.cms.med.unsw.edu.au/files/ndarc/resources/TR.100.pdf>

<sup>11</sup> Copersino ML, et al. (2010). Measurement of self-reported HIV risk behaviors in injection drug users: comparison of standard versus timeline follow-back administration procedures. *Journal of Substance Abuse Treatment*; 38(1):60-5.

<sup>12</sup> HIV Risk Questionnaire-Short Version was developed and kindly provided for the use in this assessment by Dr. Robert Brooner, professor of medical psychology at Johns Hopkins University.

1. Overall structure and policy environment
2. Costing and financing
3. Supply management of commodities
4. Human resources (staffing)
5. Infrastructure
6. Monitoring and evaluation
7. Service delivery system characteristics

For medical record reviews and interviews with patients, the following indicators were used to assess the scope and quality of services (service delivery characteristics) provided by MAT sites:

- Indicator 1. Proportion of patients on MAT with at least one complete clinical review in the last quarter
- Indicator 2. Proportion of MAT patients screened for Hepatitis C and Hepatitis B
- Indicator 3. Proportion of patients on MAT with at least one psychosocial counseling session during the last month
- Indicator 4. Proportion of patients who remain free from non-prescribed opioids at six months after initiation of MAT
- Indicator 5. Proportion of patients on MAT remaining in care six months after initiation of MAT
- Indicator 6. Proportion of patients who remain free from non-prescribed opioids twelve months after initiation of MAT
- Indicator 7. Proportion of patients on MAT remaining in care twelve months after initiation of MAT
- Indicator 8. Proportion of patients on MAT with at least one sexual and drug related risk assessment completed during the last month
- Indicator 9. The average daily dose of methadone received by patients enrolled in MAT for three months or longer

A detailed explanation of the indicators used for the medical record review, as well as the data extraction methods employed, are provided in Attachment I.

### 4.3. Statistical analysis

Means and standard deviations were calculated separately for each TPQ item. Differences in the mean frequency of use of non-prescribed psychoactive drugs for a period of 30 days prior to MAT enrollment and during the last 30 days on MAT were analyzed with paired t- tests. For a comparison of criminality rate and patients' overall satisfaction with their health before and during their participation in MAT, the Wilcoxon Signed Ranks test was used. Daily drug related expenses were calculated by multiplying the mean cost of non-prescribed drugs consumed during the last three consecutive drug consumption days with the average number of drug consumption days in the census month. Differences between drug-related expenses before and after MAT enrollment were calculated using paired t-tests. The effect of MAT enrollment on the frequency of HIV risk behaviors was tested with McNemar's test. A p-value <0.05 was used as the threshold for significance in all analyses.

### 4.4. Site selection

Seven MAT sites out of total twenty sites where MAT was implemented were randomly selected and included in the assessment:

1. Family Medicine Center #8, Bishkek;
2. Kara-Suu rayon family medicine center, Osh oblast;
3. Sokoluk rayon family medicine center, Chuy oblast;
4. Pretrial detention center#5, Osh, Osh oblast;
5. Kara-Balta rayon family medicine center, Chuy oblast;
6. Osh interobalst narcology dispensary, Osh oblast;
7. Prison #47, Bishkek.

## 4.5. Assessment Team

The assessment team was comprised of staff from ICAP-Columbia University, and short-term external consultants with expertise in conducting assessments of health care interventions, including drug dependence treatment, and particularly medication-assisted therapy.

The assessment protocol was approved by the Ministry of Health and the Republican Center of Narcology of the Kyrgyz Republic, the Ethics Committee of the Kyrgyz Republic, the US Centers for Disease Control and Prevention (CDC) and by the institutional review board (IRB) of Columbia University Medical Center.

## 5. Description of MAT services in Kyrgyz Republic

### 5.1. Overall structure and policy environment

MAT is incorporated in the *“State programme on prevention of the HIV/AIDS epidemic and its socioeconomic consequences in the Kyrgyz Republic for 2006-2010”*, which is the key strategic document that details national priority actions to combat the HIV epidemic in the country.<sup>13</sup> In addition to that, according to the *“Draft Concept of Counter-Drug Policy covering the period up to 2015”*,<sup>14</sup> MAT is an essential component of the counter-drug activities of the country, which demonstrates the Kyrgyz Republic’s strategic consistency in this area. One important feature underlying the concept of counter-drug policy is the requirement to rely on evidence-based facts and outcomes based on modern scientific methods in the planning and development of activities under this policy.<sup>15</sup>

National legislation of the Kyrgyz Republic requires medical organizations to obtain a special license in order to dispense psychotropic and narcotic drugs, including methadone and buprenorphine. The current practice is such that the MOH identifies and authorizes facilities to provide MAT, and thus far only public/state-owned medical entities providing narcological services have been included. MAT sites in the penitentiary system are selected in coordination with the State Penitentiary Service. Responsibility for the organizational and methodological supervision of the MAT program lies with the Republican Narcology Center under the Ministry of Health of the Kyrgyz Republic.

The existing MAT program in the Kyrgyz Republic is governed by the joint order of the Ministry of Health and the Drug Control Agency of the Kyrgyz Republic *“On further development of substitution therapy for opioid dependence in the Kyrgyz Republic”*, No 227/60 (dated 05.03.2006 and 13.05.2006), as well as by the joint order of the Ministry of Health and the Drug Control Agency of the Kyrgyz Republic *“On further expansion of substitution therapy with methadone for opioid dependence in Bishkek city and Chui province”* No 56/15 (dated 8 February 2007 and 14 February 2007). Provision of MAT in penitentiary institutions is governed by the joint Order of the Ministry of Health and the Ministry of Justice of the Kyrgyz Republic *“On a pilot program Substitution therapy with methadone for people with drug dependence in the institutions of the Main Directorate for Reformatory Justice under the Ministry of Justice of the Kyrgyz Republic”*, No 13/7 (dated January 17, 2005 and January 17, 2005).

A Clinical Protocol for the *“Substitution maintenance therapy with methadone for opioid dependence syndrome”* was elaborated by a team of experts coordinated by the Republican Narcology Centre under the Ministry of Health of the Kyrgyz Republic (RNC). This Protocol is largely based on the *“WHO Guidelines for the psychosocially assisted pharmacological treatment of opioid dependence”*, and reflects national laws, policies and conditions as recommended by WHO. The following criteria were defined as indications for MAT:

1. Opium/opioid dependence

<sup>13</sup> At the time of writing of this Report, the *“State Program for the Prevention of HIV/AIDS epidemic and its Social and Economic Impacts in the Kyrgyz Republic”* for 2012-2016 was in the process of being approved by the Government of the Kyrgyz Republic.

<sup>14</sup> SDCA (2011). Draft Concept of Counter-Drug Policy in the Kyrgyz Republic for the period until 2015.

<sup>15</sup> The Concept of combatting the spread of drug addiction and trafficking in the Kyrgyz Republic and the National Program of the Kyrgyz Republic to combat drug abuse and illicit drug trafficking for the period up to 2010, have also identified MAT as one of the priority means of influence on people with opioid drugs dependence.



2. Injecting use of opioids at the time of referral
3. Individual indications, as may be decided by the special advisory committee.

It should be noted that these criteria are consistent with WHO recommendations and MAT can be prescribed to any and all categories of opiate-dependent persons, without creating unnecessary obstacles to start the therapy.

In addition to these documents, *“The Standard of Substitution Maintenance Therapy”*<sup>16</sup> was developed in the Kyrgyz Republic to summarize the technical requirements for the organization and management of MAT, including personnel, equipment and monitoring requirements of MAT sites.

In the Kyrgyz Republic, there is a procedure to officially register people with drug dependence. People are entered in the registry by a narcologist upon diagnosing mental and behavioral disorders related to drug use. The registry is maintained by the regional narcological dispensaries. Narcologists and nurses registering and making appointments for a patient have full access to the registry. A person may be removed from the registry, if it is established that he/she has abstained from drugs for three years.<sup>17</sup> MAT patients surveyed believe that registration with narcology services often leads to registration in the police register, which may have negative consequences, such as unlawful harassment by the police. However, formally patients’ personal data are confidential and thus are protected by relevant legislation and normative documents.<sup>18</sup> According to interviews with MAT patients and reports of the NGO “Narcology Alternative”<sup>19</sup> often militiamen (Kyrgyz policemen) unlawfully seize MAT patients in the neighborhoods of MAT sites and hold them in militia offices exploiting opioid withdrawal syndrome until they admit guilt in crimes in which they are not responsible for. These problems, according to MAT patients as well as active PWIDs, discourage many from using narcological services and enrolling in MAT programs.

Another serious issue with the MAT Regulation currently in force is the limitation of patients’ rights to free movement. Once enrolled in a MAT program, patients cannot move or travel anywhere within or outside of the country without stopping MAT, as it is quite difficult to receive take-home doses and prescriptions of methadone. The current Regulation<sup>20</sup> provides for the provision of a maximum of two take-home doses only if the patient is in stable remission or in special cases (which are not defined). PWID who participated in interviews indicated this as another serious problem that discourages them from initiating MAT.

## 5.2. Costing and funding

In the Kyrgyz Republic, MAT is virtually free for patients. All existing MAT sites are fully supported by the GFATM-funded HIV project, without involvement of state or municipal budgets for healthcare. According to key respondents interviewed in this assessment, the current level of funding for the health care system in general, and narcology services in particular, does not allow for even partial public funding of MAT in the coming years, which makes the program vulnerable to the possible reduction of international donor assistance.

<sup>16</sup> Order number 838 (as of 25.12.09) “On Approval of Standards of service aimed at reduction of the harms associated with injecting drug use in the Kyrgyz Republic”

<sup>17</sup> UNODC. (2010). Accessibility of HIV prevention, treatment and care services for people who use drugs and incarcerated people in Azerbaijan, Kazakhstan, Kyrgyzstan, Tajikistan, Turkmenistan and Uzbekistan: Legislative and Policy analysis and recommendations for reform. Ashkhabad.

<sup>18</sup> Rules and procedures of registration and record-keeping on narcological disorders in the governmental health facilities of the KR. Endorsed by MoH Order #16 on 21.02.2002.

<sup>19</sup> Minutes of the focus group discussion with patients of the methadone substitution program. 28.01.2012. NGO “Narcology Alternative”. Bishkek.

<sup>20</sup> Regulation on expanding the program of substitution maintenance therapy with methadone in branches of the Ministry of Health of the Kyrgyz Republic. Approved by the Order of the Ministry of Health as of February 8, 2007 No 56, and the Drug Control Agency as of February 14, 2007 No 15.

According to the GFATM Project Implementation Unit under the United Nations Development Programme (UNDP) in the Kyrgyz Republic, as a result of procurement in 2012, the cost of an average daily recommended dose of methadone (100 mg) was as low as US \$0.28. Besides purchasing methadone, GFATM also provides funding for renovation and equipment, training, as well as compensation for MAT sites personnel. Recently the US Centers for Diseases Control and Prevention under PEPFAR funding provided a grant to the RNC for the establishment of three additional MAT sites, including one in prison #31, a central penitentiary institution that provides specialized treatment for TB.

### 5.3. Supply management of commodities

Both opioid substitution medicines methadone and buprenorphine are permitted for medical use under strict control and their import, storage and administration require special permissions.<sup>21</sup> Methadone is included in the list of essential medicines in the Kyrgyz Republic in line with WHO recommendations. However, only methadone was officially registered with the Ministry of Health, while buprenorphine remains unregistered due to high prices that make the use of this medicine in MAT unaffordable in the Kyrgyz Republic.

Currently methadone is procured by the UNDP, the Primary Recipient of the GFATM HIV grant. Procurement is done based on the forecast provided by the Republican Narcology Center that collects information on methadone stock and potential demand from each MAT site on a monthly basis. The country's demand for methadone is calculated based on the estimated daily dose of 100 mg of methadone per patient. In 2008, due to interruptions in the supply of methadone, MAT sites had to significantly reduce the daily dose of methadone they could allocate to each patient for a two month period. Since late 2008, methadone is procured in quantities that allow maintenance of a six-month stock and thus the continuation of the MAT program without interruptions.

### 5.4. Human resources

According to the existing standards, the following minimum required staff positions should be included in each site's organizational chart:

- One doctor (narcologist or psychiatrist) per 50 patients;
- Two nurses per 50 patients;
- One psychologist/psychotherapist per 50 patients;
- One social worker per 50 patients;
- 0.25 cleaning person per program.

GFATM also supports one consultant-coordinator at each of the MAT sites, which is typically performed by the chief doctor of the health facility. Responsibilities of the site consultant-coordinator include: overall management of the MAT site including daily staff supervision, service quality assurance, stock management, coordination of activities with other service providers, reporting to relevant bodies, etc.

All MAT staff members were recruited from the same health facilities where the MAT sites are located. For some staff, MAT-related functions are performed in addition to their main jobs. The percentage of a narcologist's time devoted to MAT varies from 25% to 50%, depending on the number of patients, their needs, and the schedule of individual counseling, group therapy, toxicology tests, etc.

