Final Monitoring and Evaluation Report on Opioid Substitution Treatment in Ukraine

outcomes from 3 phases of research

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1. Executive summary and conclusions

The Monitoring and evaluation of opiate substitution treatment OST in Ukraine was set up in order to test and document the feasibility and effectiveness of implementing Buprenorphine and Methadone based substitution treatment for opiate dependent persons in the Ukraine.

A series of studies were conducted over the period of 7 years from 2004 to 2009. Current report focuses on 3 phases of monitoring and evaluation studies.

A total of 151 patients were enrolled into the study between November 2006 and February 2007, distributed across six treatment sites providing Buprenorphine OST during phase 1. Another 80 patients were enrolled during phase 2, at two Methadone and two Buprenorphine treatment sites from February to October 2008. Phase 3 was conducted at four Methadone sites, enrolling 100 patients from August 2008 to October 2008.

Study participants were evaluated at baseline and up to four follow-up assessment points for changes in their health and social status (based on Addiction Severity Index ASI), and for their HIV transmission risk behaviours (based on BBV-TRAQ). Staff attitudes were measured using a self assessment instrument (SASQ). In addition, patient and staff focus group discussions were conducted during phase 1.

No problems occurred during the recruitment phase, and site monitoring visits confirmed adherence to the study protocol. All study participants gave their consent to participate in an extensive data collection to be used for evaluation purposes in the interest of contributing to safeguard the future availability of OST in the country.

The monitoring and evaluation protocol which was prepared specifically for this project could in general be well implemented. Some uncertainties and occurring errors could mostly be dealt with. Data collection by use of the instruments (translated into national language) was an important burden for staff, but missing data were relatively few and no obstacle to adequate monitoring and evaluation of the project.

Well trained interdisciplinary staff was recruited prior to the phase 1 clinics in 6 cities, and the great majority of staff remained in this function. Characteristics of staff were not documented in phases 2 and 3. Work satisfaction is generally good. Also, the majority of staff showed positive attitudes toward their clients, while being rather negative about a permissive attitude in regard to drug use in society. Staff attitudes and work satisfaction remained largely unchanged after 6 months of project implementation. Staff turnover was low. Recommendations for an improvement of working conditions were made in the focus groups with staff.

Characteristics of the study group (all 3 phases combined): 81% male; mean age 34.5 years; 56% married; 11 years of school education, 2 years of professional education, 37% having a job. Participants were predominantly dependent from home-made opioids, with a mean time of opioid use exceeding 13 years, and went through numerous previous treatment attempts. More than half of study participants were HIV positive.

Substitution medications were well tolerated. The average daily dose of buprenorphine was 10 mg in phase 1 and rose to 16 in phase 2. In the Methadone groups, the average daily dose rose to 97 mg. Adherence to OST medication rules was high in all groups.

Retention during phase 1 was 93% at six months and 75% at twelve months. During phase 2, 92% of Buprenorphine patients were retained over six months. In phase 3 retention among Methadone patients was 76% after 18 months.

The changes in patient status and behaviour during a 6 months treatment period were impressive:

- Use of illegal opioids, use of cannabis and polydrug use during the last 30 days dropped significantly (ca. 75% drop in ASI drug score)
- General health improved significantly (ca. 50% drop in ASI medical score)
- Patients reported significant reductions in depression, anxiety, aggression and suicide attempts (ASI score on psychological health dropped by ca. 65%)
- All HIV associated risk behaviours were reduced, most dramatically for drug injecting risk (up to ca. 82% reduction in BBV score), less so for sexual and skin penetration risk behaviours (such as tattooing) which were only temporarily reduced
- Illegal income and criminal activity during the last 30 days was massively reduced (ASI crime score dropped by ca. 70%-90%)
- Social integration increased (the number of working days per month doubled).

For many parameters, additional slight improvements were found. However, a secondary increase in alcohol intoxications and in cannabis use was documented from 2 sites (Odessa and Simferopol) in phase 1, and also sexual and skin penetration risk behaviours (tatoos, piercing) went back to the original values at entry, after a temporary reduction in all phases. It is noteworthy, that the significant improvements occurred during the first months in OST.

Feasibility and safety of OST was equally good in all phases, with no difference between Buprenorphine and Methadone. Outcomes were much the same, but differed in some respects, as mentioned above.

No significant diversion of medications was reported during site visits, and relations between treatment sites and law enforcement agencies were reported to be good during the study period. The clinical management and practice was studied during two site visits by an external specialist. He found an overall good clinical implementation of the treatment and care regime, but also a number of issues where improvements can be made. His observations and recommendations are quoted in this report. Important issues are improvements in the assessment of patient needs, introduction of a more flexible regime (allowing for take-home medication in order to facilitate job finding and keeping), continued education of staff and establishing more systematic collaboration with other medical and social services.

Based on these findings, the following conclusions are drawn:

1. A successful and adequate implementation of opiate substitution treatment OST in Ukraine is feasible, and the risk of diversion can be controlled.
2. OST proofed to be highly efficient in reducing illicit drug use and associated HIV/AIDS risk behaviours (unsafe injecting practices). OST had significant positive effects on the general health status of patients.
3. OST leads to a significant reduction of criminal behaviours, and supports social integration.
4. OST scale up is highly recommended as an effective Public Health measure, particularly in view of controlling the HIV epidemic. OST should be an integral part of a national drug policy and of a functional network caring for drug users without discrimination.

5. Regulatory change should be initiated to permit continuation of OST in case of hospitalization and/or incarceration, and to allow stable patients to take home limited number of doses for self-administration.
6. Great care should be taken to continuously educate appropriate staff how to run OST and how to best integrate harm reduction measures and treatment for blood borne infections. An appropriate revision of clinical guidelines for OST (Buprenorphine and Methadone maintenance treatment) is recommended, in order to get best results in practice.
7. Feasibility, safety and outcomes were equally good for patients from Buprenorphine clinics in phase 1 and for patients from Methadone clinics in phase 2 of the project.
8. Good results could be enhanced by optimizing working conditions of staff and treatment facilities.

2. Project description

2.1. Rationale and objectives

The Monitoring and Evaluation (M&E) project was set up in accordance with the Ministry of Health of Ukraine Order Nr. 161 of 13.04.2005. In its first phase, it was designed to assure the best possible implementation of opioid substitution maintenance treatment (OST) with Buprenorphine. In second and third phases, the same protocol was used to evaluate the implementation of methadone maintenance treatment.

The *objective* of *monitoring the program implementation* is to get standardized valid data on those elements which are essential for knowing if the project is moving in the right direction according to plans.

In detail, the objectives are:

- to provide information on patient recruitment
- to provide information on staff recruitment, turnover, attitudes and satisfaction
- to provide information on problems of project implementation and unexpected events, from patients and from staff
- to provide feedback on process and feasibility of the project to partners.

The overall *objective of evaluating the outcome* is to get standardized valid data on indicators which describe what the results are on the individual patient level and the project level.

In detail, the objectives are the following:

- to provide information on changes in patient status and behaviour
- to provide information on prescribed medications, special regimes and concomitant care
- to provide information on termination of treatment and/or participation of patients in the evaluation study.

2.2. Phases of the project and clinical sites

History of monitoring and evaluation of opioid substitution therapy in Ukraine started in 2004 with multi-country WHO collaborative study, which evaluated two first buprenorphine sites in Kiev and Kherson. After that, a series of national studies were conducted using a more extended research protocol. Current report focuses on results from 3 phases of national OST

monitoring and evaluation study. Site composition, timeline and follow-up plan are described in the Table 1.

Table 1. Summary of 3 phases of OST monitoring and evaluation studies in Ukraine

Phase	sites	Drug	Data collection start	Data collection end	# clients p/site	Follow up points	Funding agency
1	Kiev City Sociotherapy clinic	Buprenorphine	Nov 2006	Jan 2008	25	6 month, 12 month	GF/ Alliance
	Donetsk Narcological Dispensary						
	Odessa Oblast Narcological Dispensary						
	AR Crimea Republican Narcological Dispensary (Simferopol)						
	Dnipropetrovsk Narcological Dispensary						
	Mykolaiv Narcological Dispensary						
2	Vinnitsa Oblast Narcological Dispensary	Methadone	May 2008	Mar 2009	20	6 month	OSI
	Kherson Oblast Narcological Dispensary		Aug 2008				
	Sumy Oblast Narcological Dispensary	Buprenorphine	Feb 2008				
	Ivano-Frankovsk Oblast Narcological Dispensary						
3	Kiev City AIDS centre	Methadone	Aug 2008	Mar 2010	25	6 month, 9 month, 12 month, 18 month	GF/ Alliance
	Donetsk Narcological Dispensary						
	Dnipropetrovsk AIDS Center						
	Mykolaiv Narcological Dispensary						

2.3. Project partnership

The following parties collaborate in this project:

- The International HIV/AIDS Alliance
- World Health Organization, Regional Office for Europe
- The Ukrainian Institute for Public Health Policy
- Management and staff of project sites
- Independent interviewers
- External experts.

The *World Health Organization, Regional Office for Europe (WHO),* is the leading agency in developing and implementing the monitoring and evaluation plan.

The *Ukrainian Institute for Public Health Policy (UIPHP)* is the implementing agency for the project. The Director of the Institute, Dr Sergey Dvoryak, M.D., Ph.D., is the Principal Investigator (PI) for monitoring and evaluation.

The *External Experts,* mandated and contracted by WHO, are

Prof. Ambros Uchtenhagen, M.D., Ph.D., Chairman Research Institute for Public Health and Addiction, at Zurich University, Zurich Switzerland: focusing on overall scientific guidance of project evaluation, quantitative data analysis and preparation of analytical report.

Prof. Emilis Subata, M.D., Director Vilnius Centre for Addictive Disorders, Vilnius Lithuania, focusing on scientific field support by based on regular visits to evaluation sites during the first phase of the project.

3. Clinical Procedures and Documentation

Details of clinical procedures and documentation of data for monitoring and evaluation were explained in the General Monitoring and Evaluation Protocol (see Appendix). The following is extracted from the General Protocol.

The site visits by the external expert Prof. Subata confirmed, that the General Protocol was implemented, but that some problems in understanding and applying the rules occurred as described in the focus group reports (see Appendix).

3.1. Patient assessment and intake

All patients applying for inclusion into the opioid maintenance treatment were to be screened and documented in a standardized procedure according to the study protocol.

Initial screening for eligibility

Applicants had to respond to defined entry criteria in order to be eligible for treatment:

The inclusion criteria for treatment:

- dependence diagnosis for opiates according to ICD-10
- minimal age 18 years
- mentally competent to give informed consent
- physically well enough to participate in program
- giving informed consent with treatment and treatment regime incl. blood testing and urine controls
- living in permanent residence within commuting distance of the clinic.

Exclusion criteria:

- severe cognitive impairment or mental retardation
- severe behaviour disturbances or psychotic symptoms
- expected hospitalisation or imprisonment where treatment cannot be continued.

In order to be eligible for participation in the evaluation study, additional criteria applied:

- giving informed consent to participate in the study with follow-up interviews
- indicating a person who will have patient’s address for follow-up contact.

Screening was to me made by program staff using an eligibility checklist; answers are entered into the checklist. All lists are systematically collected; those of applicants not

entering treatment in a special folder, all others in the patient's record. Consent forms were explained and discussed with applicants who confirmed their consent by signature. Forms were integrated into the patient's record.

Another part of the screening process was explaining to applicants how the treatment and research data will be used. Patient data are to be kept confidentially, are not accessible to other agencies or police, and are safely stored. Data needed for the monitoring and evaluation plan are to be coded, and the code list is also safely stored by the program management.

Assessment of eligible patients

Once an applicant was eligible for participating in the program and study, a clinical assessment was made by program staff, covering present status (health, social situation, substance use, legal problems) and history (somatic and psychiatric, drug use and treatments, social integration). Findings were entered into the patient's record.

For all patients, the Addiction Severity Index ASI was applied within the first two weeks after intake, when no withdrawal symptoms are present and the first practical problems are solved. In addition, risk-taking behaviour with regard to blood borne diseases was documented by using the BBV-TRAQ questionnaire (a self-administered instrument). Copies are integrated into the patient's record.

Intake and treatment plan

On the basis of the assessment results, an individual treatment plan was made indicating which therapeutic and social elements will be provided. The plan was explained to the patient and an agreement was made, also documented in the record.

The treatment plan can be adapted according to the progress and eventually changes in the patient's life and status. A review was envisaged every three months and the results documented in the record.

3.2. Good practice and clinical management

Treatment follows the Ukrainian clinical guidelines for OST.

The guidelines had to be communicated to staff. In addition, the pilot projects had written information material on specific management issues, such as

- management of opiate overdose
- how to recognize intoxication before providing the daily dose
- how to determine individual dosages in the induction and maintenance phase
- how to proceed in the advent of a pregnancy
- rules for take-out doses
- rules for taking urine specimens
- how to proceed in case of missed take-ups and/or consultations
- sanctions for unacceptable behaviour
- rules for the termination of treatment.

Internal or external staff supervision is available for improving performance and competence in dealing with problematic situations.

During phase 1 of the project, site visits by the external expert Prof. Subata provided support to staff regarding problems of good practice. Visits took place in April and May / June 2007.

3.3. Patient record keeping

Each patient accepted for treatment had a standardized patient record, prepared by the Ukrainian Institute of Public Health Policy. All relevant information on status, regime, treatment received, adverse events, compliance and termination were entered by staff on a daily basis.

3.4. Termination of treatment and study participation

OST treatment is terminated:

- bilaterally on agreement between staff and patient
- unilaterally by patient (withdrawing consent to continue treatment, or dropping-out without formal announcement)
- unilaterally by staff (excluding patient on the basis of inability of patient to continue, e.g. due to hospitalisation or incarceration, or on the basis of continued unacceptable behaviour).

Termination of treatment is documented by providing information on the reasons for unilateral termination of treatment, or on successful completion.

This information is entered into the standard termination form (see chapter on instruments).

In all cases of treatment termination, the patient receives counseling on available options for detoxification and aftercare. He also is repeatedly informed about the overdose risks of relapse after detoxification.

Treatment termination did not automatically exclude a patient from the study. Patient is asked to provide information on where and how he/she can be contacted for follow-up interviews. This information is entered into the patient record form.

Termination of antiretroviral therapy ART

Patients accepted for OST at pilot projects who are HIV-positive and receive anti-retroviral therapy may discontinue ART without discontinuing OST. This may be the case because of side-effects of ART, or because of irregular intake of medications or other noncompliant behaviour.