At each MAT site, teams meet regularly, no less than once per month, to discuss overall project

<sup>21</sup> Decree No. 543, 9 November 2007 Government of the Kyrgyz Republic, Decree On Narcotics, Psychotropic Substances and Precursors that are under Control in Kyrgyzstan.

performance, patients' progress, and various clinical and operational challenges. In Bishkek, there are several MAT sites and the project staff are able to share experiences and knowledge between the sites. However, staff members of the MAT sites located in other regions do not have such an opportunity and more intensive on-site mentoring from more experienced clinicians would be beneficial. Methodical guidance is provided to regional specialists by the RNC staff during their site visits every six months.

All doctors that prescribe methadone under the project learned how to treat patients with methadone during various trainings, seminars and study tours organized by international development partners within and outside of the country. Although the majority of nurses interviewed indicated that they have not participated in any seminars and workshops on MAT, which in turn affects the quality of their performance, they undergo orientation and training on-site or at the MAT site on the premises of the RCN.

Most of the narcologists at MAT sites noted that they have insufficient training on MAT for the effective performance of their duties, as the work in the program requires broader knowledge. Narcologists and nurses at MAT sites reported that building their capacity in motivational interviewing, as well as in monitoring and evaluation, were priorities in order to improve the quality of the MAT operation.

It is important to mention the poor staffing of MAT sites with psychologists and social workers, who could help patients to find jobs, recover lost documents and assist with their other social needs. None of the MAT sites included in the evaluation had a specially educated staff member with a degree in social work to perform the social worker's functions – most frequently this work is done by nurses. Only one MAT site had a staff psychologist, who performed social worker's functions in addition to her own duties.

It should be noted that the poor staffing of MAT sites was not always due to the lack of interested or qualified specialists in a particular region, although this problem is inherent in the whole health care system of the Kyrgyz Republic. MAT site members as well as representatives of the RNC and UNDP pointed out the practice of allocating funding for the social worker or psychologist position only when site coverage reaches a certain minimum number (reported figures differed between respondents from 30 to 40) of patients. The assessment team did not find any documents that described such staffing restrictions. This situation negatively impacts the spectrum and quality of therapy at each MAT site, and limits the work aimed to ensure patients' commitment to methadone therapy. MAT sites' staffing is also hampered by poor wages that are not attractive to potential new employees, and do not motivate current staff members to have long term commitments with the program. MAT project staff also reported delays in payment of salaries that may be as long as two to four months.

## 5.5. Infrastructure

As stated above, all MAT sites are located within existing government health facilities.

**Bishkek.** In Bishkek, the MAT site is located in the premises of the Bishkek Family Medicine Centre No 8 (FMC). FMC is located in one of the central residential areas with a relatively well-developed public transportation network. The building is in fair condition. The MAT site has a separate entrance from the side of the building. The MAT area is located on the second floor and consists of three rooms, one of which is a utility room (a 6 m<sup>2</sup> room with no windows or furniture) and a corridor. One of the rooms is used for methadone dispensing. The room is quite spacious, has a window with direct natural light and is equipped with a table, a chair and a safe for storing methadone. Methadone is dispensed manually using a marked vial, which is very time-consuming and imprecise. The second room is the only room available to receive patients and provide counseling and individual or group therapy sessions. The doctor and the social worker

work in the same room, which is inconvenient if there is a need to counsel a program participant, family member, or potential patients. Often, one of the staff has to leave the room in order to allow the other to talk privately with a patient. The site has no toilet and the patients and staff have to exit the building, walk around it and enter the FMC to use their toilet. The only computer is broken, and the site has no funds to repair it. Accordingly, the staff have no access to internet and cannot maintain an electronic database.

Apart from methadone dispensing and toxicological analysis of urine, there are no other procedures performed onsite. For HIV testing, patients are referred to the AIDS Center. The FMC also hosts a syringe exchange point (SEP), but there is no cooperation between the MAT site and the SEP. MAT patients interviewed during the assessment could not answer questions regarding the very existence of the SEP and the services it provides.

This MAT site cooperates with the NGO “Narcology Alternative”, organized by the MAT patients themselves, which conducts seminars for MAT patients on various topics including effects of methadone, ART and other health related issues; the NGO “Narcology Alternative” also helps homeless patients to seek housing and access other health and social services. However, such cooperation between the FMC #8’s MAT site and the NGO “Narcology Alternative” is very limited due lack of funds to support those services.

Methadone is dispensed from 8:00 am to 1:00 pm, although in some cases the staff accommodates the needs of employed patients and opens at 7:30 am.

**Kara-Balta.** In Kara-Balta, the MAT site is located on the premises of the Kara-Balta Family Medicine Center. Accessibility of the FMC by public transportation is rather limited, especially for patients living in remote villages. The MAT site is a standalone single floor building, which is quite old, very small, and poorly heated in winter. It consists of two rooms– the methadone dispensing room and the doctor’s office. There is also a storage room located outside of the building. Patients have to wait outside, as the site’s building has no space for waiting. The methadone dispensing room has a glass wall separating it from the corridor (which patients enter to take their dose of methadone). The room is equipped with a chair, a table, a safe and methadone dispensing instruments (vials and beakers). Methadone is dispensed manually using marked vials. The toilet is located outside, locked and intended for staff use only. Urine samples for toxicology tests are collected at the FMC premises (“just around the corner”, says a MAT site staff member). The doctor also performs the duties of district narcologist and works as an expert-narcologist, conducting tests for drug use and dependence per the request of law enforcement services, and therefore the time she can devote to MAT patients is limited. In terms of laboratory tests, only HIV tests and chest X-ray are performed at the time of enrollment, and toxicology urine tests are taken throughout the course of treatment.

The working hours of the site are standard – from 8:00 am to 1:00 pm. A distinctive feature of this MAT site is the availability of an electronic database, which was developed on-site at the initiative of the doctor by a local programmer.

**Osh.** In Osh, the MAT site is located in the premises of the Osh Inter-Provincial Narcology Center. The Center is located on the outskirts of the city, and public transportation access is rather poor. Rooms at the MAT site are not suitable for medical institution functions. The MAT site is small and consists of three rooms, the methadone dispensing room, a doctor’s office and a meeting room. There is no separate office for the social worker, who has to either sit in the doctor’s office or join the nurse in the methadone dispensing room. There is a large meeting room, but it is not used for patients. Methadone is dispensed manually using marked vials. The dispensing room is separated from the corridor with a glazed wall with a small window through which a nurse gives out methadone doses. The room is equipped with the necessary furniture. The record-books with the results of urine toxicology tests from previous years were lost and the assessment team was only provided with a book with test results for the last year. Apart from the urine toxicology tests,

no other laboratory tests are performed under the program. Methadone is stored in a special safe in the drugs storage facility of the center, which is equipped with an alarm system. The toilet is located in a separate building, clogged and kept in unsanitary conditions. The buildings do not have tap water. The MAT site is open from 8:00 am to 1:00 pm.

**Kara-Suu.** In Kara-Suu, the MAT site is located in the premises of the Children's Hospital and the Karasuu Family Medicine Center (KFMC). Public transportation is available only to patients residing in Kara-Suu itself, or in settlements near it. Patients residing in remote areas which still fall within the KFMC catchment area have no access to public transportation and it takes them more than an hour to get to the MAT site. The MAT site occupies two rooms at the beginning of the first floor hallway, which is separated from the rest of the corridor with a door. The MAT site has a separate entrance from the side of the building, which is very convenient for patients. Entrance to the methadone dispensing room is separated from the corridor with an iron lattice that has a small window through which a nurse gives out disposable cups with methadone solution. The dispensing room is fairly spacious (about 6 sq. meters), has a window with direct natural light and is equipped with a table, a chair and a safe for storing methadone. Methadone is dispensed manually using a volumetric flask. The methadone dispensing room is located next-door to the narcologists office, who manages the MAT program. The toilet of this health facility is located at a distance from the MAT site, is unsanitary and not suitable for the collection of urine samples. All patients are tested for HIV, however screening for viral hepatitis is not performed. From August 2011 to April 2012, urine toxicology tests were not performed due to the absence of tests. Patients are referred to a TB specialist if they show symptoms of tuberculosis, and he orders fluorography. The site is not staffed with a social worker or a psychologist. The MAT site has no Internet access. The site is open from 8:00 am to 1:00 pm.

**Pre-trial detention center #5 (PTDC-5, Osh).** MAT site is located in the premises of the PTDC infirmary. The room where patients receive MAT is located next to the cells with incarcerated people. Entrance to the MAT room is separated from the corridor by an iron door. The dispensing room is sufficiently spacious, without windows. Patients are brought to the methadone dispensing room by a guard. The MAT program's doctor is the chief doctor of the PTDC infirmary and trained in MAT. The doctor does not possess any clinical protocols; rather in his daily practice he refers to a book on Methadone by A. Preston.<sup>22</sup> There is another large room for medical examination and consultations. The accurate management of medical records and other documentation is worthy of mention. In addition to the regular medical files, each patient receiving methadone is entered into an MS Word database, specifying the dates of enrollment and dropout, as well as results of examinations and tests. The site lacks office supplies, and there's no Internet access. If patients declare that they intend to receive substitution therapy with methadone, they are transferred to a separate cell. According to the medical staff, if MAT patients stayed in a common cell, informal leaders could exert pressure on them not to use methadone, and continue using heroin. Some patients refuse methadone in a few days, complaining of side effects. According to the doctor, this is probably due to the influence of criminal leaders. Interventions of relatives, many of whom have a negative attitude towards MAT and discourage patients from continuing therapy, also reduces adherence. Before MAT, all patients undergo a urine test for opioids, complete blood count, HIV test, syphilis test, and chest X-ray. If the HIV test result is positive, the patient undergoes screening for hepatitis B and C, and is examined by the provincial AIDS center experts. If the advice of other doctors is needed, patients are transported to the hospital in Osh.

**Sokoluk village.** In Sokoluk, the MAT site is located on the premises of the Sokuluk Family Medicine Center. Given the large service area of the FMC, getting to the MAT site with public transportation for some of the MAT patients takes more than one hour. Some patients do

<sup>22</sup> Preston A. The Methadone Briefing. An easy to use reference guide to methadone and methadone prescribing: for health and other professionals. Island Press, 1996. – 163 p.

not always have enough money for the trip, which causes them to regularly miss one or two consecutive daily doses of methadone. The single-floor building which houses the MAT site is in poor condition and requires capital repairs. The FCM administration and the MAT site are located in the same building. The methadone dispensing room is located next to a small office of the narcologist. The social worker does not have a separate room. The narcologist performs MAT related duties in addition to her main job which is treating neurology patients. Entrance to the methadone dispensing room is separated from a corridor by an iron lattice that has a small window through which a nurse gives out disposable cups with methadone solution. The site is using a manual dispenser, which according to medical staff is very convenient to use. At the time of this assessment, the dispenser was reported to be undergoing maintenance, and dispensing was performed using a volumetric flask. The methadone stock is refilled once a week.

HIV and tuberculosis tests are performed on a voluntary basis. For tuberculosis screening, patients are referred for a chest X-ray two weeks after enrollment in the MAT program. Chest X-rays and sputum collection for patients with a cough is done at the FMC. Free consultations of other specialist doctors (surgeons, therapists) are arranged by program staff through personal contacts. In HIV-positive patients, the initial examination, immunological status examination and prescriptions are all done in Bishkek, while the FMC dermatovenerologist manages follow-up care. Social workers help homeless patients obtain admission to the drop-in center in Gavrillovka village, where they can stay up to four months. The Sokoluk MAT site has established cooperation with the NGO "Narcology Alternative" which conducts seminars and support groups for MAT patients. The FMC also hosts a syringe exchange point and runs a program of naloxone-assisted overdose prevention.

Methadone is dispensed from 7:30 am to 1:30 pm, and for patients that come late, if is possible to receive the medication up to 4:00 pm.

**Prison #47** is one of the institutions under the State Penitentiary Service of the Kyrgyz Republic where incarcerated people in need of specialized care serve their sentences. The MAT site is located in the administration building on the first floor. The room where a nurse dispenses methadone is quite spacious (9 m<sup>2</sup>) and is separated from the second room with a wall which has a window with an iron lattice, through which patients are given methadone. The room is equipped with an automated methadone dispenser manufactured by CompWare Medical. This device is connected to a personal computer enabling accurate record-keeping of methadone dispensed, finding and issuing accurate doses of medication prescribed by the doctor for each patient by their name or number, and verification of a patient's face by matching it with an image stored in the database to prevent erroneous issue of methadone to unintended persons. The detention regime in prison #47 allows incarcerated people to move freely within the facility and to come for methadone at the appointed time without mandatory guard escort. The MAT site doctors and nurse have the national treatment protocol for opiate substitution therapy available at their workplace. In addition to MAT, incarcerated people suffering from substance abuse can undergo detoxification treatment at the narcology department of the colony. For over 10 years, prison #47 operates a rehabilitation program "Atlantis" based on "12 steps" principles. The PWID are also offered a syringe exchange program right here in the colony, which engages outreach workers and peer educators from among the prisoners. MAT patients, like all other incarcerated people, have the opportunity to receive surgical and medical therapy for other systemic diseases. HIV-positive patients that meet criteria for ART initiation can also receive these services while at the facility under the supervision of an infectious disease specialist. Two narcologists of the MAT project receive patients in personal rooms at the narcology department of the facility.