Termination of ART and the reasons for termination are also documented in the termination form.

Termination of study participation

Patients revoking their informed consent to participate in the study, may be willing to continue treatment even if not willing to participate in follow-up interviews or to have their coded data used for evaluation.

In this case, continuation of treatment was possible. Reasons given for withdrawing consent are documented in the standard termination form.

4. Data collection and data quality

4.1. Roles and responsibilities of project staff

Principal Investigator PI

The PI is responsible for:

- organization of interviewer training and of data collection on the national level;
- provision of support to program management and staff in all matters of data collection;
- development, in collaboration with the managements of pilot projects, the written rules how to deal with problem situations (e.g. overdose, intervening illnesses, missed dosages etc.), in order to establish a common practice across pilot projects;
- provision the RS with instructions how to use the coding system;
- translation and testing of instruments;
- control and storage of incoming data from the pilot projects, data entry and data transfer to the external evaluator.

Management and staff of pilot projects

Pilot project management and staff are responsible for adhering to rules of good practice in OST, for adhering to the M&E plan and especially for the quality of data collection.

Responsible staff (RS)

Responsible staff is the person responsible for data collection at the project site and for data transmission to PI. The responsible staff person (RS) is agreed by and registered with the PI. This person is also the contact person for the PI during the entire pilot period.

RS is responsible for giving each patient a personal code, on the basis of the coding system provided by PI, in order to anonymize all patient data used for evaluation. RS keeps the list with patients' names and codes in a safe place not accessible to other persons.

RS is handling the data collection instruments. He/she distributes the questionnaire for staff attitudes and satisfaction (SASQ) with an instruction to send the questionnaires to PI.

Independent interviewers

The Independent interviewers are conducting the patient interviews, using the Addiction Severity Index (ASI) and the Blood-borne Virus Transmission Risk Assessment Questionnaire (BBV-TRAQ, see instruments).

Independent interviewers also select participants for focus groups with patients and focus groups with staff, conduct the focus groups and provide reports to the external evaluator.

Independent interviewers are identified by PI and contracted independently of other site personnel.

External experts

The *external experts* are responsible for the preparation and the finalization of the M&E plan and protocol on the basis of consultations with WHO, funding agencies, with programme managers and PI. They provide the necessary instruments (in English).

The external experts are also responsible to support the national partners

- in implementing the M&E plan regarding good practice of Buprenorphine maintenance treatment during phase 1, with site visits at the pilot projects (Prof. Subata)
- regarding monitoring and evaluation by responding to any enquiries from the PI (Prof. Uchtenhagen).

The external experts are responsible for analysis and evaluation of the data provided by the PI. The external experts prepare and submit report and recommendations on the basis of the collected findings.

4.2. Selection of respondents and responsible staff

Selection of independent interviewers

The independent interviewers are not part of the treatment staff at the pilot projects. They must guarantee the confidentiality of patient interview data and focus group results. They must be trained in performing patient interviews (using the instruments mentioned in this protocol) and focus groups. At the same time, they need an understanding of opiate dependence and of opiate substitution treatment. Usually, independent interviewers are psychologists.

In view of these conditions, independent interviewers were designated and trained by the Principal Investigator (PI). On his recommendation, TOR and contracts are issued by a funding agency.

Selection of responsible staff for data collection (RS)

At each pilot project, management determined one member of staff as the responsible person for organising and supervising data collection and data transfer to PI. This person was instructed and supported by PI with regard to all problems of data collection.

Selection of staff for self-rating (SASQ)

The attitudes and satisfaction of staff working with patients have an impact on patient satisfaction, on retention and outcome. Therefore, a Staff Attitudes and Satisfaction Questionnaire (SASQ) was to be given to all staff who have direct contact with patients. The SASQ is provided by the independent interviewer with an instruction to send the completed questionnaire directly to the PI. PI also gets from the independent interviewer a list of staff who received the questionnaire.

Selection of participants for focus groups

Patients for focus groups had to be recruited so that they constitute a heterogeneous group (different age, social background, length of stay on the programme).

Staff had to be recruited from various hierarchical layers of programme and having different functions in the programme (e.g. receptionist, counsellor, doctor, nurse, secretary).

Participants for patient focus groups were to be selected by the independent interviewer from his patient list.

Participants for staff focus groups were to be selected by the independent interviewer, from a list provided by the pilot project management.

4.3. Instruments and timing of data collection

Screening for eligibility is performed within a few days after a person applies for treatment.

Proper assessment and starting a patient record is done immediately following the screening. If treatment start is delayed, the waiting period and the reason for the delay are documented in the record.

The Staff attitudes and satisfaction questionnaire is applied to all staff who have direct contact with patients, once during the first and once during the last quarter of the pilot project period.

Focus groups with patients and with staff are performed once during the first and once during the last quarter of the pilot project period.

The ASI and the BBV-TRAQ are applied within two weeks after patient's entry to treatment, (assessing time period prior to admission to treatment). The follow-up interviews with ASI and BBV-TRAQ are done within 2-week window of an assessment point according to the assessment calendar (follow-up points used in different phases are indicated in Table 1).

Entries in the patient records are made daily (for dosages) or whenever a review of the treatment plan is made or a decision is taken.

4.4. Data entry and transfer procedures

Data collection uses instruments which are available as hard copies and in electronic form. At the pilot project sites, data are entered into hard copies or directly into electronic versions.

Electronic versions are developed by the Ukrainian Institute of Public Health Policy. PI organizes the instructions to be followed for data entering into the electronic forms.

RS are responsible for organizing and supervising data entry at the pilot project sites, into hard copies as well as into the electronic versions.

In order to minimize errors in entering data from hard copies into the electronic version, it is best to perform double entry so the two files can be checked for errors.

Research data are periodically transmitted to PI who determines the intervals for data transmission.

At the Ukrainian Institute of Public Health Policy, all incoming data are cleaned. A data bank is implemented where all data files from pilot projects are stored and prepared for data analysis. The data bank is made accessible to external experts for joint data analysis and establishing monitoring and evaluation reports.

4.5. Data quality and completeness

Data from the standardized instruments Addiction Severity Index (ASI) and BBV-TRAQ were generally of good quality; exceptional errors could be corrected. The situation was more difficult with the patient record card, where data had to be entered by hand; handwriting caused difficulties and possible errors in deciphering when transferred into the general data bank.

The number of missing data at entry and during the first follow-up period is small, moderately increasing during the second follow-up period. Some missing data are due to the fact that a shortened version of the ASI has been used for follow-up at some sites. Follow-up data are

missing from most patients who dropped out of the program. Other missing data are probably a consequence of problems in understanding and / or of time pressure.

During phases 2 and 3, data quality improved, and there were fewer missing reports on patients' somatic diseases.

The quality and completeness of data are considered to be sufficient for the monitoring and evaluation purposes, especially for documenting the positive outcomes of OST and for showing the strengths and some weaknesses of the implementation process. They are not sufficient however to document the state and behaviour of patents after leaving the program; this would need a separate follow-up study including the ex-patients.

Additional valuable information from staff and from patients is available from the *Focus group reports*. The summary of findings is presented in chapter 5.2.

5. Results I: Monitoring project implementation

5.1. Staffing of project sites

In order to document the composition, training, supervision and turnover of staff at the project sites, the management was asked to enter the relevant data systematically in a list especially prepared for this purpose. The lists were computed by the PI staff. These data were collected only in the phase 1. The following tables show the results.

Table 2. Number and qualification of staff

	Doctors	***Psychiatrists***	***Nurses***	***Psychologists***	***Social workers***	***Peer-counselors***	***Volunteers***	***Other***	***Total***
Kiev	3	2	6	1	4	0	1	1	16
Donetsk	4	2	3	1	2	1	0	1	11
Odessa	3	2	2	1	1	3	0	2	9
Simferopol	2	1	1	1	1	2	2	0	7
Dnieprop.	2	1	3	1	1	2	0	1	8
Mykolaiv	2	1	2	1	1	2	2	1	9
Total	**16**	**9**	**17**	**6**	**10**	**10**	**5**	**6**	**60**

At all sites, the relevant professions were represented in the team, to take care of the somatic, psychiatric, psychological and social needs of patients.

Table 3. Training of staff

	Number of staff with special training in narcology	***Number of staff having worked with substance dependents before***	***Number of staff receiving additional training at baseline***	***Number of staff receiving additional training in 2006***	***Number of staff receiving additional training in 2007***	***Supervision of staff available***
Kiev	11	14	10	10	6	Yes
Donetsk	4	10	1	1	1	Yes
Odessa	2	8	7	7	5	Yes
Simferopol	3	6	5	5	4	Yes
Dnieprop.	5	6	4	1	4	Yes
Mykolaiv	4	8	9	9	1	Yes
Total	**29**	**52**	**36**	**33**	**21**	**Yes**

The figures show that in all teams at project sites the experience and competence to work with drug dependent persons was well taken care of.

Table 4. Turnover of staff

	Number of staff recruited in 2006	***Number of staff leaving the site in 2006***	***Number of staff recruited in 2007***	***Number of staff leaving the site in 2007***
Kiev	2	1	1	1
Donetsk	1	1	5	4
Odessa	3	4	0	0
Simferopol	4	2	0	0
Dnieprop.	4	1	1	1
Mykolaiv	5	8	3	1
Total	**19**	**17**	**10**	**7**

With the exception of Mykolaiv, teams showed only moderate turnover after starting the project and a quite high stability afterwards.

In addition, the protocol provided to measure the attitudes, the knowledge and the work satisfaction of staff. A special questionnaire was applied at baseline and at follow-up after 6 months (Staff attitude and satisfaction questionnaire). A total of 51 questions are divided into 4 domains: questions on user-friendly attitudes (9 questions), on restrictive or negative attitudes (28 questions), on incorrect medical knowledge (5 questions) and on work satisfaction 9 questions).

The findings can be seen from the Table 5, including the change over time from base line to follow-up after 6 months.

Table 5. Staff attitudes, knowledge and work satisfaction

Phase 1	***User-friendly attitudes domain (min 9, max 27)***					***Restrictive-negative attitudes domain (min 28, max 84)***					***Incorrect medical information domain (min 5, max 15)***					***Work satisfaction domain (min 9, max 27)***				
	BL	***6 mth***	***9 mth***	***12 mth***	***18 mth***	***BL***	***6 mth***	***9 mth***	***12 mth***	***18 mth***	***BL***	***6 mth***	***9 mth***	***12 mth***	***18 mth***	***BL***	***6 mth***	***9 mth***	***12 mth***	***18 mth***
Kiev	23.2	22.6		19.8	-	43.0	45.4		51.2	-	5.8	7.0		7.4	-	20.0	17.2		20.2	-
Donetsk	21.8	23.5		17.7	-	60.3	55.8		69.7	-	6.0	5.5		9.0	-	19.0	20.3		18.0	-
Odessa	21.1	21.1		18.6	-	60.6	59.5		69.4	-	9.6	10.0		10.8	-	18.3	18.4		16.3	-
Simferopol	25.7	24.0		21.7	-	47.0	48.3		43.7	-	6.1	7.0		6.0	-	21.8	20.9		20.1	-
Dniepropetr.	21.5	22.3		22.3	-	56.3	60.0		60.8	-	8.2	8.3		7.5	-	18.0	16.7		17.0	-
Mykolaiv	22.9	25.4		19.2	-	54.5	50.2		68.2	-	7.6	6.2		6.2	-	22.0	24.0		19.5	-
Total	22.6	23.1		19.9	-	53.8	53.3		59.9	-	7.5	7.6		7.9	-	20.0	19.4		18.5	-
Phase 2	***BL***	***6 mth***	***9 mth***	***12 mth***	***18 mth***	***BL***	***6 mth***	***9 mth***	***12 mth***	***18 mth***	***BL***	***6 mth***	***9 mth***	***12 mth***	***18 mth***	***BL***	***6 mth***	***9 mth***	***12 mth***	***18 mth***
Kherson	19.8	20.8	-	-	-	47.0	52.0	-	-	-	8.6	10.8	-	-	-	17.6	20.8	-	-	-
Vinnytsya	22.0	20.4	-	-	-	46.8	49.7	-	-	-	5.6	5.6	-	-	-	18.0	19.5	-	-	-
Ivano-Fr.	22.6	24.0	-	-	-	49.9	55.0	-	-	-	8.0	9.4	-	-	-	20.0	20.1	-	-	-
Sumy	21.5	22.0	-	-	-	54.6	60.3	-	-	-	5.6	7.7	-	-	-	27.2	20.6	-	-	-
Total	**21.9**	**23.0**	**-**	**-**	**-**	**57.8**	**72.8**	**-**	**-**	**-**	**8.7**	**10.8**	**-**	**-**	**-**	**20.4**	**25.7**	**-**	**-**	**-**
Phase 3	***BL***	***6 mth***	***9 mth***	***12 mth***	***18 mth***	***BL***	***6 mth***	***9 mth***	***12 mth***	***18 mth***	***BL***	***6 mth***	***9 mth***	***12 mth***	***18 mth***	***BL***	***6 mth***	***9 mth***	***12 mth***	***18 mth***
Kiev	17.7	21.3	19.0	19.5	18.3	70.3	69.7	72.7	70.5	67.67	9.7	8.3	10.0	9.5	7.7	22.0	20.0	16.0	16.0	16.7
Donetsk	20.0	22.4	21.8	22.0	22.6	65.3	66.2	67.4	68.4	64.8	8.0	7.4	7.2	9.0	7.4	18.5	17.6	19.60	20.00	20.00
Dniepropetr	23.8	21.50	24.75	24.33	23.33	57.7	58.2	60.75	62.00	58.6	7.3	8.3	8.00	5.00	7.00	21.8	19.8	18.25	19.00	20.00
Mykolaiv	22.1	23.0	24.17	23.00	23.80	62.6	58.2	49.83	58.8	44.00	9.1	8.2	7.33	8.00	5.0	22.1	37.5	23.1	19.8	25.2
Total	**21.4**	**21.6**	**22.4**	**22.2**	**22.0**	**57.3**	**59.3**	**62.6**	**64.9**	**58.**	**7.0**	**7.4**	**8.1**	**7.8**	**6.7**	**22.1**	**22.7**	**19.2**	**18.7**	**20.4**

In the domain of user-friendly attitudes, the minimum score is 9, the maximum score 27. The mean scores at all sites are above 19, at base line and follow-up, indicating that more staff had more positive than negative attitudes towards clients. In the domain of restrictive or negative attitudes towards drug use and drug users, the minimum score is 28, the maximum 84. Here we see major differences, with less negative attitudes in Kiev and Simferopol as compared to the other sites. However, between 6-month and 12-month follow-up, the user friendly attitudes became less dominant, while the negative attitudes increased at all sites, with the exception of Simferopol.