In Prison #47 methadone is dispensed daily from 10:00 to noon.

## 5.6. Monitoring and Evaluation

The system of MAT monitoring and evaluation is developed by RNC, which is responsible for the overall supervision of all MAT sites in the Kyrgyz Republic. The MAT sites report to the RNC on a monthly basis, and the RNC, in turn, reports to the UNDP, as the Principal Recipient of GFATM grant. The data reported to the RNC are collected for evaluation of the processes and outcomes of the MAT project. The following types of paper-based data are collected in each MAT site:

- Patients' passport information
- Patients' date of initiation of MAT
- Patients' daily dose of methadone prescribed (mg)
- Number of new patients
- Number of drop-outs
- Criminal charges of MAT patients
- Concurrent illnesses including HIV, HBV, HCV, TB
- Laboratory test results

Currently, RNC is in the process of optimizing collected data and a memorandum of cooperation has been signed with the UNDP which envisages quarterly site visits to the MAT sites by the RNC. So far the technical guidance provided to the MAT sites in relation to monitoring and evaluation, according to the respondents interviewed, has been inadequate.

Based on the information extracted from reports of MAT sites, RNC produces consolidated reports on an annual basis. These data are also used to forecast needs for methadone and monitor stocks.

The following data are reported on a quarterly basis by the RNC to the UNDP:

- Number of patients in the program (actual, as of the report date)
- Number of new patients in the reported period

RNC also reports all changes in MAT staff members as well as trainings staff participated in or organized.

According to the Standard of Substitution Maintenance Therapy described in the previous sections of this assessment report, the following types of documentation should be utilized and maintained by the MAT sites:

1. patient database;
2. substitution medication turnover (receipt and dispensing) registration log;
3. patient visits and substitution medication administration registration log;
4. medical records for each patient specifying their treatment plan, and regular doctors' and psychological counseling (intervention) records;
5. social support plans;
6. psychotherapy sessions registration log.

All MAT sites keep a special form for each patient (ambulatory/outpatient card), that contains personal and medical data, including: full name; address and contact details; employment and marital status; current and previous diagnoses; data on previous (narcological) treatments received; health complaints; clinical status; laboratory and other diagnostic test results; treatment plans with indication of medication dosages and indicated duration; and routine records of the attending doctor, social worker and psychologist.

There are inconsistencies among MAT sites on forms used for recording toxicology test results, and the content and outcomes of counseling provided by psychologists and social workers. However, the evaluation team has also failed to identify any formally accepted standards on

keeping such records on-site. Although the current paper-based medical record-keeping practice allows the monitoring of patients' status and progress over the treatment course, it would be beneficial to elaborate standardized forms for behavioral and psychosocial assessment based on the best international practice.

According to the Standard of Substitution Maintenance Therapy, the efficacy and quality of MAT should be evaluated with the following criteria:

1. accessibility of therapy;
2. patient's satisfaction with therapy;
3. duration of patient's retention in the program (i.e. adherence to the therapy);
4. changes in patient's psychological condition and behavior;
5. changes in patient's somatic condition;
6. changes in patient's social status and social functioning;
7. HIV prevalence among MAT patients;
8. concurrent use of illicit drugs (toxicology testing);
9. level of trust between MAT staff and patients in terms of the possibility of dispensing take-home doses of substitution medication;
10. comprehensiveness of provided services;
11. crime rates among the MAT program participants;
12. degree of collaboration with and utilization of opportunities provided by other services (social support, education, employment, treatment of concurrent diseases, etc.);
13. degree of interaction with other MAT programs to ensure continuity of care (for example, in cases when patients changes their place of residence);
14. degree of compliance of the practices of substitution medication storage, preparation, quality control and delivery to the MAT sites with standards.

No systematic reports prepared by either UNDP or RNC using these criteria were provided to the assessment team. Recently GFATM project provided funds to RCN to employ a full-time monitoring and evaluation specialist who is currently revising documentation and reporting tools aimed at improving M&E of MAT in the country.



## 6. Results of evaluation

In the absence of an effective MAT M&E system that would allow comprehensive and objective evaluation of the whole spectrum of treatment services provided by the existing MAT sites, this assessment was focused on assessing the ability of the MAT program to effectively improve the quality of life of PWID based on the following parameters:

1. Continuity of care and spectrum of services available to MAT patients
2. MAT adherence
3. Patient satisfaction with the program and his/her health status
4. Patient behavior (sexual, injection and criminal)

### 6.1. Continuity of care and comprehensiveness of spectrum of services available to MAT patients

According to existing MAT guidelines, the spectrum of services provided to MAT patients should include: MAT, diagnosis of viral hepatitis, HIV and other STIs, and psychosocial care. Attending physicians are required to elaborate individual treatment plans addressing medical complications for each patient.<sup>23</sup> This means that patients on MAT should also receive treatment for other medical conditions, such as hepatitis and HIV, at the same institution where they receive MAT or, at least, the MAT doctor should address such conditions in collaboration with other relevant services/treatment providers. All MAT patients have access to free voluntary HIV testing and counseling, however, only one of three MAT sites provides treatment of non-narcological illnesses and is actively engaged in ART counseling and monitoring. Patients in need of these services receive them at AIDS centers or from infectious disease specialists of the FMCs, however, these services are often provided without any involvement of the MAT site doctors.

#### 6.1.1. Proportion of patients on MAT with at least one complete clinical review in the last quarter

Chart review revealed that documentation of complete clinical reviews is not practiced at any of the assessed MAT sites in Kyrgyzstan. Complete clinical reviews are also not prescribed by the existing MAT guidelines elaborated by the RNC. However, clinical staff at all MAT sites indicated that all patients regularly undergo review by all specialists available (narcologists, nurses and social worker), and that the results of these reviews are communicated within the MAT team and with the patient.

#### 6.1.2. Proportion of MAT patients screened for Hepatitis C and Hepatitis B

Screening for viral hepatitis is prescribed in the MAT Regulation approved by the Ministry of Health. However, due to lack of funding, most patients enrolling in MAT programs are not screened for markers of viral hepatitis. The only exception is a small fraction of patients that are HIV-positive and are eligible to obtain HCV/HBV screening for free. But even for these patients, the results of HCV/HBV tests were only recorded in medical records at one site (PTDC#5).

In the absence of the possibility to objectively assess the proportion of MAT patients tested for HCV and HBV, the results of assessing this indicator is not provided in this report.

<sup>23</sup> Regulation on expanding the program of substitution maintenance therapy with methadone in branches of the Ministry of Health of the Kyrgyz Republic. Approved by the Order of the Ministry of Health as of February 8, 2007 No 56, and the Drug Control Agency as of February 14, 2007 No 15.

### 6.1.3. Proportion of patients on MAT with at least one psychosocial counseling session during the last month

Only one of the seven MAT sites included in the assessment employed a staff psychologist, but even this center did not record the psychological counseling properly, and as a result, the proportion of patients on MAT with at least one psychosocial counseling session during the last month was equal to zero across all MAT sites.

In a number of MAT sites patients reported that they have nothing to do and nowhere to go after taking their dose of methadone, which eventually leads to the gathering of patients near the methadone dispensing point. Such a crowd of MAT patients annoys the staff and visitors of medical facilities where the MAT sites are located, and the MAT patients are often requested to go away. After having walked off the health facilities, patients devote their free time to the collective use of diphenhydramine and other PASs. At the same time, such concentration of patients could be viewed as a missed opportunity to provide psychosocial interventions to patients, teach them to preserve and restore their health, manage their time, etc.

## 6.2. MAT adherence and support

### 6.2.1. Proportion of patients who remain free from non-prescribed opioids at six months after initiation of MAT

**Table 1.** Proportion of patients who remain free from non-prescribed opioids six months after initiation of MAT

Site	Number of charts reviewed (N)*	Number of MAT patients who remain free from non-prescribed opioids at six months	Percentage of MAT patients who remain free from non-prescribed opioids at six months
		(n2)	(n2/N*100%)
Bishkek FMC No 8	82	21 (no data for 49 charts)	25.6%
Sokoluk	78	11 (no data for 59 charts)	14.1%
Kara-Balta	73	57 (no data for 9 charts)	78.0%
Kara-Suu	43	12 (no data for 30 charts)	27.9%
Osh	102	9 (no data for 93 charts)	8.8%
PRISON #47	61	17 (no data for 44 charts)	27.9%
PTDC-5	21	5 (no data for 16 charts)	23.8%

\* all charts of all eligible patients enrolled in MAT at the site

The proportion of patients who remain free from non-prescribed opioids six months after initiation of MAT varied significantly between sites, ranging from 8.8% to 78.0%. This difference is largely due to interruptions in the supply of toxicology tests over the last year prior to this assessment. In addition, some sites were missing more than 90% of urine toxicology test results for the indicated time interval, therefore, the data cannot be deemed reliable.

### 6.2.2. Proportion of patients on MAT remaining in care six months after initiation of MAT

**Table 2.** Proportion of patients on MAT remaining in care at six months after initiation of MAT

Site	Number of charts reviewed (N)*	Number of MAT patients remaining in care at six months	Percentage of MAT patients remaining in care at six months
		(n2)	(n2/N*100%)
FMC No 8	250	147	58.8%
Sokoluk	189	78	41.3%
Kara-Balta	223	123	55.2%
Kara-Suu	85	43	50.6%
Osh	194	105	54.1%

\* all charts of all eligible patients enrolled in MAT at the site

In all MAT sites, more than a half (50.6% to 58.8%) of all patients who were enrolled in the program at any time remained in care for at least 6 months (Table 2). In interpreting this retention rate, it should be noted that at the time of this assessment, MAT was not accessible throughout the country, and thus there were patients who wanted to continue MAT, but were not able to do so when they moved to other regions of the country with no access to MAT. None of the MAT sites properly analyzed or documented the reasons for discontinuation of MAT. Using the retention data from PTDC-5 and prison #47 is deemed inappropriate, as patients/incarcerated people in these penitentiary facilities do not have the option of leaving at their own discretion as they would have in regular circumstances. Also, these patients can be moved against their will to other institutions, thus interrupting the therapy.

### 6.2.3. Proportion of patients who remain free from non-prescribed opioids twelve months after initiation of MAT

**Table 3.** Proportion of patients who remain free from non-prescribed opioids twelve months after initiation of MAT

Site	Number of charts reviewed (N)*	Number of MAT patients who remain free from non-prescribed opioids at twelve months	Percentage of MAT patients who remain free from non-prescribed opioids at twelve months
		(n2)	(n2/N*100%)
FMC No 8	58	22 (no data for 33 charts)	37.9%
Sokoluk	53	2 (no data for 49 charts)	2.6%
Kara-Balta	61	45 (no data for 9 charts)	73.8%
Kara-Suu	27	1 (no data for 26 charts)	3.7%
Osh	70	1 (no data for 68 charts)	1.4%
Prison#47	120	21 (no data for 99 charts)	17.5%
PTDC-5	3	no data	0%

\* all charts of all eligible patients enrolled in MAT at the site

As at six months, the proportion of MAT patients who remain free from non-prescribed opioids at twelve months after initiation of MAT varied significantly between sites, ranging from 1.4% (Kara-Suu) to 73.8% (Kara-Balta), as indicated in Table 3. Due to the interrupted supply of toxicology tests over the last year prior to this assessment, the data cannot be deemed reliable.

#### 6.2.4. Proportion of patients on MAT remaining in care twelve months after initiation of MAT

**Table 4.** Proportion of patients on MAT remaining in care twelve months after initiation of MAT

Site	Number of charts reviewed (N)	Number of MAT patients who remain in care at twelve months after MAT initiation	Percentage of MAT patients who remain in care at twelve months after MAT initiation
		(n)	(n/N*100%)
FMC No 8	225	95	42.2%
Sokoluk	182	53	29.1%
Kara-Balta	220	80	36.4%
Kara-Suu	84	27	32.1%
Osh	194	70	36.1%

29.1% (Sokoluk) to 42.2% (FMC No 8) of MAT patients in the civil sector remained in care twelve months after initiation of MAT. Respondents name reasons such as change of residence, difficulty of daily travel for methadone and harassment by police as the most frequent grounds for discontinuation of MAT earlier than twelve months after initiation of the therapy. As mentioned above, none of the MAT sites kept sufficiently thorough documentation or did analysis of the causes of discontinuation of MAT, and the data obtained are not adequate enough to reliably judge the nature of the cases.

#### 6.2.5. The average daily dosage of methadone received by patients enrolled in MAT three months or longer

At the time of assessment, MAT patients received doses ranging from 42 mg (PTDC-5) to 101 mg (Kara-Balta) of methadone per day (Table 5).