These findings can be understood that the initially user-friendly attitudes of responding staff became somehow more critical during the second half of the project. The rather restrictive attitudes in regard to drug use in general on the other side have been slightly reinforced during the project.

In the medical knowledge domain, minimum score is 5, maximum score 15. Ratings differ among the sites, showing deficits in the correctness of medical information in agonist effects, with only modest or no changes over time.

Work satisfaction domain has a minimum score of 9 and maximum of 27. The mean scores are all in the upper segment, with some differences between sites and small changes during the follow-up period, in some sites to the better, in others to the worse.

No major differences were found between Buprenorphine and Methadone sites. The additional Buprenorphine clinics in phase 2 however showed a major increase in restrictive-negative attitudes and in incorrect medical information.

5.2. Monitoring problems and progress

Qualitative information on implementation progress and problems during phases 1 and 3 was collected using the focus groups conducted with staff and patients at each project site. Complete information about focus groups is included in the site reports; a summary of findings is integrated into this chapter. During phase 1, focus groups were complemented by site visits by Dr Subata, who assessed projects' performance and adherence to protocol. Full site visit reports are included in the Annex 2, short summary is presented below.

Main findings from site evaluation visits include:

- M&E study was well accepted by the staff and patients of the OST program. There was full cooperation from patients' side. Independent interviewers and responsible study staff didn't indicate any problems in collecting assessment and transfer data.
- Patients in all sites were generally satisfied with OST and staff. At all sites patients indicated that the staff could be quite easily accessed and the staff was supportive. Patients were also satisfied with HIV/AIDS services, which were provided outside the OST programs by AIDS centres: HIV testing, laboratory monitoring, ARV therapy provision. ARV medications were provided for patients up to 1 month. All HIV/AIDS services were accessible and free of charge.
- The main concern of patients was that participation in OST created difficulties in finding and maintaining jobs as no take-home medication doses were allowed by current legislature. Patients also indicated that everyday or almost everyday travel required considerable amount of time and additional financial resources.
- Patients were concerned that at some sites (Kiev and Donetsk) there was no possibility to continue OST in case of hospitalization (including for the reason of AIDS or TB).

- In none of the focus groups patients indicated problems with law enforcement (e.g. ungrounded search of IDU or harassment) at the time of the study.
- Qualified social support was not always available. Peers from NGO often lacked skills to assess the social status and needs of the patient, to build a plan for social assistance and implement it.
- The staff indicated that a lot of time and energy had to be invested in the control of medication use and prevention of diversion. In all sites nurses administered the medication and verified absorption in accordance to the current legal requirements. Tablets were crushed in Kiev and Donetsk sites to minimize the risk of diversion. To ensure control, OST programs had to implement strict sanctions for the attempts to conceal tablets with a threat of the discharge from OST. During the study period there were no problems with the law enforcement sector because of diversion of medications.
- Physicians identified comparatively big amount of paperwork, which had to be done according the legal acts to which control the use of substitution drugs.
- Some of the staff complained about the inadequate space for OST programs. Most of the sites lack rooms for confidential counseling.
- Staff is generally well trained and professional. Some physician asked for improvement of the quality of continuous training.

Based on site visits, the following recommendations were made by the expert visiting the sites:

- Establishment of a Working Group at the Ministry of Health with a mandate to review the legal acts regulating OST should be considered. The revision of legal acts would aim at providing more flexibility for OST programs to ensure the possibility of take-home medications, continuation of OST in other health care institutions, reduction of the required paperwork. At the same time prevention measures of large scale diversion of substitutive medications should remain in place. .
- Link OST programs with professional social support providers. Improvement of the support from NGOs should be considered through training of NGO staff to assess needs of OST patients and provide social assistance. Training needs of the OST staff could be assessed to adjust the continuous training program according the needs of the staff.
- When possible, the OST sites should be expanded with premises for confidential counseling.
- Multidisciplinary teams to assess psychosocial and medical needs of patients more thoroughly and develop time-bound treatment plans by all OST MDT and review them on regular bases.
- Establish the system of continuous education at sites for the all OST MDT members and staff not involved in OST, covering: Professional assessment of psychosocial needs of patients and developing a time-bound treatment plan and its implementation; narcological staff on OST as a public health intervention rather than “treatment” of selected groups of IDU.
- To increase the therapeutic flexibility of OST providers to provide individualized care and better opportunities for social reintegration – finding and maintaining jobs.

Reports on *focus groups with patients from phase 1* were available from all sites except Mikolaiv (one group report per site). Group participants were selected by independent interviewers; they were of different ages, with different length of stay on the program.

A general satisfaction with the substitution treatment was expressed, and also a need to expand this type of program in order to make it available for other patients as well. Many

patients express their satisfaction with having more time to care about their family, about sports and other interests, and about their health. While some expect to become drug-free, others have a perspective of long-term participation in the program.

Critical issues mentioned in the group discussions concern the following:

- restricted opening hours which create a problem for seeking employment and keeping jobs
- restrictive regimes not allowing take-out of substitution medication
- no availability of substitution medication during hospitalization
- negative attitudes of employers, prohibiting a self-declaration as an OST patient
- need for more guidance where and how to get medical and social support
- daily travelling to the dispensing site.

Apart from recommendations to reduce this kind of problems, one proposal was made to create a club of OST patients, where one might continue to have contacts after leaving the programme (in Simferopol).

Focus groups with patients from phase 3 came from all sites.

Patients reported mainly positive effects, especially the regular provision of the medication, good work of staff, avoiding problems with police, better health and social functioning, less financial problems, opportunities for employment, and better relations with families. Negative aspects frequently mentioned are insufficient opening hours of the clinics, no adequate premises for confidential consultations with psychologist and social worker, breach of confidentiality, side effects of medication, no flexibility of dosages and supervised intake only. Patients expressed a need for a take-out policy, a decentralization of dispensing (in some places they had to hire a car for attending the clinic, coming from a far away place). In some groups, a negative coverage of MST in the media was mentioned, and a concern that the program will not be able to continue.

Phase 1 protocols from *focus groups with staff* of programmes were made available from all sites except Mikolaiv (one group report per site). Participants came from different professions and hierarchical levels, and were chosen by independent interviewers.

The reports show a wide range of attitudes and experiences. While the positive changes in patients in appearance, in behaviours, in willingness to solve their problems were highlighted in one group (Dniepropetrovsk), the demanding attitudes and lack of compliance by patients were criticized in another (Simferopol). Exclusion of a few patients, due to misbehaviour, was mentioned.

Working conditions of staff were frequently criticized: too much paperwork, insufficient funds and payments, inadequate locations. Recommendations mainly focused on improvements in regard to these conditions: more staff, better salaries, more rooms, separate access and telephone line, more staff training. Much improvement was noted in Odessa, after opening a day patient facility with additional staff.

Focus groups with staff from phase 3 were available from all 4 sites, with participants from all professions except secretariat. In general, the positive effects of the programme on clients were mentioned. However, some events with patients who tried to take out their medication and injected methadone, with patients who made problems with examinations and urine tests were also mentioned. A general remark concerned the inadequacy of premises, not allowing for confidential consultations with clients.

6. Results II: Evaluation of patient data

The patient description and follow-up data were collected by use of the Addiction Severity Index and the BBV-TRAQ questionnaire on risk taking behaviour for blood borne infections.

The treatment data were collected in the individual patient records.

6.1. Baseline patient description data

The demographical description, the substance use history, the intervention history and the data on family problems of patients when entering the OST program are collected from the ASI.

Table 6. Patient description: demography

	N	*Gender*	*Age (years)*		*Family status*	*Years education*		*Professional education*		*Working (paid job)*
Phase 1		**% male**	**mean**	**range**	**% married**	**mean**	**range**	**mean**	**range**	**% working**
Kiev	25	52.0	29.0	27	68.0	10.2	5.0	3.2	11.0	37.5
Donetsk	25	80.0	33.6	20	60.0	11.4	10.0	0.2	7.0	40.0
Odessa	24	87.5	37.5	33	20.9	9.8	3.0	0.1	5.0	50.0
Simferopol	24	80.0	35.3	37	56.0	10.9	8.0	0.2	5.0	48.0
Dniepropetr	25	75.0	38.6	24	81.0	12.5	7.0	1.4	5.0	40.9
Mykolaiv	28	75.0	37.4	23	50.0	9.9	7.0	1.4	3.5	14.8
Total	**151**	**75.5**	**35.2**	**37**	**56.0**	**10.8**	**10.0**	**1.8**	**11.0**	**38.1**
	N	*Gender*	*Age (years)*		*Family status*	*Years education*		*Professional education*		*Working (paid job)*
Phase 2		**% male**	**mean**	**range**	**% married**	**mean**	**range**	**mean**	**range**	**% working**
Vinnytsya	20	80.0	30.0	28.0	55.0	9.4	5.0	2.4	5.0	40.0
Kherson	20	95.0	36.1	37.0	90.0	10.7	2.0	2.4	6.0	35.0
Ivano-Fr.	20	85.0	34.3	19.0	55.0	10.3	5.0	3.2	5.0	40.0
Sumy	20	95.0	33.6	39.0	55.0	10.7	7.0	0.1	1.0	65.0
Total	**80**	**88.8**	**33.5**	**30.8**	**63.8**	**10.3**	**4.8**	**2.0**	**4.3**	**45.0**
	N	*Gender*	*Age (years)*		*Family status*	*Years education*		*Professional education*		*Working (paid job)*
Phase 3		**% male**	**mean**	**range**	**% married**	**mean**	**range**	**mean**	**range**	**% working**
Kiev	25	76.0	29.4	21.0	56.0	10.2	5.0	3.2	11.0	16.0
Donetsk	25	88.0	33.5	24.0	40.0	11.4	9.5	2.1	7.5	20.0
Dniepropetr	25	72.0	37.3	25.0	36.0	9.7	3.0	1.7	6.0	28.0
Mykolaiv	25	88.0	36.1	25.0	68.0	10.0	0.0	1.3	4.0	52.0
Total	**100**	**81.0**	**34.1**	**23.8**	**50.0**	**10.3**	**4.4**	**2.1**	**7.1**	**29.0**

The data show some differences in the patient population among sites. In Kiev, there is an almost equal distribution regarding gender, while in all other sites patients are predominantly men. These findings ask for some explanation: if there are less female users outside the capital, or is there a problem for them to come forward or being accepted in the OST program.

The mean age of patients is between 29.0 and 38.6 years for phase 1, with a slightly lower average in Kiev as compared to the other sites. The range between youngest and oldest is an important one and covers overall 37 years.

Large differences are visible in the rate of patients being married: between 20.9% in Odessa and 81.0% in Dniepropetrovsk, which cannot be explained by age differences.

School education is given with 10.8 years on average, with small differences between sites, but a rather important range of 10 years between minimum and maximum. The additional professional education varies also considerably, with an overall average of 1.8 years and a highest average in Kiev of 3.2 years.

The employment rate, with a paid job, is relatively high with 38.1% on average, with an exceptionally low value of about 14.8% in Mykolaiv only.

Phase 2 and 3 patients show a higher rate of males, a slightly lower average age and higher employment rates. However, it is noteworthy that the treatment populations in the Buprenorphine and Methadone clinics are highly comparable.

Table 7. Patient description: lifetime substance use (1)

	Alcohol hard use (years)		***Heroin use (years)***		***Buprenorphine /Methadone use (years)***		***Other opiate use (years)***		***Barbiturates use (years)***	
Phase 1	**mean**	**range**	**mean**	**range**	**mean**	**range**	**mean**	**range**	**mean**	**range**
Kiev	0.08	2	2.44	7	0.20	1	9.64	30	5.64	13
Donetsk	0.56	5	0.24	2	0.00	0	12.36	22	0.32	5
Odessa	0.04	1	0.33	6	0.00	0	17.25	34	0.42	5
Simferopol	1.84	7	0.28	3	0.20	2	9.32	22	0.28	3
Dniepropetr.	0.42	5	0.17	2	0.21	3	15.04	27	0.54	10
Mykolaiv	0.57	7	0.50	4	0.00	0	17.39	32	1.39	10
Total	0.59	7	0.66	7	0.10	3	13.54	38	1.44	13
	Alcohol hard use (years)		***Heroin use (years)***		***Buprenorphine /Methadone use (years)***		***Other opiate use (years)***		***Barbiturates use (years)***	
Phase 2	**mean**	**range**	**mean**	**range**	**mean**	**range**	**mean**	**range**	**mean**	**range**
Kherson	0.00	0	0.20	2	0.60	1	13.05	26	0.15	1
Vinnytsya	0.30	5	0.00	0	0.15	2	10.30	19	0.15	3
Ivano-Fr.	1.50	25	1.20	10	2.95	18	6.80	20	5.20	20
Sumy	0.00	0	3.67	12	0.10	1	10.90	20	0.50	6
Total	0.45	25	1.27	10	0.95	18	10.05	20	1.50	20
	Alcohol hard use (years)		***Heroin use (years)***		***Buprenorphine /Methadone use (years)***		***Other opiate use (years)***		***Barbiturates use (years)***	
Phase 3	**mean**	**range**	**mean**	**range**	**mean**	**range**	**mean**	**range**	**mean**	**range**
Kiev	0.00	0	1.96	10	0.48	2	10.92	19	4.92	20
Donetsk	0.80	16	0.52	6	0.28	3	12.88	28	1.32	10
Dniepropetr	0.60	5	0.04	1	0.36	3	14.56	33	1.44	10
Mykolaiv	6.30	20	0.40	2	0.28	2	15.60	28	3.68	12
Total	0.47	20	0.84	2	0.37	2	12.79	28	2.56	12

Table 8. Patient description: lifetime substance use (2)

	Sedative use (years)		***Cocaine use (years)***		***Amphetamines use (years)***		***Cannabis use (years)***		***Hallucinogens use (years)***		***Inhalants use (years)***		***Polydrug use (years)***	
Phase 1	**mean**	**range**	**mean**	**range**	**mean**	**range**	**mean**	**range**	**mean**	**range**	**mean**	**range**	**mean**	**range**
Kiev	3.34	13	0.04	1	0.80	12	5.04	15	0.04	1	0.00	0	5.36	13
Donetsk	1.48	15	0.00	0	0.24	3	6.60	30	0.00	0	0.00	0	5.40	20
Odessa	1.46	15	0.00	0	0.13	3	10.33	36	0.08	1	0.00	0	8.25	22
Simferopol	3.28	15	0.08	1	0.32	2	7.12	22	0.80	5	0.28	2	4.04	15
Dniepropetr.	2.67	18	0.00	0	0.25	5	1.00	15	0.00	0	0.00	0	7.54	20
Mykolaiv	3.75	21	0.04	1	0.07	1	9.00	36	0.04	1	0.07	1	5.64	30
Total	2.69	21	0.03	1	0.30	12	6.58	36	0.16	5	0.06	2	6.01	30
	Sedative use (years)		***Cocaine use (years)***		***Amphetamines use (years)***		***Cannabis use (years)***		***Hallucinogens use (years)***		***Inhalants use (years)***		***Polydrug use (years)***	
Phase 2	**mean**	**range**	**mean**	**range**	**mean**	**range**	**mean**	**range**	**mean**	**range**	**mean**	**range**	**mean**	**range**
Kherson	0.10	1	0.15	1	0.05	2	1.95	10	0.00	0	0.00	0	0.00	0
Vinnytsya	3.15	12	0.00	0	0.35	3	4.85	25	0.00	0	0.00	0	2.75	12
Ivano-Fr.	3.95	15	2.05	15	3.70	15	4.50	20	0.25	5	0.00	0	1.40	6
Sumy	0.45	7	0.05	1	0.10	1	0.90	15	0.00	0	0.05	1	0.00	0
Total	1.91	15	0.56	15	1.05	15	3.05	20	0.06	5	0.01	1	1.04	6
	Sedative use (years)		***Cocaine use (years)***		***Amphetamines use (years)***		***Cannabis use (years)***		***Hallucinogens use (years)***		***Inhalants use (years)***		***Polydrug use (years)***	
Phase 3	**mean**	**range**	**mean**	**range**	**mean**	**range**	**mean**	**range**	**mean**	**range**	**mean**	**range**	**mean**	**range**
Kiev	4.04	15	0.00	0	0.44	1	5.28	16	0.00	0	0.00	0	8.00	18
Donetsk	3.04	22	0.00	0	0.32	3	8.48	33	0.00	0	0.00	0	9.08	33
Dniepropetr	1.56	10	0.04	1	0.92	5	2.40	8	0.00	0	0.00	0	2.92	10
Mykolaiv	9.88	30	0.04	1	1.48	5	14.96	25	0.16	1	0.00	0	9.92	25
Total	4.63	30	0.02	1	0.79	1	7.78	33	0.04	1	0.00	0	7.48	33

By far the longest history of substance use relates to “other opiates” – which usually refers to home-made opioid solution called “hanka” or “shirka” (13.5 years on average), followed by cannabis use and polydrug use (both around 6 years on average).

In contrast, the use of other substances and especially of heroin is of a recent date; only barbiturate use and the use of sedatives and tranquillizers go back to more than 1 or 2 years respectively. Accordingly, the range of consumption history duration is highest in regard to “other opiates”, cannabis and polydrug use.

From these data we can conclude that using the traditional liquid extracted from poppy straw is still much more important than the use of street heroin, which has relevance for HIV and Hepatitis prevention (clean needles and syringes do not prevent infection, if the opiate solution is contaminated).

It is noteworthy that the history of hard use of alcohol is excessively long in patients from Mikolaiv although they are in the same age range. A comparatively long history of cannabis use is documented for patients from Mikolaiv and Odessa.

The comparison of the Buprenorphine and Methadone data reveal no major differences.

Table 9. Patient description: somatic diseases

	HIV status	***HIV infection stage 4***	***Tuberculosis status***		***HCV (self-reported)***	***HBV (self-reported)***	***Any lifetime treatment for chronic somatic disease***
Phase 1	**%positive**	**%**	**%**	**%m.d.**	**%**	**%**	**%**
Kiev	44.0	Na	Na	-	18.2	4.5	60.9
Donetsk	80.0	20.0	20.0	20.0	12.0	0.0	60.0
Odessa	41.7	Na	9.1	63.6	17.4	8.7	41.7
Simferopol	48.0	13.0	13.3	86.7	7.7	0.0	52.0
Dniepropetr.	45.8	0.0	9.5	61.9	30.4	4.3	77.3
Mykolaiv	50.0	8.7	10.5	73.7	26.3	5.3	62.5
Total	**51.7**	**12.3**	**11.2**	**62.9**	**15.8**	**3.3**	**55.6**
	HIV status	***HIV infection stage 4***	***Tuberculosis status***		***HCV (self-reported)***	***HBV (self-reported)***	***Any lifetime treatment for chronic somatic disease***
Phase 2	**%positive**	**%**	**%**	**%m.d.**	**%**	**%**	**%**
Kherson	30.0	16.7	5.0	0.0	10.0	20.0	55.0
Vinnytsya	20.0	0.0	0.0	0.0	60.0	10.0	55.0
Ivano-Fr.	30.0	0.0	5.0	0.0	20.0	10.0	60.0
Sumy	40.0	0.0	0.0	0.0	0.0	0.0	65.0
Total	**30.0**	**4.2**	**2.5**	**0.0**	**22.5**	**10.0**	**58.8**
	HIV status	***HIV infection stage 4***	***Tuberculosis status***		***HCV (self-reported)***	***HBV (self-reported)***	***Any lifetime treatment for chronic somatic disease***
Phase 3	**%positive**	**%**	**%**	**%m.d.**	**%**	**%**	**%**
Kiev	92.0	4.5	12.0	8.0	i.d.	0.0	52.0
Donetsk	60.0	Na	0.0	0.0	4.0	8.0	96.0
Dniepropetr	100.0	4.3	4.0	0.0	i.d.	8.0	72.0
Mykolaiv	48.0	Na	12.0	44.0	24.0	4.0	64.0
Total	**75.0**	**4.4**	**7.0**	**13.0**	**14.0**	**5.0**	**71.0**

Na = no answer; i.d. = irregular data

Over half of patients were HIV positive at entry into the program according to self-report (no routine testing available), with an outstanding high seropositivity rate of 80.0% in Donetsk. In

regard to the infection stage, clinical AIDS syndrome (infection stage 4) was diagnosed in an average of 12.3% HIV infected patients; however, no data were available on the infection stage from Kiev and Odessa. There seems to be a deficit in tuberculosis diagnosis, with a generally high rate of overall 62.9% missing data.

HCV seropositivity was self-reported by 15.8% of patients, with important differences among sites; in Dniepropetrovsk the rate was highest with 30.4%, in Simferopol lowest with 7.7%. The rates for self-reported HBV seropositivity were much lower, with an overall average of 3.3% (rates of 0% in Donetsk and Simferopol). It has to be noted that these are self-reported data, which are very likely to underestimate the actual prevalence.

In the cohort of Methadone patients, the rate of HIV infections and especially of HCV infections is higher, but the rate of stage 4 infections is lower, and the rate of those having received any treatment for a chronic disease is increased.

Table 10. Patient description: psychological disorders (lifetime)

	Depression	***Anxiety***	***Hallucinations***	***Memory /cognition***	***Aggression***	***Suicidal attempts***
Phase 1	**% yes**	**% yes**	**% yes**	**% yes**	**% yes**	**% yes**
Kiev	68	84	4	52	32	8
Donetsk	64	44	8	28	20	0
Odessa	79	88	0	21	4	0
Simferopol	8	8	0	0	8	4
Dniepropetr.	58	88	0	13	0	0
Mykolaiv	54	58	0	7	25	0
Total	**55**	**62**	**2**	**20**	**15**	**2**
	Depression	***Anxiety***	***Hallucinations***	***Memory /cognition***	***Aggression***	***Suicidal attempts***
Phase 2	**% yes**	**% yes**	**% yes**	**% yes**	**% yes**	**% yes**
%positive	%	%	%	%	%	%
Kherson	85	85	15	0	10	25
Vinnytsya	95	95	40	80	55	65
Ivano-Fr.	95	95	15	60	55	45
Sumy	85	70	5	15	90	70
Total	**90**	**83**	**10**	**38**	**73**	**58**
	Depression	***Anxiety***	***Hallucinations***	***Memory /cognition***	***Aggression***	***Suicidal attempts***
Phase 3	**% yes**	**% yes**	**% yes**	**% yes**	**% yes**	**% yes**
%positive	%	%	%	%	%	%
Kiev	96	88	24	60	56	36
Donetsk	72	80	16	32	52	28
Dniepropetr	80	68	0	40	32	4
Mykolaiv	100	100	4	36	72	8
Total	**88**	**86**	**16**	**41**	**47**	**26**

High rates of depression and anxiety dominate, with rates of 55% and 62% respectively. Only in Simferopol the rates are exceptionally low with 8. Also, the rates of cognitive and memory problems are quite high with an average of 20%, but an extremely high rate of 52% in Kiev and a rate of 0% in Simferopol. Similar differences can be seen in regard to aggressive mood, ranging from 0% in Simferopol up to 32% in Kiev. At least part of these striking differences may eventually be due to different diagnostic procedures.

Patients in the Methadone cohort show a higher prevalence of psychopathology on practically all items, and especially the second round of Buprenorphine patients had

extremely high ratings. It cannot be excluded that differences in the diagnostic procedures are somehow responsible for these striking findings.

The large majority of former treatments received were treatments for drug problems, with an average of 5.6 treatments per patient during phase 1 and 4.7 treatments per patient during phase 2. 4.3 (3.6) treatment episodes were detoxifications only. The number of psychiatric treatment episodes on average was 2.5 (1.2), the number of treatments for alcohol problems 0.14 (0.07).

Table 11. Patient description: treatment and intervention history (lifetime)

	Former treatment alcohol problems		*Former treatment drug problems*		*AA/NA group ever*	*Abstinent periods > 3 mths*	*Psych. Treatment episodes*		*Psych medication ever*	*Nr of arrests and/or convictions*			
Phase 1	**Any %**	**Detox %**	**Any %**	**Detox %**	**%**	**%**	**In-pat%**	**Out-pat%**	**%**	**% arrest**	**% conv.**	**mean**	**range**
Kiev	0.0	0.0	88.0	80.0	52.2	73.9	8.0	8.0	24.0	60.9	24.0	0.9	7
Donetsk	8.0	4.0	92.0	88.0	8.3	88.0	8.0	8.0	16.0	68.0	16.0	1.4	4
Odessa	0.0	0.0	70.8	46.8	12.5	62.5	4.2	0.0	4.2	95.8	4.2	2.5	6
Simferopol	20.0	8.0	76.0	48.0	20.0	84.0	20.0	20.0	56.0	80.0	56.0	0.4	2
Dniepropetr.	0.0	0.0	95.8	79.2	4.5	81.8	37.5	25.0	54.2	68.2	54.2	1.7	6
Mykolaiv	7.2	7.1	82.1	60.7	0.0	55.6	7.1	10.7	32.1	77.8	32.1	2.1	6
Total	**5.9**	**4.0**	**84.1**	**66.9**	**15.2**	**71.5**	**13.9**	**11.9**	**31.3**	**75.3**	**31.3**	**1.5**	**7**
	Former treatment alcohol problems		*Former treatment drug problems*		*AA/NA group ever*	*Abstinent periods > 3 mths*	*Psych. Treatment episodes*		*Psych medication ever*	*Nr of arrests and/or convictions*			
Phase 2	**Any %**	**Detox %**	**Any %**	**Detox %**	**%**	**%**	**In-pat%**	**Out-pat%**	**%**	**% arrest**	**% conv.**	**mean**	**range**
Kherson	5.0	5.0	70.0	50.0	25.0	90.0	5.0	0.0	0.0	25.0	25.0	0.6	4
Vinnytsya	0.0	0.0	90.0	50.0	0.0	80.0	20.0	5.0	15.0	85.0	85.0	1.9	6
Ivano-Fr.	40.0	40.0	90.0	90.0	60.0	80.0	5.0	10.0	25.0	80.0	100.0	2.4	7
Sumy	5.0	15.0	85.0	55.0	Na	15.0	15.0	10.0	45.0	95.0	60.0	6.6	12
Total	**12.5**	**15.0**	**83.8**	**61.3**	**28.3**	**66.3**	**11.3**	**6.3**	**21.3**	**71.3**	**67.5**	**2.9**	**12**
	Former treatment alcohol problems		*Former treatment drug problems*		*AA/NA group ever*	*Abstinent periods > 3 mths*	*Psych. Treatment episodes*		*Psych medication ever*	*Nr of arrests and/or convictions*			
Phase 3	**Any %**	**Detox %**	**Any %**	**Detox %**	**%**	**%**	**In-pat%**	**Out-pat%**	**%**	**% arrest**	**% conv.**	**mean**	**range**
Kiev	4.0	4.0	96.0	92.0	24.0	80.0	8.0	4.0	24.0	64.0	64.0	1.1	4
Donetsk	8.0	4.0	80.0	80.0	0.0	40.0	8.0	4.0	16.0	60.0	60.0	1.4	7
Dniepropetr	4.0	4.0	72.0	72.0	0.0	4.0	0.0	0.0	0.0	40.0	40.0	1.1	4
Mykolaiv	0.0	8.0	76.0	76.0	4.0	76.0	0.0	0.0	0.0	72.0	72.0	2.4	7
Total	**4.0**	**5.0**	**81.0**	**80.0**	**7.0**	**50.0**	**4.0**	**2.0**	**10.0**	**59.0**	**59.0**	**1.5**	**7**

Na = no answer

An average of 5.9% had previously been in treatment for alcohol problems, whereof 2/3 in detoxification only. The highest rate of 20.0% is mentioned from Simferopol. On the other side, 84.1% mentioned earlier treatments for drug problems, with 66.9% reporting detoxifications. The highest rates of 92% were observed in Donetsk (88% detoxifications). 13.9% of all patients had been in psychiatric in-patient treatment and 11.9% in out-patient treatment, with highest rates in Simferopol (20.0% in each category) and Dniepropetrovsk (37.5 in-patient, 25.0% out-patient treatment). Lowest figures for psychiatric treatments come from Odessa (4.2% in-patient, 0% out-patient treatments) and Mykolaiv (7.1% in-patient, 11.9% out-patient treatments). Experience with psychiatric medication varies between 56.0% in Simferopol and 4.2% in Odessa (31.3% of patients on average), raising questions about the availability of psychopharmacological treatments for this target group of patients.