**Table 5.** The average and the median daily dosage of methadone received by patients enrolled in MAT three months or longer

Site	Number of patients sampled	Average (median) daily dose (mg)	Interquartile range (mg)
FMC No 8	63	56 (50)	25
Sokoluk MAT	51	52 (50)	20
Kara-Balta MAT	31	101 (85)	105
Kara-Suu MAT	29	46 (30)	38
Osh MAT	47	57 (50)	30
Prison#47	55	64 (60)	30
PTDC-5 MAT	12	42 (38)	10

International evidence suggests that the optimal daily dose of methadone is in the range of 60-125 mg.<sup>24</sup> It should be noted that out of seven MAT sites only those in Prison #47 and

<sup>24</sup> WHO, 2010. Guidelines for the psychosocially assisted pharmacological treatment of opioid dependence. Geneva.

Kara-Balta had median daily doses of 60 mg and 85 mg respectively, but only in Kara-Balta interquartile range of daily doses was above the lower margin of the recommended dose. According to patients interviewed at MAT sites, and also all of the narcologists interviewed, methadone dosing is flexible, depending on patients' individual needs and health conditions. However, suboptimal dosing in most of the assessed MAT sites suggests a common reluctance to increase the daily doses of methadone. Interviews with MAT patients revealed that some patients do not ask their doctors to increase the dose of methadone even when they feel their doses are insufficient and force themselves to adjust to lower doses of the medication. Reasons for such low-dose preferences among patients included beliefs that higher doses of methadone cause greater harm to their bodies and low daily doses will also enable them to quit the therapy relatively quickly when needed. Another part of patients reported preferring lower doses of methadone because after taking methadone they inject Dimedrol to feel a heroine-like surge of euphoria ("rush").

As stated in the policy environment section above, the regulatory framework existing in the Kyrgyz Republic at the time of writing this report provides means to ensure uninterrupted access to opioid substitution medications for those patients on MAT who, for some good reason, cannot attend the clinic to take his/her daily dose of medication. Such circumstances include, but are not limited to, being hospitalized for inpatient treatment, short (up to two days) travel, moving to another city, being arrested, etc. According to the respondents, there were many instances when MAT patients receiving treatment in non-narcology facilities were provided with the necessary supply of methadone by agreement between the administrations of the MAT site and the hospital to ensure MAT continuity. However, the medical staff of MAT sites in the civil sector noted that when a patient is in a temporary detention facility at a police station or other penitentiary facilities not participating in the MAT program, the contact with these patients is interrupted and they are forced to discontinue therapy.

### 6.3. Patients' satisfaction with the program and their own health status

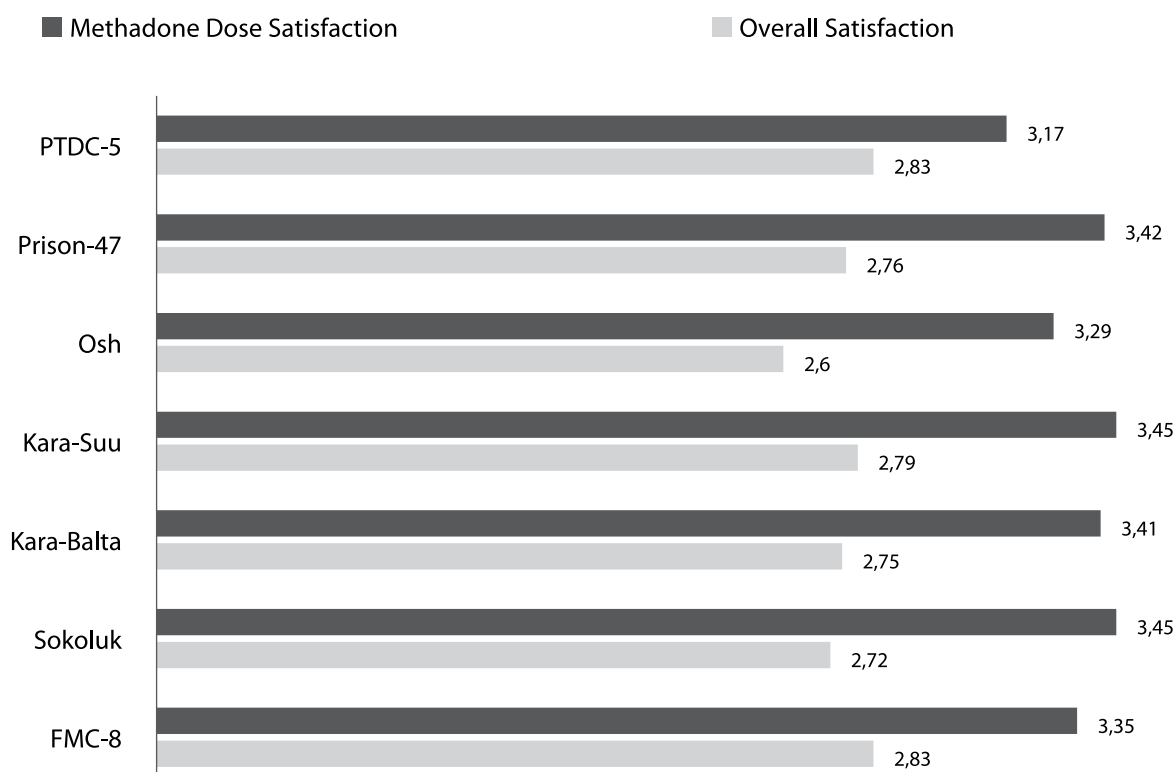
All MAT patients participating in interviews were asked to answer a self-administered Treatment Perception Questionnaire (TPQ). The TPQ consists of ten items related to patients' perceptions about the MAT staff and program design. Each item is scored on a five-point scale from 0 (strongly disagree) to 4 (strongly agree). Higher scores indicate greater satisfaction with the program. For statements that are worded negatively, a higher score indicates greater disagreement with the statement.<sup>25</sup>

The overall level of satisfaction with MAT was rated by patients as average: the highest mean score being 2.83 (SD=0.47) in FMC No 8 in Bishkek and the same mean score in PTDC-5 in Osh (SD=0.37), and the lowest was recorded at the Osh Inter-Provincial Narcology Center MAT site, where the general patient's satisfaction level comprised 2.6 (SD=0.4). In general, patients in all MAT sites rated their satisfaction with the MAT program rules as fairly low, including the need for daily visits and limited hours of operation. Patients of Sokoluk and Kara-Suu sites rated their satisfaction with the practice of informing patients about decisions made regarding his/her treatment as very low. Another case of low patient satisfaction was registered in Osh MAT site with respect to the level of staff's understanding of the patients' needs.

Results of MAT patients' treatment perception assessment are provided in Figure 1.

<sup>25</sup> Morris Z, et al. (2008). Drug misuse treatment services in Scotland: predicting outcomes. *International Journal for Quality in Health Care*; Volume 20, Number 4: pp. 271 – 276

**Figure 1.** Patients' satisfaction with MAT services  
(mean score; 0 = strong dissatisfaction; and 4 = strong satisfaction)



**Table 6.** Patients' satisfaction with the MAT program, mean (standard deviation)

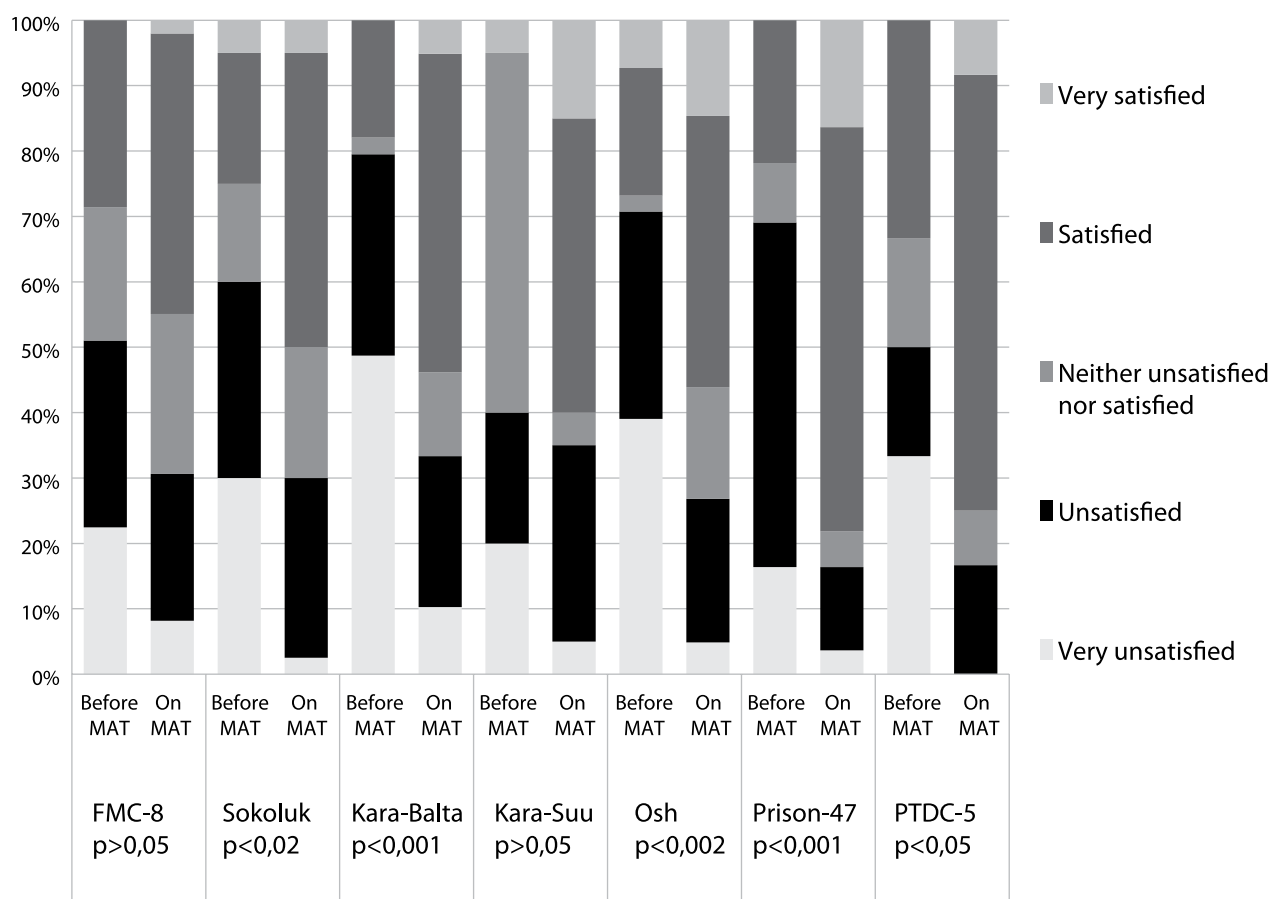
Areas evaluated	FMC-8	Sokoluk	Kara-Balta	Kara-Suu	Osh	PRI-SON-47	PTDC-5
Staff's understanding of patients' needs	2,59 (0,84)	2,53 (0,99)	2,62 (0,71)	2,40 (0,98)	2,05 (0,97)	2,15 (1,06)	2,25 (0,88)
Informing patients about decisions made regarding their treatment	3,20 (0,49)	3,18 (0,5)	2,79 (0,45)	3,25 (0,53)	2,90 (0,41)	3,22 (0,48)	3,25 (0,5)
Congruence between staff's and patient's ideas about what patient's treatment objectives should be	2,59 (0,7)	1,98 (0,83)	2,59 (0,69)	2,05 (1,06)	2,39 (0,85)	2,31 (0,84)	3,00 (0,33)
Availability of a staff member when patient wanted to talk	3,39 (0,5)	3,13 (0,44)	3,03 (0,35)	3,45 (0,5)	2,66 (0,68)	2,98 (0,58)	3,00 (0,5)
Motivation of patients by staff to sort out their problems	2,73 (0,66)	2,95 (0,39)	2,38 (0,8)	3,00 (0,3)	2,59 (0,68)	2,56 (0,78)	2,58 (1,06)
Satisfaction with treatment sessions attended	2,86 (0,41)	2,48 (0,98)	3,05 (0,34)	2,70 (0,68)	3,10 (0,44)	3,07 (0,2)	2,50 (1,0)
Sufficiency of time to sort out patient's problems	2,18 (1,07)	2,10 (1,05)	2,51 (0,78)	2,35 (0,85)	2,73 (0,89)	2,42 (0,92)	2,67 (0,72)
Performance of duties by staff	3,27 (0,45)	3,35 (0,55)	3,08 (0,38)	3,20 (0,48)	2,66 (0,6)	3,15 (0,44)	3,00 (0,33)
Concordance between patient's needs and services received	3,24 (0,49)	3,15 (0,51)	3,05 (0,29)	3,05 (0,09)	2,76 (0,49)	3,16 (0,52)	2,92 (0,47)
Satisfaction with treatment rules or regulations	2,24 (0,48)	2,33 (0,55)	2,44 (0,48)	2,45 (0,5)	2,15 (0,41)	2,62 (0,51)	3,08 (0,28)
Overall satisfaction	2,83 (0,32)	2,72 (0,35)	2,75 (0,34)	2,79 (0,34)	2,60 (0,4)	2,76 (0,34)	2,83 (0,37)
Methadone dose satisfaction	3,35 (0,93)	3,45 (1,04)	3,41 (0,86)	3,45 (1,02)	3,29 (1,06)	3,42 (0,77)	3,17 (0,46)

Patients' level of satisfaction with the dose of methadone they received was the highest compared to the overall mean of their perception of treatment, and ranged from 3.17 (SD = 0.46) in PTDC-5 to 3.45 (SD = 1.04) in Sokoluk; this was the score the patients assigned to the item concerning the adequacy of the dose of methadone they received to avoid experiencing withdrawal symptoms and craving drugs. This is an important observation as clinicians providing MAT most often rely on patients' feedback regarding the adequacy of methadone dosing as the sole measure of service quality. Patients' satisfaction with services has been identified as a strong predictor of retention in treatment and better treatment outcomes.<sup>26,27,28</sup>

MAT patients were also asked, "How satisfied with your health status were you during the last 30 days?" and, "How satisfied with your health status were you before starting MAT?", on a scale ranging from 0 (very unsatisfied) to 4 (very satisfied). A Wilcoxon Signed Ranks Test showed that there were statistically significant improvements in patients' perception of their current health status compared to the period before initiating MAT at all sites, except for FMC No 8 and Kara-Suu MAT site (Figure 2).