These differences do not correspond to the self-rate data on psychological disorders and may be due to differences in service provision and utilization.

15.2% of all patients had been participating in groups of Alcoholics anonymous or Narcotics anonymous. Differences between sites (52.2% in Kiev, 0% in Mykolaiv) may be due to the availability of such self-help organizations.

A rate of 75.3% on average had been arrested and 67.8% had been convicted in the past. The number of arrests and convictions per patient was given with 1.5 on average, with minor differences (2.5 in Odessa, 0.4 in Simferopol) and a maximum range of 7.

Independent of the type of interventions, periods of abstinence lasting 3 months or longer were noted by 71.1% of all patients (maximum 88.0% of patients from Donetsk, minimum 55.6% of patients from Mykolaiv).

Phase 2 patients had less psychiatric interventions and engaged less in self-help groups.

Table 12. Patient description: family problems

	Person with drug problems living in the household	***Person with alcohol problems living in the household***	***Family member with psych. disorder***	***Pat. suffered emotional abuse***	***Pat. suffered physical abuse***	***Pat. suffered sexual abuse***	***Suffering cruel or violent behaviour in family***
Phase 1	**%**	**%**	**%**	**%**	**%**	**%**	**%**
Kiev	16.7	8.0	8.7	84.0	56.0	4.0	21.7
Donetsk	12.0	4.0	0.0	44.0	40.0	4.0	4.0
Odessa	8.3	12.5	0.0	54.2	45.8	8.3	13.0
Simferopol	36.0	24.0	0.0	68.0	44.0	8.0	4.0
Dniepropetr.	37.5	4.2	4.5	95.8	70.8	8.3	4.5
Mykolaiv	21.4	7.1	0.0	100.0	96.4	3.6	8.0
Total	22.0	13.3	2.0	75.5	60.4	6.0	8.6

	Person with drug problems living in the household	***Person with alcohol problems living in the household***	***Family member with psych. disorder***	***Pat. suffered emotional abuse***	***Pat. suffered physical abuse***	***Pat. suffered sexual abuse***	***Suffering cruel or violent behaviour in family***
Phase 2	**%**	**%**	**%**	**%**	**%**	**%**	**%**
Kherson	5.0	5.0	0.0	75.0	50.0	0.0	30.0
Vinnytsya	5.0	10.0	0.0	95.0	60.0	10.0	20.0
Ivano-Fr.	20.0	10.0	10.0	80.0	70.0	10.0	20.0
Sumy	20.0	20.0	5.0	100.0	100.0	10.0	5.0
Total	10.0	8.3	3.3	83.3	60.0	6.7	23.3
	Person with drug problems living in the household	***Person with alcohol problems living in the household***	***Family member with psych. disorder***	***Pat. suffered emotional abuse***	***Pat. suffered physical abuse***	***Pat. suffered sexual abuse***	***Suffering cruel or violent behaviour in family***
Phase 3	**%**	**%**	**%**	**%**	**%**	**%**	**%**
Kiev	20.0	16.0	0.0	88.0	84.0	16.0	16.0
Donetsk	16.0	4.0	0.0	56.0	56.0	0.0	44.0
Dniepropetr	20.0	0.0	0.0	88.0	44.0	8.0	56.0
Mykolaiv	28.0	4.0	0.0	80.0	60.0	4.0	40.0
Total	18.7	6.7	0.0	77.3	61.3	8.0	38.7

According to their self-rating, 75.5% of all patients suffered from emotional abuse in the past, and 60.4% from physical abuse as well. There are major differences between sites, with maximum values from Mykolaiv (100.0% emotional abuse, 96.4% physical abuse) and minimum values from Donetsk (44.0% emotional abuse, 40.0% physical abuse). However, sexual abuse is rarely mentioned by 6.0% of patients on average. Cruel and violent behaviour is mainly mentioned by patients from Kiev (21.7%).

Living together with a person having drug problems is mentioned by 22.0% of all patients (especially in Dniepropetrovsk by 37.5% and in Simferopol by 36.0% of patients, while only by 8.0% of patients in Odessa). The presence of a person having alcohol problems is less frequently mentioned, by 13.3% of all patients (with a maximum of 24.0% of patients in Simferopol). Psychiatric disorders in the family are rarely mentioned, by 2% of all patients (but by 8.7% of patients in Kiev, possibly due to a better recognition of such disorders).

Patients from phase 2 gave higher rates of cruel or violent behaviour in family, while the abuse rates were about equal and drug and psychiatric problems in the family somehow less frequent. Differences between phases seem less important than differences between sites, eventually due to different interpretations of the severity of the various items.

6.2. Patient treatment data

Information about the treatment received and about the compliance of patients comes from the individual patient records.

Table 13. Treatment data - medication

	ST dosage					*Side effect of ST.*				*ARV medication*					*Nr of urine tests*			
Phase 1	**BL**	**6 mth**	**9 mth**	**12 mth**	**18 mth**	**6 mth**	**9 mth**	**12 mth**	**18 mth**	**BL**	**6 mth**	**9 mth**	**12 mth**	**18 mth**	**6 mth**	**9 mth**	**12 mth**	**18 mth**
	mean	**mean**	**mean**	**mean**	**mean**	**%**	**%**	**%**	**%**	**%**	**%**	**%**	**%**	**%**	**mean**	**mean**	**mean**	**mean**
Kiev	13	13	-	13	-	71	-	25	-	13	24	-	Na	-	1.2	-	-	-
Donetsk	11	12	-	11	-	16	-	0	-	21	38	-	75	-	0.9	-	-	-
Odessa	11	11	-	11	-	33	-	0	-	Na	Na	-	Na	-	Na	-	-	-
Simferopol	8	8	-	12	-	0	-	12	-	16	16	-	55	-	2.0	-	-	-
Dniepropetr.	11	9	-	8	-	38	-	0	-	6	6	-	11	-	1.6	-	-	-
Mykolaiv	8	7	-	8	-	11	-	7	-	7	24	-	24	-	0.3	-	-	
Total	10	10	-	10	-	25	-	6	-	12	21	-	27	-	1.0	-	-	
	ST dosage					*Side effect of ST.*				*ARV medication*					*Nr of urine tests*			
Phase 1	**BL**	**6 mth**	**9 mth**	**12 mth**	**18 mth**	**6 mth**	**9 mth**	**12 mth**	**18 mth**	**BL**	**6 mth**	**9 mth**	**12 mth**	**18 mth**	**6 mth**	**9 mth**	**12 mth**	**18 mth**
	mean	**mean**	**mean**	**mean**	**mean**	**%**	**%**	**%**	**%**	**%**	**%**	**%**	**%**	**%**	**mean**	**mean**	**mean**	**mean**
Kherson (M)	41	52	-	-	-	100	-	-	-	15	15	-	-	-	2.0	-	-	-
Vinnytsya (M)	69	91	-	-	-	100	-	-	-	0	0	-	-	-	2.8	-	-	-
Ivano-Fr. (B)	15	13	-	-	-	55	-	-	-	30	35	-	-	-	2.2	-	-	-
Sumy (B)	16	16	-	-	-	30	-	-	-	40	15	-	-	-	0.9	-	-	-
Total	55 /15.5	71.5 /14.5	-	-	-	43	-	-	-	35	25	-	-	-	1.6	-	-	-
	ST dosage					*Side effect of ST.*				*ARV medication*					*Nr of urine tests*			
Phase 1	**BL**	**6 mth**	**9 mth**	**12 mth**	**18 mth**	**6 mth**	**9 mth**	**12 mth**	**18 mth**	**BL**	**6 mth**	**9 mth**	**12 mth**	**18 mth**	**6 mth**	**9 mth**	**12 mth**	**18 mth**
	mean	**mean**	**mean**	**mean**	**mean**	**%**	**%**	**%**		**%**	**%**	**%**	**%**	**%**	**mean**	**mean**	**mean**	**mean**
Kiev	103.6	100.9	107.3	120.3	129.0	52.0	0.0	0.0	0.0	12.0	18.2	15.0	15.8	12.0	7.2	3.9	4.0	1.6
Donetsk	50.2	57.8	62.8	64.8	72.6	16.0	60.0	40.0	23.8	4.2	4.2	0.0	5.0	4.2	0.0	0.0	0.0	0.0
Dniepropetr	80.2	117.0	116.1	107.0	112.4	32.0	43.5	38.9	37.5	0.0	13.0	26.1	40.0	0.0	3.1	4.7	5.7	1.1
Mykolaiv	50.6	55.6	57.2	64.2	77.0	0.0	0.0	0.0	0.0	16.0	16.7	16.7	16.7	16.0	0.0	0.0	0.0	0.0
Total	71.2	82.8	85.8	89.0	97.7	33.3	51.7	39.4	30.7	8.1	13.0	14.5	19.4	8.1	2.6	2.1	2.4	0.7

Na = no answer

Not all records provide complete and reliable data. The following is what could be extracted from the dataset.

The average dosage of Buprenorphine is listed with 10 mg per day, at base line and at follow-up after 6 and 12 months. Highest average dosages are dispensed at Kiev (13 mg per day per patient). Lowest average dosages are recorded from Mykolaiv and Dniepopetrovsk at follow-up (8 mg/day).

Side effects of Buprenorphine are reported from an average of 25% of patients after 6 months, of 6% after 12 months: No interpretation can be made, because it was not clear enough how side effects were identified.

The rate of seropositive patients receiving anti-retroviral medication ARV increased on average from 12% at entry to 23% after 12 months. The most important rate is recorded from Donetsk with 75%, the lowest from Dniepropetrovsk with 11%; no data from Odessa. Side-effects are reported by 3% of those receiving this medication (range 0-8%, no data from Odessa).

Urine testing for drug consumption is rare with only 1 test per patient on average during 6 months (no data from Odessa). No data were available for the number of tests performed during the second half of the follow-up period.

We have no data on the various psychosocial interventions offered and provided to OST patients. Most of these interventions and support activities were not provided at the OST site, but at a NGO specialized in this type of service, often at the site.

Phase 3 data show an average baseline Methadone dosage of 60 mg/day, increasing to 97 mg/day after 18 months. Almost half of patients are recorded to show side-effects of methadone. The rate of seropositive patients receiving ARV treatment is relatively low with 8-10%; the reasons are unknown. Changes in treatment regime and number of urine controls are in the same range as during phase 1.

Buprenorphine dosages during phase 2 are higher than during phase 1, with 15 mg/day compared to 10 mg/day.

Table 14. Treatment data - patient compliance

	Adherence to OST				***Attendance individual sessions***				***Attendance group session***				***Attendance family session***				***Attendance self-help groups***				***Adh. social sup.***
Phase 1	**6 mth**	**9 mth**	**12 mth**	**18 mth**	**6 mth**	**9 mth**	**12 mth**	**18 mth**	**6 mth**	**9 mth**	**12 mth**	**18 mth**	**6 mth**	**9 mth**	**12 mth**	**18 mth**	**6 mth**	**9 mth**	**12 mth**	**18 mth**	**6 mth**
	%yes	**%yes**	**%yes**	**%yes**	**%yes**	**%yes**	**%yes**	**%yes**	**%yes**	**%yes**	**%yes**	**%yes**	**%yes**	**%yes**	**%yes**	**%yes**	**%yes**	**%yes**	**%yes**	**%yes**	**%yes**
Kiev	100.0	-	87.5	-	100	-	82	-	80	-	70	-	40	-	18	-	40	-	41	-	20
Donetsk	91.7	-	100.0	-	100	-	88	-	13	-	8	-	29	-	4	-	42	-	17	-	8
Odessa	95.0	-	100.0	-	80	-	69	-	50	-	56	-	Na	-	Na	-	70	-	31	-	25
Simferopol	84.0	-	100.0	-	100	-	100	-	100	-	18	-	26	-	29	-	90	-	18	-	0
Dniepropetr	87.0	-	100.0	-	Na	-	10	-	Na	-	Na	-	0	-	5	-	11	-	32	-	11
Mykolaiv	95.5	-	100.0	-	100	-	100	-	100	-	100	-	62	-	71	-	86	-	71	-	5
Total	**92.8**	**-**	**98.1**	**-**	**82**	**-**	**75**	**-**	**57**	**-**	**42**	**-**	**27**	**-**	**22**	**-**	**57**	**-**	**35**	**-**	**13**
	Adherence to OST				***Attendance individual sessions***				***Attendance group session***				***Attendance family session***				***Attendance self-help groups***				***Adh. social sup.***
Phase 2	**6 mth**	**9 mth**	**12 mth**	**18 mth**	**6 mth**	**9 mth**	**12 mth**	**18 mth**	**6 mth**	**9 mth**	**12 mth**	**18 mth**	**6 mth**	**9 mth**	**12 mth**	**18 mth**	**6 mth**	**9 mth**	**12 mth**	**18 mth**	**6 mth**
	%yes	**%yes**	**%yes**	**%yes**	**%yes**	**%yes**	**%yes**	**%yes**	**%yes**	**%yes**	**%yes**	**%yes**	**%yes**	**%yes**	**%yes**	**%yes**	**%yes**	**%yes**	**%yes**	**%yes**	**%yes**
Kherson	100.0	-	-	-	100	-	-	-	100	-	-	-	45	-	-	-	0	-	-	-	20
Vinnytsya	100.0	-	-	-	65	-	-	-	65	-	-	-	15	-	-	-	30	-	-	-	55
Ivano-Fr.	100.0	-	-	-	100	-	-	-	90	-	-	-	50	-	-	-	55	-	-	-	30
Sumy	100.0	-	-	-	95	-	-	-	24	-	-	-	30	-	-	-	35	-	-	-	10
Total	**100.0**	**-**	**-**	**-**	**93**	**-**	**-**	**-**	**58**	**-**	**-**	**-**	**40**	**-**	**-**	**-**	**45**	**-**	**-**	**-**	**20**
	Adherence to OST				***Attendance individual sessions***				***Attendance group session***				***Attendance family session***				***Attendance self-help groups***				***Adh. social sup.***
Phase 3	**6 mth**	**9 mth**	**12 mth**	**18 mth**	**6 mth**	**9 mth**	**12 mth**	**18 mth**	**6 mth**	**9 mth**	**12 mth**	**18 mth**	**6 mth**	**9 mth**	**12 mth**	**18 mth**	**6 mth**	**9 mth**	**12 mth**	**18 mth**	**6 mth**
	%yes	**%yes**	**%yes**	**%yes**	**%yes**	**%yes**	**%yes**	**%yes**	**%yes**	**%yes**	**%yes**	**%yes**	**%yes**	**%yes**	**%yes**	**%yes**	**%yes**	**%yes**	**%yes**	**%yes**	**%yes**
Kiev	100.0	100.0	100.0	100.0	95.5	100.0	100.0	100.0	13.6	45.0	78.9	94.7	95.5	90.0	100.0	100.0	45.5	40.0	89.5	73.7	40.0
Donetsk	100.0	100.0	100.0	100.0	80.0	60.0	60.0	47.6	40.0	50.0	80.0	76.2	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	20.0
Dniepropetr	95.7	100.0	95.0	100.0	100.0	91.3	50.0	93.8	43.5	69.6	95.0	100.0	73.9	78.3	95.0	100.0	43.5	69.6	90.0	100.0	36.0
Mykolaiv	100.0	100.0	94.4	88.2	100.0	100.0	94.4	88.2	5.6	5.6	11.1	64.7	55.6	55.6	55.6	58.8	66.7	66.7	66.7	94.1	4.0
Total	98.9	100.0	97.4	97.1	93.9	87.8	76.1	82.4	25.7	42.6	66.3	83.9	81.3	81.0	87.7	89.7	63.9	69.1	86.6	92.0	29.0

Na = no answer

Patient compliance was measured in various ways: number of drug-positive urines, attendance at counseling sessions and adherence to the medical treatment and social support activities.