Our observation of the relatively low level of perception of MAT by patients, and the significant increase in their health satisfaction after enrollment in MAT, suggests that many did like methadone, but did not like how the service was delivered.

**Figure 2.** Level of satisfaction with own health status during the past 30 days among MAT patients, before and after enrollment in MAT, by site



<sup>26</sup> Sanders L, Trinh C, Sherman B et al. (1998). Assessment of client satisfaction in a peer counseling substance abuse treatment program for pregnant and postpartum women. *Evaluation and Program Planning*; 21: 287–96.

<sup>27</sup> Morris Z, McKeganey N. (2007). Client perceptions of drug treatment services in Scotland. *Drugs: Education, Prevention & Policy*; 14: 49 – 60.

<sup>28</sup> Marsden J., et al. (2000). Assessing client satisfaction with treatment for substance use problems and the development of the Treatment Perceptions Questionnaire (TPQ). *Addictions research*; 8:455 – 70.

## 6.4. Evaluation of patient behaviors (sexual, injection and criminal)

### 6.4.1. Proportion of patients on MAT with at least one sexual and drug related risk assessment completed during the last month

According to the chart review, sexual and drug related risk assessments were not conducted in any of the sites.

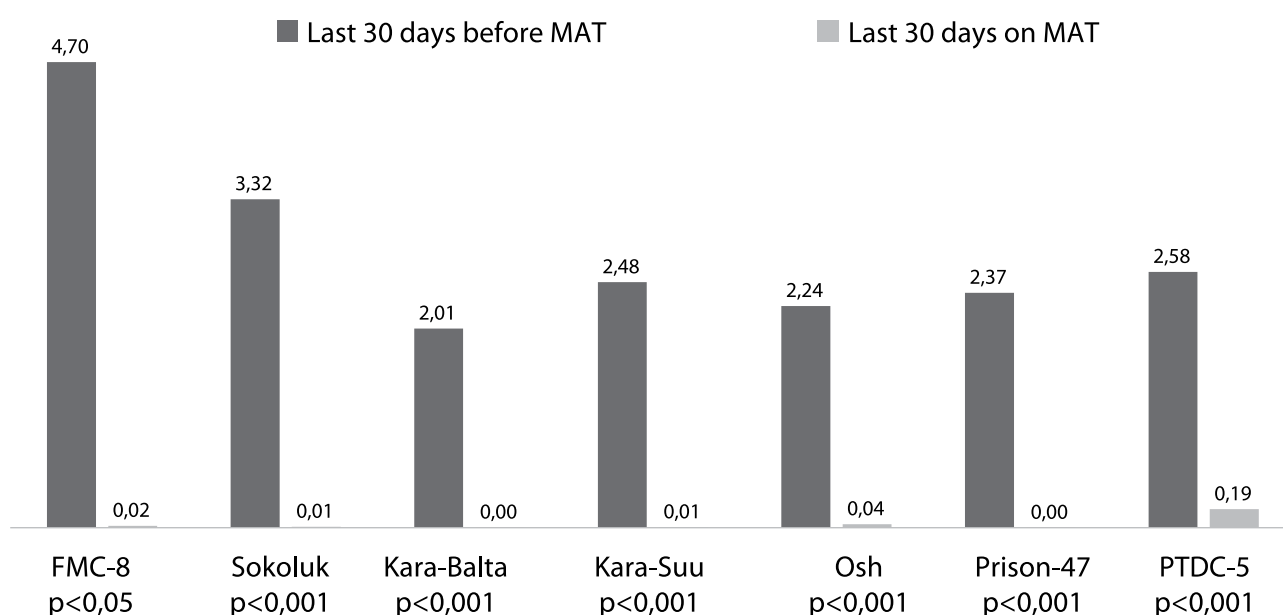
### 6.4.2. Drug use

The Opioid Treatment Index (OTI) was used to assess the frequency of psychotropic drug use for non-medical purposes during the last 30 days before enrollment in MAT and the last 30 days prior to their interview. The OTI was administered according to the OTI Manual: "...For each drug class, the subject was asked about the timeframe for their three most recent days of drug use, and how much they used on the last two occasions. The intervals between days of drug use were taken as an estimate of frequency of use, and the number of use episodes on the last two occasions was taken as an estimate of quantity consumed".<sup>29</sup> Table 7 below shows how the results were interpreted for the frequency scores.

**Table 7.** OTI drug use scores interpretation table

Frequency/Quantity	Score
Abstinence	0.00
Once a week or less	0.01-0.13
More than once a week	0.14-0.99
Daily	1.00-1.99
More than once a day	2.00 or more

**Figure 3.** Use of heroin in patients before and after enrollment into MAT program



<sup>29</sup> Darke S., Ward J., Hall W., Heather N. and Wodak A. (1991) The Opiate Treatment Index (OTI) researchers' manual. NDARC Technical Report 11, National Drug and Alcohol Research Centre, University of New South Wales.

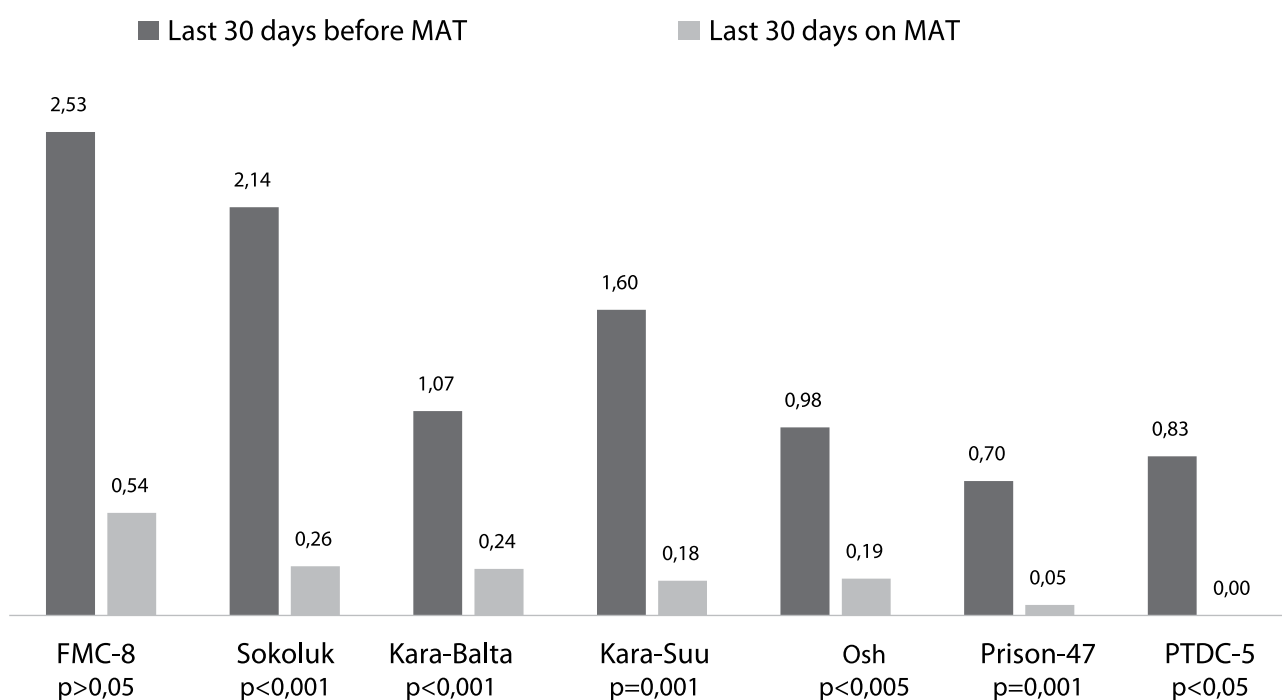


**Heroin.** The assessment identified a significant difference in frequency of heroin use by patients during the last 30 days prior to starting MAT and during the last 30 days on MAT across all MAT sites. Thus, the frequency of heroin use in patients of Bishkek FMC No 8 decreased: prior to MAT, the patients used heroin more than once a day ( $M=4.70$ ,  $SD=16.27$ ), and during the last 30 days on MAT, they used heroin once a week or less ( $M=0.02$ ,  $SD=0.07$ ;  $t(49)=2.032$ ,  $p<0.05$ ); in Kara-Balta, the frequency of heroin use decreased from more than once a day ( $M=2.01$ ,  $SD=1.26$ ) to complete abstinence ( $M=0.00$ ,  $SD=0.01$ ;  $t(38)=9.88$ ,  $p<0.001$ ). Figure 3 demonstrates mean differences in heroin use for all seven MAT sites.

**Diphenhydramine** (marketed and widely known in the country under the trade name *Dimedrol*). One of the features of heroin use in the Kyrgyz Republic is the concurrent use of an antihistamine medication named Diphenhydramine. Diphenhydramine tablets are crushed and the resulting powder is diluted in a solution of heroin, or in water for intravenous administration. Often the intravenous administration of diphenhydramine continues even after the start of MAT, presenting a significant risk of HIV and HCV transmission among MAT patients. However, statistically significant reductions in the use of diphenhydramine by patients on MAT were observed across all MAT sites, except FMC #8. The reduction in use of diphenhydramine after enrollment in MAT in Sokoluk was statistically significant: from 2.14 ( $SD = 2.11$ ) during the last 30 days prior to starting MAT to 0.26 ( $SD = 1.58$ ) during the last 30 days on MAT;  $t(39) = 4.67$ ,  $p < 0.001$ ). The average frequency of diphenhydramine use by patients in Bishkek FMC #8 has also decreased, however this reduction was not statistically significant. Figure 4 below demonstrates the average changes in diphenhydramine use.

The approach which is practiced in Prison #47 to reduce diphenhydramine use by MAT patients deserves special attention. In this facility, MAT project staff purposefully worked with informal prison leaders and patients themselves to promote rejection of diphenhydramine abuse while participating in the MAT project. As a result, according to project staff, there was a significant reduction in diphenhydramine use among patients, which was confirmed by analysis of the program participants' interviews in the facility.