Attendance was best for individual counseling sessions, in 82% of patients on average at first follow-up, in 75% at second follow-up. Group and family sessions showed a lower attendance rate. At second follow-up, attendance generally was moderately reduced.

Adherence to the OST medication rules was high with 92.8% of rule compliance after 6 months and even higher with 98.1% after 12 months. The figures and especially the 100% adherence in Kiev show an active interest of patients to profit from what they are offered. Adherence to the social support activities is also high with 87% on average after 6 months (range 75-100%), and with 81% after 12 months (range 59-100%).

The rate of drug positive urines cannot be presented and interpreted because testing was rare and we do not know how the timing and the patients were chosen; many patients never had a urine test.

Compliance data from phases 2 and 3 show similar tendencies, with more social support attendance and less self-help attendance.

Table 15. Treatment data – treatment retention

Phase 1	**Enrolled**	**Retained in treatment**							
		6 months		**9 months**		**12 months**		**18 months**	
	No.	**No.**	**%**	**No.**	**%**	**No.**	**%**	**No.**	**%**
Kiev	25	19	76.0	-	-	17	68.0	-	-
Donetsk	25	22	88.0	-	-	21	84.0	-	-
Odessa	24	20	83.3	-	-	17	70.8	-	-
Simferopol	24	22	91.7	-	-	22	91.7	-	-
Dniepropetr.	25	20	80.0	-	-	20	80.0	-	-
Mykolaiv	28	22	78.6	-	-	21	75.0	-	-
Total	**151**	**125**	**82.8**	-	-	**118**	**78.1**	-	-
Phase 2	**Enrolled**	**Retained in treatment**							
		6 months		**9 months**		**12 months**		**18 months**	
	No.	**No.**	**%**	**No.**	**%**	**No.**	**%**	**No.**	**%**
Vinnytsya	20	18	90.0	-	-	-	-	-	-
Kherson	20	14	70.0	-	-	-	-	-	-
Ivano-Fr.	20	19	95.0	-	-	-	-	-	-
Sumy	20	18	90.0	-	-	-	-	-	-
Total	**80**	**69**	**86.3**	-	-	-	-	-	-
Phase 3	**Enrolled**	**Retained in treatment**							
		6 months		**9 months**		**12 months**		**18 months**	
	No.	**No.**	**%**	**No.**	**%**	**No.**	**%**	**No.**	**%**
Kiev	25	21	84.0	20	80.0	19	76.0	19	76.0
Donetsk	25	25	100.0	19	90.5	19	90.5	19	90.5
Dniepropetr	25	23	92.0	21	91.3	21	95.5	19	86.4
Mykolaiv	25	18	72.0	18	72.0	17	68.0	15	60.0
Total	**100**	**87**	**87.0**	**78**	**83.0**	**76**	**81.7**	**72**	**77.4**

During the follow-up period in phase 1, 17.2% of all patients have left the treatment program after 6 months and 21.9 % after 12 months. The highest drop-out rate was noted in Kiev with 32%, the lowest in Donetsk with 16%. Most of the drop-outs were due to continued illicit consumption and irregular attendance. Only few patients left OST in order to change to drug-free treatment (1.4% of all patients), and also a few cases died, were incarcerated or excluded from programme due to violence. In phase 3 due to increased availability of

substitution treatment in Ukraine by the end of the study 7 subjects moved to other OST sites, and were excluded from the sample size in calculation of retention percentage.

The retention rate in OST during phase 1 was 82.8% after 6 months and 78% after 12 months. Retention over 6 months during phase 2 higher for Buprenorphine (92.5%) compared to Methadone (85%).

Retention at Methadone sites in phase 3 was higher compared to previous phases both at 6 month and 12 month follow-up points.

Overall, retention at both Methadone and Buprenorphine OST sites in the study was good, comparing to the data from studies in other countries.

6.3. Patient follow-up data

All follow-up data on patients who stayed in the treatment program are recorded in the ASI, repeated 6 and 12 months after entering OST, or in the patient record. This allows to measure changes over time in a number of dimensions, such as drug consumption, somatic and psychological health, risk taking behaviour, employment and legal status and family problems.

Table 16. Change over time - substance use last 30 days (1)

	Alcohol intox.					*Heroin*					*Bup/Meth*					*Other opiates*				
Phase 1	**BL**	**6 mth**	**9 mth**	**12 mth**	**18 mth**	**BL**	**6 mth**	**9 mth**	**12 mth**	**18 mth**	**BL**	**6 mth**	**9 mth**	**12 mth**	**18 mth**	**BL**	**6 mth**	**9 mth**	**12 mth**	**18 mth**
	%yes	**%yes**	**%yes**	**%yes**	**%yes**	**%yes**	**%yes**	**%yes**	**%yes**	**%yes**	**%yes**	**%yes**	**%yes**	**%yes**	**%yes**	**%yes**	**%yes**	**%yes**	**%yes**	**%yes**
Kiev	0	0	-	0	-	16	0	-	0	-	24	76	-	68	-	88	0	-	18	-
Donetsk	8	4	-	0	-	0	0	-	0	-	12	88	-	84	-	92	4	-	13	-
Odessa	4	21	-	23	-	0	0	-	0	-	0	83	-	71	-	99	5	-	6	-
Simferopol	36	0	-	33	-	4	0	-	0	-	4	92	-	72	-	86	0	-	0	-
Dniepropetr.	0	0	**-**	0	**-**	0	0	**-**	0	**-**	4	80	**-**	79	**-**	92	0	**-**	0	**-**
Mykolaiv	4	0	-	0	-	0	0	-	0	-	18	80	-	74	-	87	0	-	0	-
Total	**8.7**	**4.2**	**-**	**9.3**	**-**	**3.3**	**0.0**	**-**	**0.0**	**-**	**10.3**	**83.2**	**-**	**74.7**	**-**	**90.7**	**1.5**	**-**	**6.2**	**-**
	Alcohol intox.					*Heroin*					*Bup/Meth*					*Other opiates*				
Phase 2	**BL**	**6 mth**	**9 mth**	**12 mth**	**18 mth**	**BL**	**6 mth**	**9 mth**	**12 mth**	**18 mth**	**BL**	**6 mth**	**9 mth**	**12 mth**	**18 mth**	**BL**	**6 mth**	**9 mth**	**12 mth**	**18 mth**
	%yes	**%yes**	**%yes**	**%yes**	**%yes**	**%yes**	**%yes**	**%yes**	**%yes**	**%yes**	**%yes**	**%yes**	**%yes**	**%yes**	**%yes**	**%yes**	**%yes**	**%yes**	**%yes**	**%yes**
Kherson	0	0	-	-	-	0	0	-	-	-	0	70	-	-	-	99	0	-	-	-
Vinnytsya	0	0	-	-	-	0	0	-	-	-	10	90	-	-	-	99	0	-	-	-
Ivano-Fr.	0	15	-	-	-	0	0	-	-	-	55	95	-	-	-	45	20	-	-	-
Sumy	0	0	-	-	-	0	0	-	-	-	60	85	-	-	-	40	0	-	-	-
Total	**0**	**3.8**	**-**	**-**	**-**	**0**	**0**	**-**	**-**	**-**	**31.3**	**85.0**	**-**	**-**	**-**	**70.8**	**5.0**	**-**	**-**	**-**
	Alcohol intox.					*Heroin*					*Bup/Meth*					*Other opiates*				
Phase 3	**BL**	**6 mth**	**9 mth**	**12 mth**	**18 mth**	**BL**	**6 mth**	**9 mth**	**12 mth**	**18 mth**	**BL**	**6 mth**	**9 mth**	**12 mth**	**18 mth**	**BL**	**6 mth**	**9 mth**	**12 mth**	**18 mth**
	%yes	**%yes**	**%yes**	**%yes**	**%yes**	**%yes**	**%yes**	**%yes**	**%yes**	**%yes**	**%yes**	**%yes**	**%yes**	**%yes**	**%yes**	**%yes**	**%yes**	**%yes**	**%yes**	**%yes**
Kiev	0.0	0.0	0.0	0.0	0.0	28.0	4.5	0.0	0.0	0.0	32.0	100.0	100.0	100.0	100.0	92.0	9.1	5.0	0.0	0.0
Donetsk	4.0	0.0	9.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	12.0	100.0	100.0	100.0	100.0	96.0	20.8	0.0	0.0	9.1
Dniepropetr	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.5	0.0	0.0	0.0	100.0	100.0	100.0	100.0	88.0	13.0	0.0	0.0	0.0
Mykolaiv	84.0	11.1	50.0	16.7	41.2	20.0	0.0	0.0	0.0	0.0	20.0	100.0	100.0	100.0	100.0	96.0	0.0	0.0	0.0	5.9
Total	**22.0**	**2.8**	**14.9**	**4.2**	**10.3**	**12.0**	**1.1**	**1.1**	**0.0**	**0.0**	**16.0**	**100.0**	**100.0**	**100.0**	**100.0**	**93.0**	**10.7**	**1.3**	**0.0**	**3.8**

Table 17. Change over time - substance use last 30 days (2)

	Barbiturates					***Sedatives/tranquilizers***					***Amphetamines***				
Phase 1	**BL**	**6 mth**	**9 mth**	**12 mth**	**18 mth**	**BL**	**6 mth**	**9 mth**	**12 mth**	**18 mth**	**BL**	**6 mth**	**9 mth**	**12 mth**	**18 mth**
	%yes	**%yes**	**%yes**	**%yes**	**%yes**	**%yes**	**%yes**	**%yes**	**%yes**	**%yes**	**%yes**	**%yes**	**%yes**	**%yes**	**%yes**
Kiev	76	5	-	6	-	56	10	-	12	-	12	0	-	0	-
Donetsk	4	0	-	0	-	20	9	-	7	-	4	0	-	7	-
Odessa	4	0	-	24	-	37	89	-	77	-	0	0	-	29	-
Simferopol	0	0	-	0	-	32	0	-	0	-	0	0	-	0	-
Dniepropetr.	4	0	-	0	-	33	0	-	0	-	4	0	-	0	-
Mykolaiv	0	0	-	0	-	29	0	-	5	-	0	0	-	0	-
Total	**14.7**	**0.8**	**-**	**5.0**	**-**	**34.5**	**18.0**	**-**	**16.8**	**-**	**3.3**	**0.0**	**-**	**6.0**	**-**
	Barbiturates					***Sedatives/tranquilizers***					***Amphetamines***				
Phase 2	**BL**	**6 mth**	**9 mth**	**12 mth**	**18 mth**	**BL**	**6 mth**	**9 mth**	**12 mth**	**18 mth**	**BL**	**6 mth**	**9 mth**	**12 mth**	**18 mth**
	%yes	**%yes**	**%yes**	**%yes**	**%yes**	**%yes**	**%yes**	**%yes**	**%yes**	**%yes**	**%yes**	**%yes**	**%yes**	**%yes**	**%yes**
Kherson	0	0	-	-	-	0	0	-	-	-	0	0	-	-	-
Vinnytsya	5	0	-	-	-	55	0	-	-	-	20	0	-	-	-
Ivano-Fr.	10	5	-	-	-	35	15	-	-	-	10	10	-	-	-
Sumy	10	0	-	-	-	10	15	-	-	-	0	5	-	-	-
Total	**6.3**	**1.3**	**-**	**-**	**-**	**25.0**	**7.5**	**-**	**-**	**-**	**7.5**	**3.8**	**-**	**-**	**-**
	Barbiturates					***Sedatives/tranquilizers***					***Amphetamines***				
Phase 3	**BL**	**6 mth**	**9 mth**	**12 mth**	**18 mth**	**BL**	**6 mth**	**9 mth**	**12 mth**	**18 mth**	**BL**	**6 mth**	**9 mth**	**12 mth**	**18 mth**
	%yes	**%yes**	**%yes**	**%yes**	**%yes**	**%yes**	**%yes**	**%yes**	**%yes**	**%yes**	**%yes**	**%yes**	**%yes**	**%yes**	**%yes**
Kiev	56.0	9.1	0.0	5.0	5.0	44.0	0.0	0.0	0.0	0.0	0.0	4.5	0.0	0.0	0.0
Donetsk	24.0	4.2	0.0	0.0	4.5	36.0	37.5	9.5	0.0	0.0	20.0	0.0	4.8	0.0	9.1
Dniepropetr	0.0	0.0	0.0	0.0	0.0	0.0	47.8	0.0	0.0	0.0	12.0	0.0	0.0	0.0	0.0
Mykolaiv	48.0	0.0	0.0	0.0	0.0	80.0	88.9	0.0	0.0	5.9	64.0	0.0	5.6	0.0	5.9
Total	**32.0**	**3.3**	**0.0**	**1.3**	**2.4**	**40.0**	**43.6**	**2.4**	**0.0**	**1.5**	**24.0**	**1.1**	**2.6**	**0.0**	**3.8**

Table 18. Change over time - substance use last 30 days (3)

	Cannabis					*Polydrug use*					*ASI score alcohol (min 0, max 1)*					*ASI score drugs (min 0, max 1)*				
Phase 1	**BL**	**6 mth**	**9 mth**	**12 mth**	**18 mth**	**BL**	**6 mth**	**9 mth**	**12 mth**	**18 mth**	**BL**	**6 mth**	**9 mth**	**12 mth**	**18 mth**	**BL**	**6 mth**	**9 mth**	**12 mth**	**18 mth**
	%yes	**%yes**	**%yes**	**%yes**	**%yes**	**%yes**	**%yes**	**%yes**	**%yes**	**%yes**	**mean**	**mean**	**mean**	**mean**	**mean**	**mean**	**mean**	**mean**	**mean**	**mean**
Kiev	36	0	-	6	-	72	0	-	6	-	0.01	0.00	-	0.00	-	0.40	0.03	-	0.01	-
Donetsk	40	32	-	7	-	16	27	-	0	-	0.09	0.05	-	0.02	-	0.37	0.12	-	0.08	-
Odessa	58	16	-	47	-	79	84	-	12	-	0.07	0.09	-	0.14	-	0.32	0.19	-	0.12	-
Simferopol	52	28	-	29	-	56	0	-	0	-	0.10	0.08	-	0.06	-	0.13	0.09	-	0.06	-
Dniepropetr	13	0	-	0	-	61	0	-	0	-	0.07	0.01	-	0.01	-	0.29	0.00	-	0.00	-
Mykolaiv	11	4	-	0	-	36	0	-	5	-	0.04	0.00	-	0.02	-	0.19	0.07	-	0.04	-
Total	**35.0**	**13.3**	**-**	**14.8**	**-**	**53.3**	**18.5**	**-**	**3.8**	**-**	**0.06**	**0.04**	**-**	**0.04**	**-**	**0.26**	**0.08**	**-**	**0.05**	**-**
	Cannabis					*Polydrug use*					*ASI score alcohol (min 0, max 1)*					*ASI score drugs (min 0, max 1)*				
Phase 2	**BL**	**6 mth**	**9 mth**	**12 mth**	**18 mth**	**BL**	**6 mth**	**9 mth**	**12 mth**	**18 mth**	**BL**	**6 mth**	**9 mth**	**12 mth**	**18 mth**	**BL**	**6 mth**	**9 mth**	**12 mth**	**18 mth**
	%yes	**%yes**	**%yes**	**%yes**	**%yes**	**%yes**	**%yes**	**%yes**	**%yes**	**%yes**	**mean**	**mean**	**mean**	**mean**	**mean**	**mean**	**mean**	**mean**	**mean**	**mean**
Kherson	0	0	-	-	-	0	0	-	-	-	0.01	0.00	-	-	-	0.18	0.00	-	-	-
Vinnytsya	25	0	-	-	-	45	0	-	-	-	0.06	0.00	-	-	-	0.33	0.02	-	-	-
Ivano-Fr.	15	5	-	-	-	0	0	-	-	-	0.06	0.03	-	-	-	0.07	0.09	-	-	-
Sumy	15	0	-	-	-	0	0	-	-	-	0.03	0.04	-	-	-	0.12	0.13	-	-	-
Total	**13.8**	**1.3**	-	-	-	**11.3**	**0.0**	-	-	-	**0.04**	**0.02**	-	-	-	**0.18**	**0.06**	**-**	**-**	**-**
	Cannabis					*Polydrug use*					*ASI score alcohol (min 0, max 1)*					*ASI score drugs (min 0, max 1)*				
Phase 3	**BL**	**6 mth**	**9 mth**	**12 mth**	**18 mth**	**BL**	**6 mth**	**9 mth**	**12 mth**	**18 mth**	**BL**	**6 mth**	**9 mth**	**12 mth**	**18 mth**	**BL**	**6 mth**	**9 mth**	**12 mth**	**18 mth**
	%yes	**%yes**	**%yes**	**%yes**	**%yes**	**%yes**	**%yes**	**%yes**	**%yes**	**%yes**	**mean**	**mean**	**mean**	**mean**	**mean**	**mean**	**mean**	**mean**	**mean**	**mean**
Kiev	48.0	9.1	45.0	30.0	25.0	80.0	9.1	30.0	15.0	0.5	0.08	0.02	0.03	0.03	0.03	0.22	0.08	0.05	0.03	0.02
Donetsk	28.0	12.5	19.0	14.3	4.5	12.0	0.0	0.0	4.8	0.0	0.07	0.03	0.05	0.02	0.02	0.27	0.10	0.08	0.07	0.07
Dniepropetr	12.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.01	0.00	0.00	0.22	0.08	0.08	0.06	0.02
Mykolaiv	96.0	83.3	72.2	66.7	52.9	68.0	0.0	5.6	0.0	1.9	0.04	0.00	0.02	0.01	0.01	0.22	0.01	0.01	0.01	0.01
Total	**46.0**	**26.2**	**34.1**	**27.8**	**20.6**	**40.0**	**2.3**	**8.9**	**5.0**	**0.6**	**0.05**	**0.01**	**0.03**	**0.02**	**0.02**	**0.23**	**0.07**	**0.06**	**0.04**	**0.03**

The reduction in the main substance use (“other opiates”) is massive: from over 90% to 1-10% of patients using it during the last 30 days after 6 months, and 0-6% after 12 months. At the same time, the rates for Buprenorphine went up from 21% to 83% after 6 months, 76% after 12 months (the high baseline values for Buprenorphine are due to low dosages received by eligible patients before recruitment; the dosages were so low that it was not considered treatment). Also remarkable are the reductions in cannabis use (from 35% to 15% after 12 months in phase 1, 46% to 28% in phase 3), in sedative use (from 35% to 17% and from 40% to 0% respectively), barbiturate use (from 15% to 5% and 32% to 1% respectively), and most significantly in polydrug use (from 53% to 4% and from 40% to 5%, respectively). This confirms that enrolment in OST not only is a replacement of illicit opiates by a legal opioid, but an effective way to reduce other substance use significantly as well.

The only “compensatory” increase in substance use concerns alcohol intoxication and cannabis use in Simferopol and Odessa in phase 1 and Ivano-Frankivsk in phase 2, not in other sites.

During phase 1, the ASI drug severity score is massively reduced from 0.26 at entry to 0.08 after 6 months and 0.05 after 12 months. The ASI alcohol score, on the other side, is reduced from initially 0.06% to 0.04% during all follow-up. Comparable reductions in both ASI drug and alcohol scores were observed in phases 2 and 3.

During phase 2, the reduction of ASI scores is almost identical for Methadone patients (from 0.24 to 0.06 after 6 months), while the values for Buprenorphine patients remain questionable (baseline 0.10, follow-up 0.11). Alcohol scores remain practically unchanged.

Use of cocaine, hallucinogens and inhalants was negligible or zero at baseline as well as follow-up and therefore is not included in the tables.

Table 19. Change over time - somatic disorders (1)

	HIV positive					*Abnormal weight*					*Trophic ulcer*					*Digestion problems*				
Phase 1	**BL**	**6 mth**	**9 mth**	**12 mth**	**18 mth**	**BL**	**6 mth**	**9 mth**	**12 mth**	**18 mth**	**BL**	**6 mth**	**9 mth**	**12 mth**	**18 mth**	**BL**	**6 mth**	**9 mth**	**12 mth**	**18 mth**
	%yes	**%yes**	**%yes**	**%yes**	**%yes**	**%yes**	**%yes**	**%yes**	**%yes**	**%yes**	**%yes**	**%yes**	**%yes**	**%yes**	**%yes**	**%yes**	**%yes**	**%yes**	**%yes**	**%yes**
Kiev	44	44	-	53	-	38	74	-	85	-	8	0	-	7	-	38	42	-	36	-
Donetsk	80	80	-	80	-	52	58	-	54	-	4	0	-	0	-	32	8	-	1	-
Odessa	42	42	-	35	-	46	40	-	56	-	0	0	-	0	-	17	0	-	0	-
Simferopol	48	48	-	48	-	48	79	-	59	-	8	0	-	6	-	32	21	-	18	-
Dniepropetr.	46	46	-	40	-	68	58	-	40	-	9	10	-	6	-	9	11	-	53	-
Mykolaiv	50	50	-	70	-	82	52	-	60	-	15	10	-	0	-	40	5	-	14	-
Total	**51.7**	**51.7**	**-**	**54.3**	**-**	**55.7**	**60.2**	**-**	**59.0**	**-**	**7.3**	**3.3**	**-**	**3.2**	**-**	**28.0**	**14.5**	**-**	**20.3**	**-**
	HIV positive					*Abnormal weight*					*Trophic ulcer*					*Digestion problems*				
Phase 2	**BL**	**6 mth**	**9 mth**	**12 mth**	**18 mth**	**BL**	**6 mth**	**9 mth**	**12 mth**	**18 mth**	**BL**	**6 mth**	**9 mth**	**12 mth**	**18 mth**	**BL**	**6 mth**	**9 mth**	**12 mth**	**18 mth**
	%yes	**%yes**	**%yes**	**%yes**	**%yes**	**%yes**	**%yes**	**%yes**	**%yes**	**%yes**	**%yes**	**%yes**	**%yes**	**%yes**	**%yes**	**%yes**	**%yes**	**%yes**	**%yes**	**%yes**
Kherson	30	30	-	-	-	25	40	-	-	-	10	0	-	-	-	35	20	-	-	-
Vinnytsya	20	20	-	-	-	60	75	-	-	-	10	10	-	-	-	55	35	-	-	-
Ivano-Fr.	30	35	-	-	-	40	70	-	-	-	5	0	-	-	-	5	0	-	-	-
Sumy	40	30	-	-	-	60	75	-	-	-	25	15	-	-	-	65	35	-	-	-
Total	**30.0**	**28.8**	**-**	**-**	**-**	**46.3**	**65.0**	**-**	**-**	**-**	**12.5**	**6.3**	**-**	**-**	**-**	**40.0**	**22.5**	**-**	**-**	**-**
	HIV positive					*Abnormal weight*					*Trophic ulcer*					*Digestion problems*				
Phase 3	**BL**	**6 mth**	**9 mth**	**12 mth**	**18 mth**	**BL**	**6 mth**	**9 mth**	**12 mth**	**18 mth**	**BL**	**6 mth**	**9 mth**	**12 mth**	**18 mth**	**BL**	**6 mth**	**9 mth**	**12 mth**	**18 mth**
	%yes	**%yes**	**%yes**	**%yes**	**%yes**	**%yes**	**%yes**	**%yes**	**%yes**	**%yes**	**%yes**	**%yes**	**%yes**	**%yes**	**%yes**	**%yes**	**%yes**	**%yes**	**%yes**	**%yes**
Kiev	92	84	76	72	72	32	9.1	45	5.3	15.8	8	4.5	0	0	5.3	36	0	5	0	0
Donetsk	60	56	40	40	44	52	16	75	30	57.1	8	0	0	0	0	32	16	45	30	19
Dniepropetr	100	92	92	80	64	36	47.8	47.8	35	25	16	4.3	0	0	0	16	43.5	31.8	10	0
Mykolaiv	48	28	32	32	32	36	11.1	11.1	11.1	23.5	8	0	0	0	0	32	16.7	16.7	11.1	17.6
Total	**75.0**	**65.0**	**60.0**	**56.0**	**53.0**	**39.0**	**21.0**	**44.7**	**20.4**	**30.4**	**10.0**	**2.2**	**0.0**	**0.0**	**1.3**	**29.0**	**19.1**	**24.6**	**12.8**	**9.2**

Table 20. Change over time - somatic disorders (2)

	Urination problems					*Sexual problems*					*ASI score medical (min 0, max 1)*				
Phase 1	**BL**	**6 mth**	**9 mth**	**12 mth**	**18 mth**	**BL**	**6 mth**	**9 mth**	**12 mth**	**18 mth**	**BL**	**6 mth**	**9 mth**	**12 mth**	**18 mth**
	%yes	**%yes**	**%yes**	**%yes**	**%yes**	**%yes**	**%yes**	**%yes**	**%yes**	**%yes**	**mean**	**mean**	**mean**	**mean**	**mean**
Kiev	8	0	-	7	-	13	32	-	50	-	0.22	0.21	-	0.26	-
Donetsk	16	0	-	0	-	36	17	-	8	-	0.29	0.35	-	0.15	-
Odessa	13	0	-	0	-	0	0	-	0	-	0.39	0.31	-	0.29	-
Simferopol	16	5	-	12	-	4	5	-	6	-	0.32	0.14	-	0.09	-
Dniepropetr.	0	0	-	5	-	27	16	-	16	-	0.09	0.09	-	0.03	-
Mykolaiv	7	0	-	5	-	4	0	-	0	-	0.42	0.23	-	0.15	-
Total	**10.0**	**0.8**	**-**	**4.8**	**-**	**14.0**	**11.7**	**-**	**13.3**	**-**	**0.29**	**0.22**	**-**	**0.16**	**-**
	Urination problems					*Sexual problems*					*ASI score medical (min 0, max 1)*				
Phase 2	**BL**	**6 mth**	**9 mth**	**12 mth**	**18 mth**	**BL**	**6 mth**	**9 mth**	**12 mth**	**18 mth**	**BL**	**6 mth**	**9 mth**	**12 mth**	**18 mth**
	%yes	**%yes**	**%yes**	**%yes**	**%yes**	**%yes**	**%yes**	**%yes**	**%yes**	**%yes**	**mean**	**mean**	**mean**	**mean**	**mean**
Kherson	20	0	-	-	-	15	0	-	-	-	0.10	0.07	-	-	-
Vinnytsya	20	10	-	-	-	5	5	-	-	-	0.21	0.01	-	-	-
Ivano-Fr.	0	0	-	-	-	0	0	-	-	-	0.27	0.28	-	-	-
Sumy	30	10	-	-	-	15	0	-	-	-	0.33	0.43	-	-	-
Total	**17.5**	**5.0**	**-**	**-**	**-**	**8.8**	**1.3**	**-**	**-**	**-**	**0.23**	**0.20**	**-**	**-**	**-**
	Urination problems					*Sexual problems*					*ASI score medical (min 0, max 1)*				
Phase 3	**BL**	**6 mth**	**9 mth**	**12 mth**	**18 mth**	**BL**	**6 mth**	**9 mth**	**12 mth**	**18 mth**	**BL**	**6 mth**	**9 mth**	**12 mth**	**18 mth**
	%yes	**%yes**	**%yes**	**%yes**	**%yes**	**%yes**	**%yes**	**%yes**	**%yes**	**%yes**	**mean**	**mean**	**mean**	**mean**	**mean**
Kiev	0	0	0	0	0	0	0	0	0	0	0.4	0.27	0.15	0.2	0.19
Donetsk	4	0	5	0	0	12	12	15	0	4.8	0.11	0.16	0.05	0.2	0.24
Dniepropetr	16	17.4	17.4	0	0	8	47.8	47.8	0	6.3	0.14	0.01	0.09	0.03	0
Mykolaiv	12	0	0	0	0	0	0	0	0	0	0.15	0.06	0	0.1	0.12
Total	**8.0**	**4.4**	**5.6**	**0.0**	**0.0**	**5.0**	**15.0**	**15.7**	**0.0**	**2.8**	**0.20**	**0.13**	**0.07**	**0.13**	**0.14**

For all conditions listed above, the prevalence rates were reduced during the first follow-up period, while a re-increase was noted at 12 months follow-up for digestion problems, urination problems and sexual problems. The ASI score for medical conditions however was continually reduced from 0.29 at entry to 0.16 after 12 months.