**Figure 4.** Diphenhydramine use among patients prior to and after enrollment into MAT, by sites



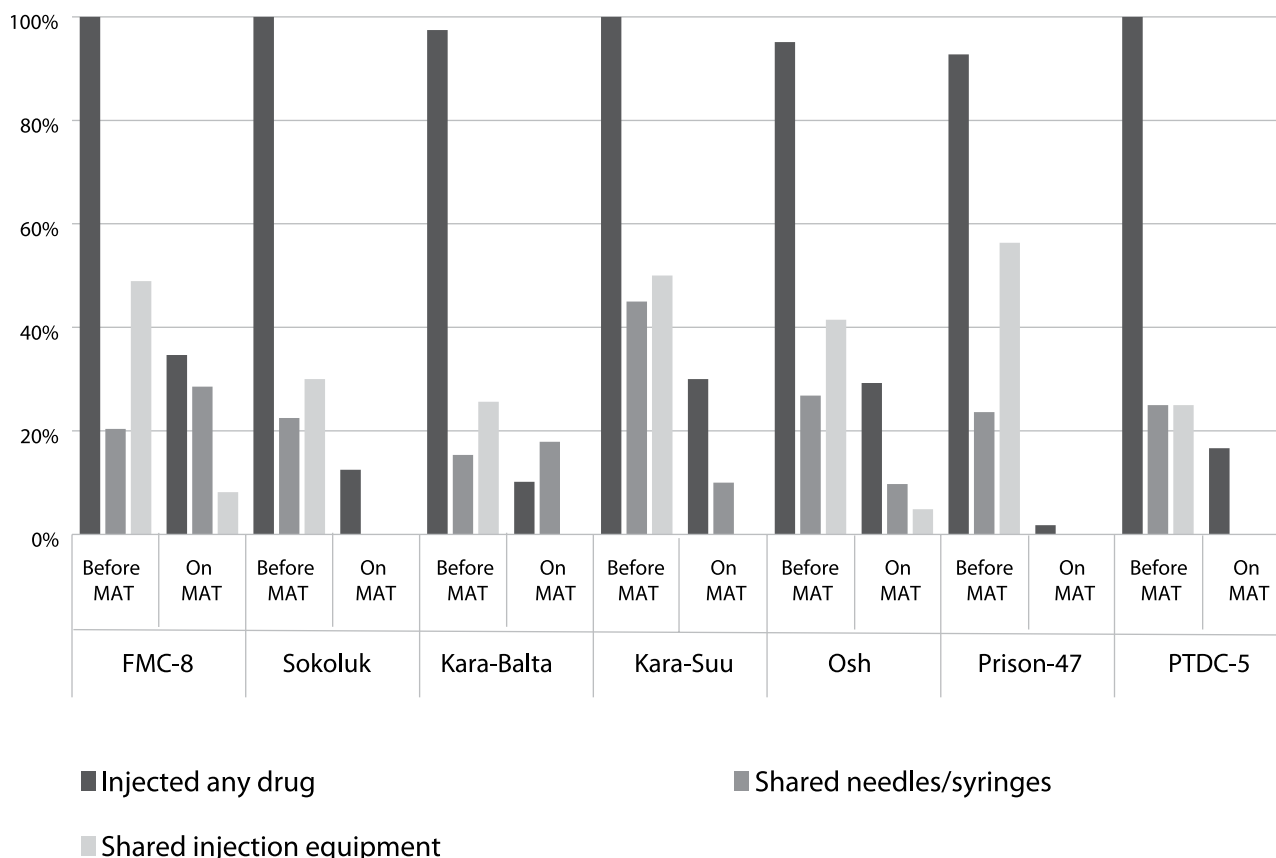
**Other substances.** There were no patients that used cocaine, barbiturates or inhalants in the last 30 days prior to initiating MAT and during the last 30 days on MAT. Paired sample tests did not identify any statistically significant differences in the frequency of use of other substances, such as alcohol, cannabis, amphetamines and tranquilizers with the following exceptions: The mean frequency score of cannabis use dropped in FMC No 8 and PRISON#47: from (M=0.33, SD=0.95) prior to MAT to (M=0.05, SD=0.17) during the last 30 days on MAT,  $t(48)=2.01$ ,  $p<0.05$ ; and from (M=1.07, SD=2.93) prior to MAT to during the last 30 days on MAT (M=0.07, SD=0.28), during the last 30 days on MAT,  $t(54)=2.536$ ,  $p<0.02$ ) accordingly.

The details of the paired sample test results for all drugs covered during interviews are shown in Attachment II at the end of the report.

### 6.4.3. HIV Risk Behavior

Drug injection related behavior. The assessment results showed that participation in MAT for at least 3 months resulted in a statistically significant reduction in HIV risk related to drug-taking behavior: Compared to the last 30 days before enrolling in MAT, the percentage of patients who reported injecting any drug during the last 30 days was significantly reduced at all MAT sites ( $p<0.005$ ). However, reductions in sharing syringes and needles were only seen in patients of Sokoluk FMC MAT site and Prison#47 (from 23.63% during the last 30 days before enrolling in MAT to 0% during the last thirty days on MAT, and from 22.5% to 0%, respectively ( $p<0,005$  for both)). The proportion of persons who shared any injection equipment (cooker, filter, swabs, etc.) decreased across all MAT sites, except PTDC-5, as there this parameter was low at baseline and differences were not statistically significant (see Figure 5 and Table 8).

**Figure 5.** Drug injection behavior before and after enrollment in MAT, by sites



**Table 8.** Drug injection behavior before and after enrollment in MAT, by sites

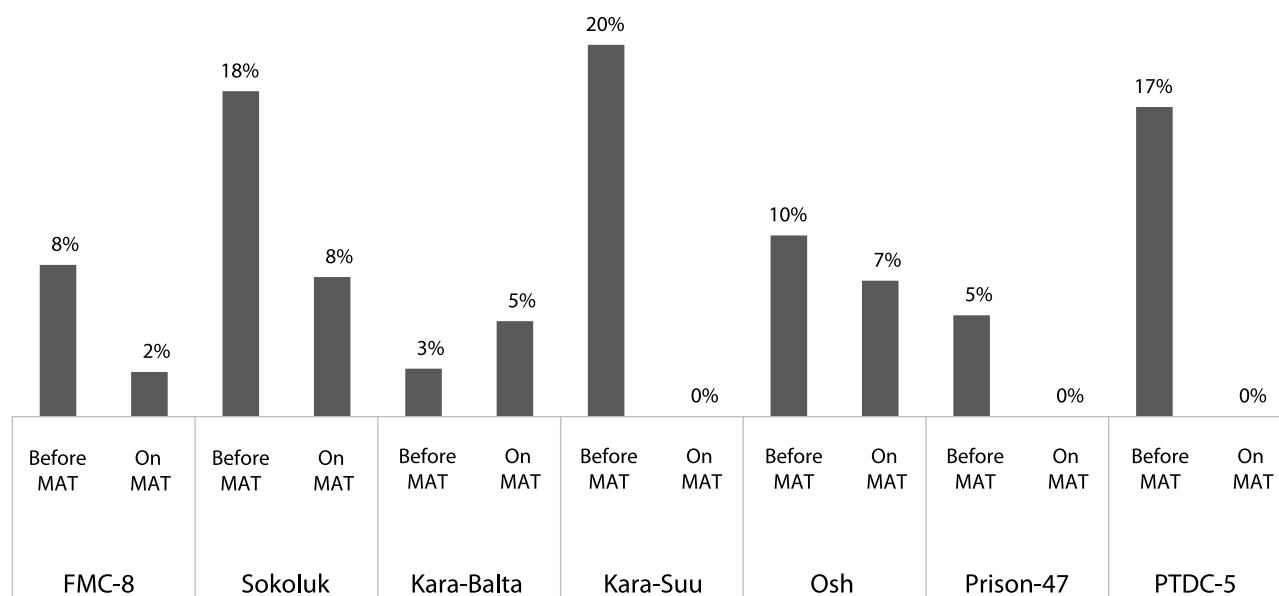
	Injected any drug		Shared needles\ syringes		Shared IDU equipment		Had any sex		Had unprotected sex with non-permanent partner	
	On MAT	Prior to MAT	On MAT	Prior to MAT	On MAT	Prior to MAT	On MAT	Prior to MAT	On MAT	Prior to MAT
FMC No 8	34,69	100	28,57	20,4	8,16	48,97	71,42	69,38	2,4	8,16
	p<0,001		p>0,05		p<0,001		p>0,05		p>0,05	
Sokoluk	12,5	100	0	22,5	0	30	35	77,5	7,5	17,5
	p<0,001		p<0,005		p<0,001		p<0,001		p>0,05	
Kara-Balta	10,2	97,43	17,9	15,38	0	25,64	48,71	58,97	5,12	2,56
	p<0,001		p=1,000		p<0,005		p>0,05		p>0,05	
Kara-Suu	30	100	10	45	0	50	65	95	0	20
	p<0,001		p>0,05		p<0,005		p>0,05		p>0,05	
Osh	29,26	95,12	9,75	26,82	4,87	41,46	56,09	53,65	7,31	9,75
	p<0,001		p>0,05		p<0,001		p>0,05		p>0,05	
PRISON-47	1,81	92,72	0	23,63	0	56,36	3,63	43,63	0	5,45
	p<0,001		p<0,001		p<0,001		p<0,001		p>0,05	
PTDC-5	16,66	100	0	25	0	25	8,33	58,33	0	16,66
	p<0,003		p>0,05		p>0,05		p<0,05		p>0,05	

*\* grey highlights statistically significant results*

**Sexual behavior.** The rate of unprotected sexual contacts with non-permanent partners among MAT patients who had any sexual contact was low at baseline, and differences in this rate prior to and after enrollment in MAT were not found to be statistically significant (see Figure 6 and Table 8).

**Figure 6.** Sexual behavior before and after enrollment in MAT, by sites

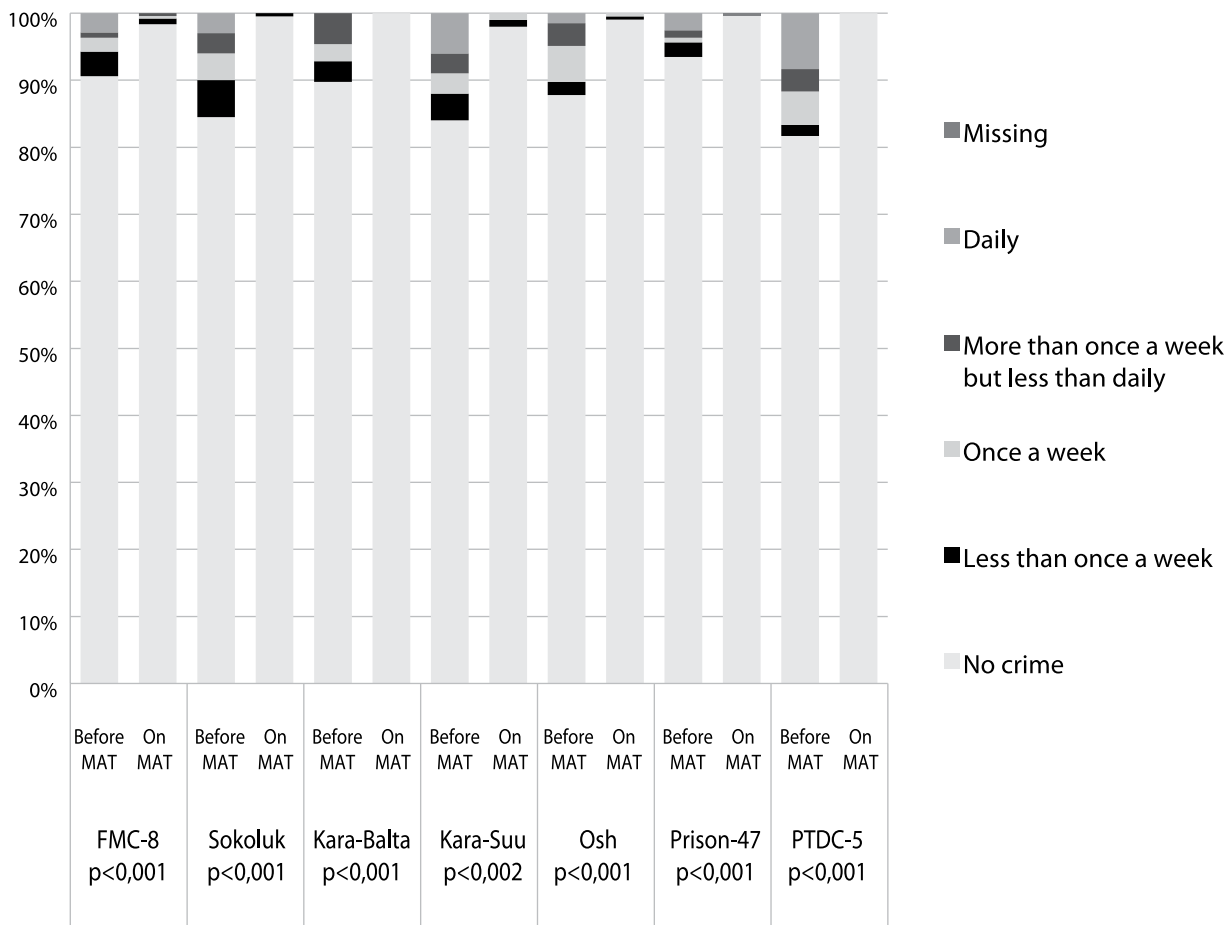
■ Had unprotected sex with non-permanent partner



### 6.4.4. Criminal Behavior.

Statistically significant reductions in engagement in criminal activities were reported by patients of all MAT sites who participated in MAT for three months or longer compared to the last 30 days prior to initiating MAT. As such, MAT patients of Bishkek FMC # 8 reported that 9.39% of them had committed any sort of crime (fraud; drug dealing; sex work; violence; and property crime) before starting MAT compared to 1.64% after starting MAT ( $z=-4,173, p<0,001$ ). Similar numbers were reported at all other MAT sites. In addition, the data suggests reductions in the frequency of all types of criminal activities among patients compared to the period before MAT (See Figure 7).

**Figure 7.** Criminal behavior before and after enrollment in MAT



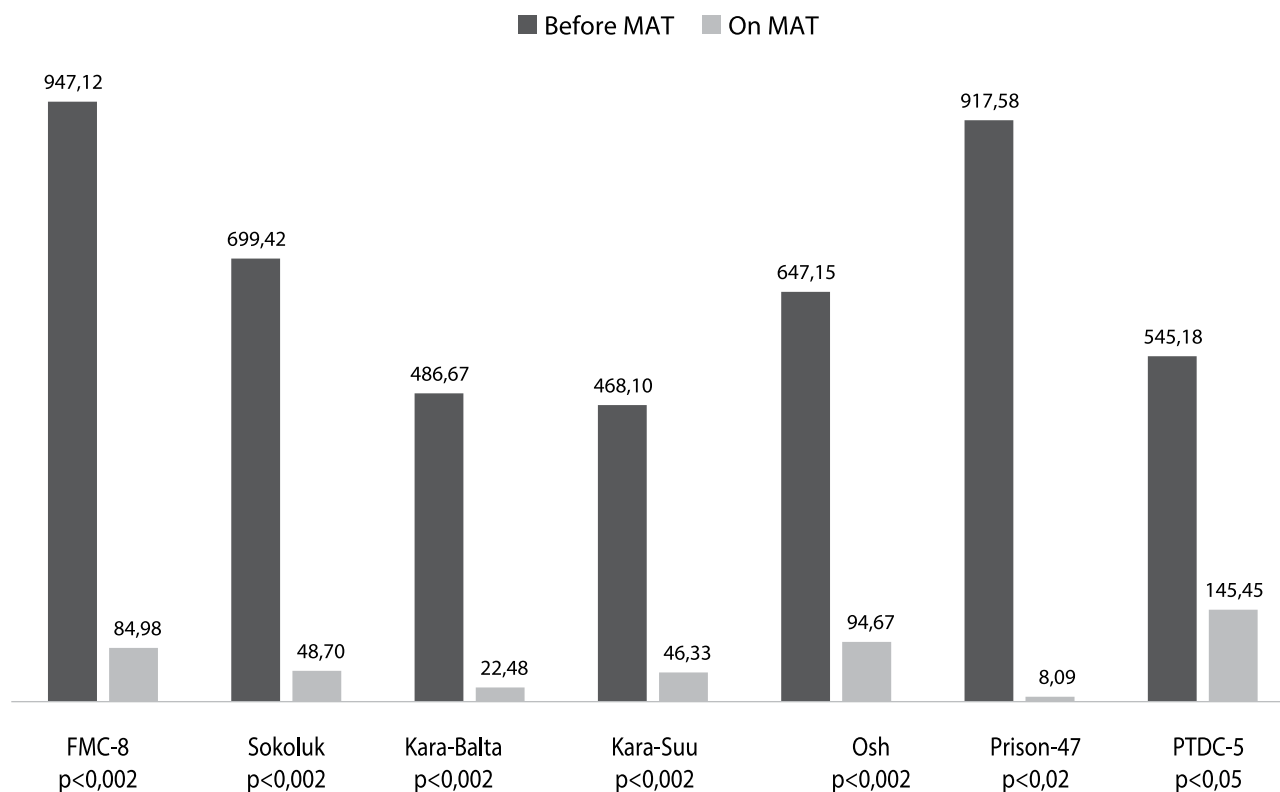
## 6.5. Drug Use Related Expenses

Patients were asked about their expenses for the use of non-prescribed psychoactive substances listed in the OTI questionnaire that incurred on each of the last three days of use during MAT and just before starting MAT. Assessment results demonstrate that patients' expenses for non-prescribed substances at each day of use prior to MAT, on average, were significantly greater than during MAT across all seven MAT sites. For example, at PRISON-47 ( $M=917.58$  soms<sup>30</sup>,  $SD=1877.51$  and  $M=8.09$  soms,  $SD=18.19$ );  $t(54)=3.598, p<0.02$ ); and in Kara-Suu ( $M=488.1$  soms,  $SD=340.5$  and  $M=46.33$  soms,  $SD=73.56$ );  $t(19)=5.416, p<0.002$ ). Considering that heroin was the drug of choice for all patients across all seven sites before joining MAT, and the frequency of drug use reported by

<sup>30</sup> 1 USD = 46,77 som – official exchange rate for April 16, 2012 <http://www.nbkr.kg>

participants (see section on Drug use above), IDUs' average monthly expenses for non-prescribed substances could range from 19,059 to 32,669 soms in Bishkek (FMC No 8); and from 6,728 to 21,123 soms in Kara-Balta (Figure 8).

**Figure 8.** Mean expenditures for non-prescribed psychoactive substances by MAT patients on each day of use before and after enrollment in MAT



## 7. Limitations

It should be noted that the assessment team did not have any specialists with a background in law, and thus the review of the legislative framework related to the provision of MAT in the Kyrgyz Republic should not be interpreted as exhaustive and free from bias. However, this report's key findings related to the legislative framework do correspond with the conclusions made by an earlier legal review conducted by experts in laws related to drug control and public health led by UNODC.<sup>31</sup>

Data collected on patients' criminal, drug use, and HIV risk behavior were based on self-report, however we have exercised every effort to obtain accurate information while ensuring anonymity of respondents interviewed. Also, evidence from studies of outcomes of methadone maintenance therapy in other countries, including China<sup>32</sup>, Iran<sup>33</sup>, Kazakhstan<sup>34</sup> and Malaysia<sup>35</sup> support the findings of our assessment.

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<sup>31</sup> UNODC. (2010). Accessibility of HIV prevention, treatment and care services for people who use drugs and incarcerated people in Azerbaijan, Kazakhstan, Kyrgyzstan, Tajikistan, Turkmenistan and Uzbekistan: Legislative and Policy analysis and recommendations for reform. Ashkhabad.

<sup>32</sup> Yin W. et al. (2010) Scaling up the national methadone maintenance treatment program in China: achievements and challenges. *International Journal of Epidemiology*; 39, Supplement 2:ii29-37.

<sup>33</sup> Noori R, et al. (2012). Methadone maintenance therapy outcomes in Iran. *Substance Use Misuse*; 47(7):767-73. Epub 2012 Mar 15.

<sup>34</sup> Boltaev A., Deryabina A., Howard A. Assessment of the medication assisted therapy program in Kazakhstan. ICAP/Columbia University, Almaty, 2012

<sup>35</sup> Noordin NM, et al. (2008). Substitution treatment in Malaysia. *Lancet*; 372(9644):1149-50.

## 8. Conclusions

The assessment team identified the following strengths of the MAT project in Kyrgyzstan:

1. The GFATM-funded MAT project in the Kyrgyz Republic has clearly demonstrated the prescription of methadone is an effective method for treatment opioid dependence. With MAT, in the absolute majority of patients the frequency of heroin use was reduced from more than once a day to once a week and less, or even to total abstinence. Statistically significant reductions in risky drug injection behavior as well as criminal behavior were observed at all MAT sites. Patients at all MAT sites also reported an improvement in the perception of their health status, and in six of the seven MAT sites these differences after starting MAT were highly statistically significant. Retention rates achieved at the Kyrgyz Republic's MAT sites (29-42% for twelve months) are consistent with those observed in other countries. For example, three large studies in the USA reported twelve month retention on methadone maintenance therapy ranging from 25% to 60%.<sup>36,37,38</sup> However there is potential for improving patients' retention through increasing the network of MAT sites, prescription of adequate doses of methadone and provision of ancillary services for patients.
2. Legislation of the Kyrgyz Republic is favorable for the introduction of MAT as a standard of care for treatment of opioid dependence. Methadone and buprenorphine are scheduled as narcotic substances allowed for medical use under strict control, and both medications are included in the list of essential medicines. Over the last decade, the country has been implementing its Counter-Drug Policy based on the use of scientifically grounded methods of working with drug-dependent people, and MAT is recognized as an important tool in the implementation of this policy.
3. Enrollment in MAT is associated with significant reductions in patients' spending on non-prescribed psychoactive substances. In the absence of MAT, drug-related expenses may be as high as 32,669 soms per month per patient. Taking into account the estimated number of PWID in the country (25,000 as of 2006), annual expenditures of PWID residing in the Kyrgyz Republic can be calculated to amount as high as 9,809,787,000 soms or 210 million U.S. dollars, causing additional social harms through drug-related crimes.
4. Methadone used for MAT in the Kyrgyz Republic is purchased at a very low cost: the price of the average daily dose (100 mg) of methadone per patient in 2012 was only U.S. \$ 0.28. The low purchase price is maintained through the sustainable procurement of medication from the manufacturer, and the purchase of methadone in powder form which is then transformed into 0.1% ready for use solution by licensed Kyrgyz pharmacies.
5. The Kyrgyz Republic has successfully operating NGOs that promote the social reintegration of MAT patients. One of the leading organizations in this field is the "Narcology Alternative" NGO, organized by the MAT patients themselves, which offers peer support groups for patients and provides a wide range of social and psychological support to MAT patients and their families.

At the same time, there are certain weaknesses that obstruct effective implementation of MAT in the Kyrgyz Republic:

6. Drug users have access to MAT in only three out of seven provinces, two pretrial detention

<sup>36</sup> Sells SB, Simpson DD (eds.). (1976). *The Effectiveness of Drug Abuse Treatment*. Cambridge, MA: Ballinger, 1976.

<sup>37</sup> Hubbard RL, Marsden ME, Rachal JV, Harwood HJ, Cavanaugh ER, Ginzburg HM. (1989). *Drug Abuse Treatment: A National Study of Effectiveness*. Chapel Hill: University of North Carolina Press.

<sup>38</sup> Ball JC, Ross A. (1991). *The Effectiveness of Methadone Maintenance Treatment: Patients, Programs, Services, and Outcomes*. New York: Springer-Verlag.

centers, and one out of thirty-seven penitentiary institutions in the Kyrgyz Republic, which translates into a coverage rate of less than 5% of the estimated number of PWID. Limited access and coverage of the MAT program seriously limits its potential benefit and impact if it were to be provided on a wider scale.

7. The MAT sites outside of the capital experience a great lack of technical guidance. MAT site narcologists require training in psychosocial counseling and motivating patients to improve adherence to therapy. The training of nurses is paid insufficient attention – in a number of MAT sites, the nurses did not undergo any formal MAT training.
8. The current system of monitoring and evaluation of MAT in the Kyrgyz Republic has a number of deficiencies, including those related to the collection and analysis of data from the MAT sites, and fails to enable proper evaluation of the quality of the services provided, patients' satisfaction with the program, and the actual effect of the MAT on their behavior (sexual, drug use, and criminal). There is no system of electronic documents exchange between the RNC and MAT sites, thus forcing paper-based handwritten record-keeping and reporting. Interruptions in the supply of toxicology tests have affected the ability to monitor therapy success.
9. Despite a decade of experience in MAT, the country periodically witnesses spikes of politicized debate around the appropriateness of MAT as a form of narcology treatment. MAT opponents' arguments are influenced by incorrect information about opioid agonist therapy, including its clinical and pharmacological features. Apart from that, there are still some myths about methadone among active PWID and the general public, which reduces their motivation to seek such therapy.
10. The existing infrastructure of organizations supporting the MAT projects and their material circumstances (e.g. lack of dispensers and basic computers) hinder the quality of MAT services provided and warrant improvement. MAT sites are usually open from 8:00 am to 1:00 pm, and such a schedule gives no regard to the individual needs of patients who have to visit the narcology dispensaries daily, while fulfilling their social responsibilities, including work and family commitments.
11. Despite a significant reduction in injecting non-prescribed substances in comparison with the period before MAT, some patients continue injecting PAS, mostly Diphenhydramine. Administration of Diphenhydramine by MAT patients often occurs in groups and involves needles and syringes sharing, that may cause transmission of blood borne infections and abscesses at the injection site.
12. Collaboration with other healthcare and social services that also target PWUD is poor. Lack of cooperation has been observed in a number of cases, including with needle exchange programs, which sometimes work next door to the MAT sites. MAT patients who continue injecting substances receive no training in safe injection techniques and are not provided access to sterile needles and syringes. Awareness of MAT project narcologists about HIV infection in general and ART in particular is rather poor, and thus their ability to monitor the effectiveness of HIV care and treatment in their HIV-positive patients is limited.
13. There is no system of support in social adaptation and employment available for MAT patients. In a number of MAT sites patients reported that they have nothing to do and nowhere to go after taking their dose of methadone and such situation offers a valuable but unutilized opportunity to conduct psychosocial interventions among them.
14. Violation of MAT patients' rights by law enforcement services in a form of groundless seizures and detentions undermines the effectiveness of the MAT program and is viewed as one of the most significant obstacles in accessing the service.



## 9. Recommendations

1. Further expand the MAT program, improving accessibility of the therapy in remote areas of the country, where there is a need for such therapy. Special attention should be paid to the provision of MAT in penitentiary institutions.
2. Improve the provision of technical guidance to the MAT sites through selection, training, and involvement of specialists in addiction psychiatry and narcology from medical institutions to serve as technical advisors.
3. Continue improvements to the infrastructure of narcology centers, ensuring the provision of a full range of services in a confidential environment. In order to further improve the quality of dispensing daily doses of medication and to prevent the diversion of methadone for illegal purposes, MAT sites should be equipped with automated electronic dispensers.
4. Improve monitoring and evaluation procedures for MAT, ensuring the collection and analysis of data related not only to program implementation, but also to patient outcomes (such as changes in behavior and health). At the same time, it is important to ensure standardization and simplification of data collection and reporting forms from various sites; increase data quality; and reduce of paperwork through the introduction of health management information systems (HMIS).
5. Increase participation of non-governmental organizations and MAT patients in activities aiming to explain MAT to PWID and their families. The expertise and experience of NGOs should also be used in the provision of psychosocial support to MAT patients and their families.
6. Enhance interactions between MAT sites, HIV and tuberculosis treatment programs, and harm reduction programs. It is essential to find ways of providing comprehensive care for patients with HIV and tuberculosis on based on a “one stop shop’ approach.
7. Develop a mechanism to ensure that MAT patients receive free examinations for viral hepatitis in accordance with Ministry of Health guidelines.
8. Scale-up advocacy activities aimed at establishing and maintaining supportive attitudes towards MAT in general and MAT patients specifically among key stakeholders, particularly law enforcement representatives, on national and local levels.

# 10. Attachments

## ATTACHMENT I

### Definitions and Sampling frame for patient level indicators

Indicator	Sampling Frame	Numerator
		Denominator
Proportion of patients on MAT with at least one complete clinical review in the last quarter**	All MAT patients enrolled in MAT $\geq 3$ months prior to review	# of patients on MAT with at least one complete clinical review in the last quarter
		# of patients that started taking MAT $\geq 3$ months prior to review
Proportion of MAT patients screened for HCV antibody (anti-HCV) and HBV Surface antigen (HBsAg)	All MAT patients enrolled in MAT $\geq 3$ months prior to review	# of patients screened for anti-HCV and HBsAg
		# of patients that started taking MAT $\geq 3$ months prior to review
Proportion of patients on MAT with at least one psychosocial counseling session during the last 1 month	All MAT patients currently receiving MAT	# of patients on MAT with at least one psychosocial counseling session during the last 1 month
		# of patients that currently receive MAT
Proportion of patients who remain free from non-prescribed opioids at 6 months after initiation of MAT.	All MAT patients enrolled in MAT $\geq 6$ months prior to review	# of patients whose last urine toxicology test was negative
		# of patients that started taking MAT $\geq 6$ months prior to review and have a urine toxicology test result available
Proportion of patients on MAT remaining in care at 6 months after initiation of MAT.	All MAT patients enrolled in MAT $\geq 6$ months prior to review	# of patients continuing MAT without interruptions at 6 months after initiation of MAT.
		# of patients that started taking MAT $\geq 6$ months prior to review
Proportion of patients on MAT remaining in care at 12 months after initiation of MAT.	All MAT patients enrolled in MAT $\geq 12$ months prior to review	# of patients continuing MAT without interruptions at 12 months after initiation of MAT.
		# of patients that started taking MAT $\geq 12$ months prior to review

Proportion of patients who remain free from non-prescribed opioids at 12 months after initiation of MAT.	All MAT patients enrolled in MAT $\geq$ 12 months prior to review	# of patients whose urine remains free from non-prescribed opioids at 12 months after initiation of MAT.
		# of patients that started taking MAT $\geq$ 12 months prior to review and have a urine toxicology test result available
Proportion of patients on MAT with at least one sexual and drug related risk assessment completed during the last one month*	All MAT patients currently receiving MAT	# of patients on MAT with at least one sexual and drug related risk assessment completed during the last one month
		# of patients that currently receive MAT
The average daily dosage of methadone received by patients enrolled in MAT 3 months or longer	All MAT patients enrolled in MAT $\geq$ 3 months prior to review	Total daily dosage of methadone received by stabilized patients $\geq$ 3 months prior to review
		# of patients enrolled in MAT $\geq$ 3 months prior to review
* Sexual and drug related risk assessment includes at a minimum one documented evaluation of patient's sexual and drug use practices using standardized set of questions for interview or self-evaluation.		
**Complete clinical review includes at a minimum one documented assessment and counseling by a doctor in charge; social worker in charge and urine toxicology test conducted during the report period.		

## Attachment II

## Paired sample test results for non-prescribed drug use

<b>Bishkek FMC-8</b>		<b>Mean</b>	<b>Std. Deviation</b>	<b>T</b>	<b>Df</b>	<b>Sig. (2-tailed)</b>
Pair 1	PRE Heroin subtotal	4,68	16,28	2,03	49	0,05
	POST Heroin subtotal	0,02	0,08			
Pair 2	PRE Opiates subtotal	0,00	0,01	-0,93	48	0,36
	POST Opiates subtotal	0,02	0,14			
Pair 3	PRE Alcohol subtotal	0,35	1,08	0,52	48	0,61
	POST Alcohol subtotal	0,26	0,63			
Pair 4	PRE Cannabis subtotal	0,33	0,96	2,10	48	0,04
	POST Cannabis subtotal	0,05	0,17			
Pair 5	PRE Amphet subtotal	,00 <sup>a</sup>	0,00			
	POST Amphet subtotal	,00 <sup>a</sup>	0,00			
Pair 6	PRE Cocaine subtotal	,00 <sup>a</sup>	0,00			
	POST Cocaine subtotal	,00 <sup>a</sup>	0,00			
Pair 7	PRE Tranquil subtotal	0,02	0,04	-0,86	48	0,39
	POST Tranquil subtotal	0,10	0,71			
Pair 8	PRE Hallucin subtotal	,00 <sup>a</sup>	0,00			
	POST Hallucin subtotal	,00 <sup>a</sup>	0,00			
Pair 9	PRE Barbitur subtotal	,00 <sup>a</sup>	0,00			
	POST Barbitur subtotal	,00 <sup>a</sup>	0,00			
Pair 10	PRE Dimedrol subtotal	2,53	8,95	1,98	49	0,05
	POST Dimedrol subtotal	0,54	1,95			
<b>Sokoluk</b>		<b>Mean</b>	<b>Std. Deviation</b>	<b>T</b>	<b>Df</b>	<b>Sig. (2-tailed)</b>
Pair 1	PRE Heroin subtotal	3,32	1,66	12,65	39	0,00
	POST Heroin subtotal	0,01	0,04			
Pair 2	PRE Opiates subtotal	0,15	0,95	1,01	39	0,32
	POST Opiates subtotal	0,00	0,00			
Pair 3	PRE Alcohol subtotal	0,82	2,81	1,28	39	0,21
	POST Alcohol subtotal	0,31	0,71			
Pair 4	PRE Cannabis subtotal	0,28	0,67	1,81	39	0,08
	POST Cannabis subtotal	0,11	0,44			
Pair 5	PRE Amphet subtotal	,00 <sup>a</sup>	0,00			
	POST Amphet subtotal	,00 <sup>a</sup>	0,00			
Pair 6	PRE Cocaine subtotal	,00 <sup>a</sup>	0,00			
	POST Cocaine subtotal	,00 <sup>a</sup>	0,00			
Pair 7	PRE Tranquil subtotal	0,23	1,00	1,37	39	0,18
	POST Tranquil subtotal	0,01	0,05			
Pair 8	PRE Hallucin subtotal	,00 <sup>a</sup>	0,00			
	POST Hallucin subtotal	,00 <sup>a</sup>	0,00			

Pair 9	PRE Barbitur subtotal	,00 <sup>a</sup>	0,00			
	POST Barbitur subtotal	,00 <sup>a</sup>	0,00			
Pair 10	PRE Dimedrol subtotal	2,14	2,11	4,67	39	0,00
	POST Dimedrol subtotal	0,26	0,25			
<b>Kara-Balta</b>						
		<b>Mean</b>	<b>Std. Deviation</b>	<b>T</b>	<b>Df</b>	<b>Sig. (2-tailed)</b>
Pair 1	PRE Heroin subtotal	2,01	1,27	9,879	38	0,000
	POST Heroin subtotal	0,00	0,01			
Pair 2	PRE Opiates subtotal	0,03	0,16	1,006	39	0,321
	POST Opiates subtotal	0,00	0,00			
Pair 3	PRE Alcohol subtotal	0,25	0,80	-0,040	38	0,968
	POST Alcohol subtotal	0,26	0,84			
Pair 4	PRE Cannabis subtotal	0,04	0,16	1,351	38	0,185
	POST Cannabis subtotal	0,00	0,00			
Pair 5	PRE Tranquil subtotal	0,10	0,45	1,419	38	0,164
	POST Tranquil subtotal	0,00	0,01			
Pair 6	PRE Barbitur subtotal	,00 <sup>a</sup>	0,00			
	POST Barbitur subtotal	,00 <sup>a</sup>	0,00			
Pair 7	PRE Dimedrol subtotal	1,07	1,40	3,910	38	0,000
	POST Dimedrol subtotal	0,24	0,38			
<b>Karasuu</b>						
		<b>Mean</b>	<b>Std. Deviation</b>	<b>T</b>	<b>Df</b>	<b>Sig. (2-tailed)</b>
Pair 1	PRE Heroin subtotal	2,48	1,39	7,938	19	0,000
	POST Heroin subtotal	0,01	0,01			
Pair 2	PRE Opiates subtotal	0,00	0,01	1,000	19	0,330
	POST Opiates subtotal	0,00	0,00			
Pair 3	PRE Alcohol subtotal	0,50	1,26	0,048	19	0,962
	POST Alcohol subtotal	0,49	1,74			
Pair 4	PRE Cannabis subtotal	0,22	0,68	1,313	19	0,205
	POST Cannabis subtotal	0,02	0,06			
Pair 5	PRE Tranquil subtotal	,00 <sup>a</sup>	0,00			
	POST Tranquil subtotal	,00 <sup>a</sup>	0,00			
Pair 6	PRE Dimedrol subtotal	1,60	1,75	3,757	19	0,001
	POST Dimedrol subtotal	0,18	0,46			
Pair 7	PRE Barbitur subtotal	,00 <sup>a</sup>	0,00			
	POST Barbitur subtotal	,00 <sup>a</sup>	0,00			
<b>Osh</b>						
		<b>Mean</b>	<b>Std. Deviation</b>	<b>T</b>	<b>Df</b>	<b>Sig. (2-tailed)</b>
Pair 1	PRE Heroin subtotal	2,24	1,18	11,683	40	0,000
	POST Heroin subtotal	0,04	0,16			
Pair 2	PRE Opiates subtotal	0,01	0,06	1,369	40	0,179
	POST Opiates subtotal	0,00	0,00			

Pair 3	PRE Alcohol subtotal	1,12	2,84	1,471	40	0,149
	POST Alcohol subtotal	0,40	1,17			
Pair 4	PRE Cannabis subtotal	0,21	0,67	1,875	40	0,068
	POST Cannabis subtotal	0,05	0,20			
Pair 5	PRE Tranquil subtotal	0,13	0,72	0,384	40	0,703
	POST Tranquil subtotal	0,09	0,42			
Pair 6	PRE Dimedrol subtotal	0,98	1,49	3,294	40	0,002
	POST Dimedrol subtotal	0,19	0,67			
Pair 7	PRE Barbitur subtotal	0,00	0,00	-1,000	40	0,323
	POST Barbitur subtotal	0,01	0,04			
<b>Prison-47</b>						
		<b>Mean</b>	<b>Std. Deviation</b>	<b>T</b>	<b>Df</b>	<b>Sig. (2-tailed)</b>
Pair 1	PRE Heroin subtotal	2,37	2,08	8,460	54	0,000
	POST Heroin subtotal	0,00	0,00			
Pair 2	PRE Opiates subtotal	0,04	0,19	1,535	54	0,131
	POST Opiates subtotal	0,00	0,01			
Pair 3	PRE Alcohol subtotal	0,73	3,06	1,763	54	0,084
	POST Alcohol subtotal	0,00	0,00			
Pair 4	PRE Cannabis subtotal	1,07	2,94	2,536	54	0,014
	POST Cannabis subtotal	0,07	0,28			
Pair 5	PRE Tranquil subtotal	0,19	0,72	1,995	54	0,051
	POST Tranquil subtotal	0,00	0,00			
Pair 6	PRE Dimedrol subtotal	0,70	1,31	3,444	54	0,001
	POST Dimedrol subtotal	0,05	0,40			
Pair 7	PRE Barbitur subtotal	,00 <sup>a</sup>	0,00			
	POST Barbitur subtotal	,00 <sup>a</sup>	0,00			
<b>PTDC-5</b>						
		<b>Mean</b>	<b>Std. Deviation</b>	<b>T</b>	<b>Df</b>	<b>Sig. (2-tailed)</b>
Pair 1	PRE Heroin subtotal	2,58	1,51	5,140	11	0,000
	POST Heroin subtotal	0,19	0,58			
Pair 2	PRE Opiates subtotal	,00 <sup>a</sup>	0,00			
	POST Opiates subtotal	,00 <sup>a</sup>	0,00			
Pair 3	PRE Alcohol subtotal	,00 <sup>a</sup>	0,00			
	POST Alcohol subtotal	,00 <sup>a</sup>	0,00			
Pair 4	PRE Cannabis subtotal	0,35	1,15	1,066	11	0,309
	POST Cannabis subtotal	0,00	0,00			
Pair 5	PRE Tranquil subtotal	,00 <sup>a</sup>	0,00			
	POST Tranquil subtotal	,00 <sup>a</sup>	0,00			
Pair 6	PRE Dimedrol subtotal	0,83	1,11	2,590	11	0,025
	POST Dimedrol subtotal	0,00	0,00			
Pair 7	PRE Barbitur subtotal	,00 <sup>a</sup>	0,00			
	POST Barbitur subtotal	,00 <sup>a</sup>	0,00			