There was some increase of HIV-infection prevalence at 12 months follow-up in the first phase due to higher drop-out of seronegative subjects. No new infections are recorded during follow-up, but it is unclear if new tests were performed on the seronegative patients.

During phase 2, comparable changes were observed, the ASI score for medical problems in Methadone patients was reduced from 0.23 to 0.2 after 6 months. However the change was noticeable only in Methadone patients. HIV prevalence in phases 2 and 3 has decreased due to higher dropout of seropositive subjects.

Table 21. Change over time - psychological disorders (patient ratings)(1)

	Depression					***Anxiety***					***Hallucination***					***Cognitive impairment***				
Phase 3	**BL**	**6 mth**	**9 mth**	**12 mth**	**18 mth**	**BL**	**6 mth**	**9 mth**	**12 mth**	**18 mth**	**BL**	**6 mth**	**9 mth**	**12 mth**	**18 mth**	**BL**	**6 mth**	**9 mth**	**12 mth**	**18 mth**
	%yes	**%yes**	**%yes**	**%yes**	**%yes**	**%yes**	**%yes**	**%yes**	**%yes**	**%yes**	**%yes**	**%yes**	**%yes**	**%yes**	**%yes**	**%yes**	**%yes**	**%yes**	**%yes**	**%yes**
Kiev	68	60	-	35	-	84	75	-	53	-	4	0	-	0	-	52	15	-	18	-
Donetsk	64	41	-	20	-	44	59	-	33	-	8	9	-	0	-	28	9	-	0	-
Odessa	79	32	-	71	-	88	84	-	77	-	0	0	-	0	-	21	5	-	19	-
Simferopol	8	0	-	0	-	8	0	-	0	-	0	0	-	0	-	0	0	-	0	-
Dniepropetr.	58	11	-	0	-	88	11	-	11	-	0	0	-	0	-	13	0	-	0	-
Mykolaiv	54	29	-	10	-	58	63	-	35	-	0	4	-	0	-	7	8	-	5	-
Total	**55.2**	**28.8**	**-**	**22.7**	**-**	**61.7**	**48.7**	**-**	**34.8**	**-**	**2.0**	**2.2**	**-**	**0.0**	**-**	**20.2**	**6.2**	**-**	**7.0**	**-**
	Depression					***Anxiety***					***Hallucination***					***Cognitive impairment***				
Phase 3	**BL**	**6 mth**	**9 mth**	**12 mth**	**18 mth**	**BL**	**6 mth**	**9 mth**	**12 mth**	**18 mth**	**BL**	**6 mth**	**9 mth**	**12 mth**	**18 mth**	**BL**	**6 mth**	**9 mth**	**12 mth**	**18 mth**
	%yes	**%yes**	**%yes**	**%yes**	**%yes**	**%yes**	**%yes**	**%yes**	**%yes**	**%yes**	**%yes**	**%yes**	**%yes**	**%yes**	**%yes**	**%yes**	**%yes**	**%yes**	**%yes**	**%yes**
Kherson	35	5	-	-	-	30	10	-	-	-	0	0	-	-	-	0	0	-	-	-
Vinnytsya	80	30	-	-	-	85	60	-	-	-	0	0	-	-	-	50	30	-	-	-
Ivano-Fr.	70	70	-	-	-	70	35	-	-	-	0	0	-	-	-	35	40	-	-	-
Sumy	40	80	-	-	-	35	35	-	-	-	5	0	-	-	-	10	0	-	-	-
Total	**56.3**	**46.3**		**-**	**-**	**55.0**	**35.0**	**-**	**-**	**-**	**1.3**	**0.0**		**-**	**-**	**23.8**	**17.5**		**-**	**-**
	Depression					***Anxiety***					***Hallucination***					***Cognitive impairment***				
Phase 3	**BL**	**6 mth**	**9 mth**	**12 mth**	**18 mth**	**BL**	**6 mth**	**9 mth**	**12 mth**	**18 mth**	**BL**	**6 mth**	**9 mth**	**12 mth**	**18 mth**	**BL**	**6 mth**	**9 mth**	**12 mth**	**18 mth**
	%yes	**%yes**	**%yes**	**%yes**	**%yes**	**%yes**	**%yes**	**%yes**	**%yes**	**%yes**	**%yes**	**%yes**	**%yes**	**%yes**	**%yes**	**%yes**	**%yes**	**%yes**	**%yes**	**%yes**
Kiev	68	54.5	40	40	25	64.0	77.3	60.0	50.0	40.0	4.0	4.5	0.0	0.0	0.0	52.0	13.6	25.0	15.0	10.0
Donetsk	56	37.5	19	19	9.1	52.0	8.3	14.3	9.5	9.1	0.0	0.0	0.0	0.0	0.0	16.0	4.2	0.0	0.0	0.0
Dniepropetr	36	8.7	0	0	5.9	32.0	17.4	4.5	0.0	5.9	0.0	0.0	0.0	0.0	0.0	12.0	0.0	0.0	0.0	0.0
Mykolaiv	76	0	5.6	11.1	5.9	84.0	0.0	22.2	11.1	5.9	0.0	0.0	0.0	0.0	0.0	32.0	0.0	22.2	0.0	5.9
Total	**59.0**	**25.2**	**16.2**	**17.5**	**11.5**	**58.0**	**25.8**	**25.3**	**17.7**	**15.2**	**1.0**	**1.1**	**0.0**	**0.0**	**0.0**	**28.0**	**4.5**	**11.8**	**3.8**	**4.0**

Table 22. Change over time - psychological disorders (patient ratings)(2)

	Aggression					*Suicidal attempts*					*ASI score psychiat.*				
Phase 1	**BL**	**6 mth**	**9 mth**	**12 mth**	**18 mth**	**BL**	**6 mth**	**9 mth**	**12 mth**	**18 mth**	**BL**	**FU1**	**FU2**	**FU3**	**FU4**
	%yes	**%yes**	**%yes**	**%yes**	**%yes**	**%yes**	**%yes**	**%yes**	**%yes**	**%yes**	**mean**	**mean**	**mean**	**mean**	**mean**
Kiev	32	10	-	12	-	8	0	-	0	-	0.38	0.25	-	0.19	-
Donetsk	20	32	-	0	-	0	0	-	0	-	0.28	0.24	-	0.10	-
Odessa	4	0	-	0	-	0	0	-	0	-	0.36	0.20	-	0.24	-
Simferopol	8	4	-	5	-	4	0	-	0	-	0.07	0.03	-	0.06	-
Dniepropetr.	0	0	-	0	-	0	0	-	0	-	0.33	0.03	-	0.02	-
Mykolaiv	25	8	-	0	-	0	0	-	0	-	0.21	0.14	-	0.03	-
Total	**14.8**	**9.0**	**-**	**2.8**	**-**	**2.0**	**0.0**	**-**	**0.0**	**-**	**0.27**	**0.15**	**-**	**0.10**	**-**
	Aggression					*Suicidal attempts*					*ASI score psychiat.*				
Phase 2	**BL**	**6 mth**	**9 mth**	**12 mth**	**18 mth**	**BL**	**6 mth**	**9 mth**	**12 mth**	**18 mth**	**BL**	**FU1**	**FU2**	**FU3**	**FU4**
	%yes	**%yes**	**%yes**	**%yes**	**%yes**	**%yes**	**%yes**	**%yes**	**%yes**	**%yes**	**mean**	**mean**	**mean**	**mean**	**mean**
Kherson	0	0	-	-	-	0	0	-	-	-	0.04	0.08	-	-	-
Vinnytsya	5	0	-	-	-	30	0	-	-	-	0.05	0.36	-	-	-
Ivano-Fr.	15	20	-	-	-	10	0	-	-	-	0.33	0.19	-	-	-
Sumy	35	25	-	-	-	10	5	-	-	-	0.22	0.12	-	-	-
Total	**13.8**	**11.3**		**-**	**-**	**12.5**	**1.3**		**-**	**-**	**0.16**	**0.19**	**-**	**-**	**-**
	Aggression					*Suicidal attempts*					*ASI score psychiat.*				
Phase 3	**BL**	**6 mth**	**9 mth**	**12 mth**	**18 mth**	**BL**	**6 mth**	**9 mth**	**12 mth**	**18 mth**	**BL**	**FU1**	**FU2**	**FU3**	**FU4**
	%yes	**%yes**	**%yes**	**%yes**	**%yes**	**%yes**	**%yes**	**%yes**	**%yes**	**%yes**	**mean**	**mean**	**mean**	**mean**	**mean**
Kiev	16.0	36.4	30.0	20.0	10.0	0.0	0.0	0.0	0.0	0.0	0.12	0.13	0.1	0.08	0.05
Donetsk	8.0	4.2	4.8	4.8	4.5	0.0	0.0	0.0	0.0	0.0	0.18	0.09	0.07	0.06	0.03
Dniepropetr	8.0	4.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.14	0.05	0	0	0.01
Mykolaiv	44.0	0.0	11.1	0.0	5.9	0.0	0.0	0.0	0.0	0.0	0.18	0	0.02	0.02	0.01
Total	**19.0**	**11.2**	**11.5**	**6.2**	**5.1**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.16**	**0.07**	**0.05**	**0.04**	**0.03**

According to patient self-ratings, all psychiatric disorders listed below show a reduction in prevalence rates after 6 months and 12 months enrolment in the OST programme. Especially the reductions in depressions (from 55% to 23% after 12 months) and anxiety states (from 62% to 35%) are impressive.

The improvements during the 6 months in phase 3 are the same for Methadone patients, less so for the Buprenorphine patients in phase 2.

ASI scores for psychiatric problems were equally reduced for Buprenorphine patients, but not for Methadone patients in phase 2. Methadone patients in phase 2 had similar reduction to Buprenorphine patients.

Table 23. Change over time: risk taking behaviour

	BBV-TRAQ score injecting					***BBV-TRAQ score sexual***					***BBV-TRAQ score skin pen.***				
Phase 1	**BL**	**6 mth**	**9 mth**	**12 mth**	**18 mth**	**BL**	**6 mth**	**9 mth**	**12 mth**	**18 mth**	**BL**	**6 mth**	**9 mth**	**12 mth**	**18 mth**
	mean	**mean**	**mean**	**mean**	**mean**	**mean**	**mean**	**mean**	**mean**	**mean**	**mean**	**mean**	**mean**	**mean**	**mean**
Kiev	14.0	0.3	-	1.5	-	5.9	7.1	-	4.7	-	1.7	2.8	-	1.2	-
Donetsk	18.5	0.4	-	0.3	-	14.3	8.0	-	1.3	-	7.0	2.2	-	0.8	-
Odessa	19.0	1.5	-	1.9	-	5.6	4.2	-	0.1	-	1.7	0.4	-	1.1	-
Simferopol	9.6	4.6	-	10.0	-	12.3	7.5	-	11.9	-	2.3	0.5	-	9.2	-
Dniepropetr.	9.3	0.0	-	0.0	-	7.8	0.2	-	2.9	-	2.0	0.4	-	0.0	-
Mykolaiv	4.9	0.0	-	2.4	-	2.5	1.4	-	9.6	-	0.9	1.4	-	3.8	-
Total	12.4	1.1	-	2.4	-	7.8	4.7	-	0.0	-	2.5	1.3	-	2.6	-
	BBV-TRAQ score injecting					***BBV-TRAQ score sexual***					***BBV-TRAQ score skin pen.***				
Phase 2	**BL**	**6 mth**	**9 mth**	**12 mth**	**18 mth**	**BL**	**6 mth**	**9 mth**	**12 mth**	**18 mth**	**BL**	**6 mth**	**9 mth**	**12 mth**	**18 mth**
	mean	**mean**	**mean**	**mean**	**mean**	**mean**	**mean**	**mean**	**mean**	**mean**	**mean**	**mean**	**mean**	**mean**	**mean**
Kherson	4.2	4.0	-	-	-	2.6	3.6	-	-	-	1.2	0.1	-	-	-
Vinnytsya	7.6	0.2	-	-	-	6.0	8.2	-	-	-	1.6	3.5	-	-	-
Ivano-Fr.	2.9	0.9	-	-	-	1.9	0.6	-	-	-	1.0	1.2	-	-	-
Sumy	4.6	5.3	-	-	-	4.0	5.9	-	-	-	0.4	2.5	-	-	-
Total	**3.7**	**3.0**	**-**	**-**	**-**	**2.9**	**3.2**	**-**	**-**	**-**	**0.7**	**1.8**	**-**	**-**	**-**
	BBV-TRAQ score injecting					***BBV-TRAQ score sexual***					***BBV-TRAQ score skin pen.***				
Phase 3	**BL**	**6 mth**	**9 mth**	**12 mth**	**18 mth**	**BL**	**6 mth**	**9 mth**	**12 mth**	**18 mth**	**BL**	**6 mth**	**9 mth**	**12 mth**	**18 mth**
	mean	**mean**	**mean**	**mean**	**mean**	**mean**	**mean**	**mean**	**mean**	**mean**	**mean**	**mean**	**mean**	**mean**	**mean**
Kiev	6.6	1.7	1.9	1.0	0.0	2.1	5.4	6.1	9.0	5.3	1.5	0.7	0.9	0.2	0.1
Donetsk	5.1	2.0	0.3	0.2	0.1	2.5	3.4	4.3	1.7	1.0	1.2	0.4	0.8	0.5	0.5
Dniepropetr	3.5	2.4	0.7	1.1	1.4	2.8	0.2	1.6	1.5	1.1	0.6	0.2	0.6	1.3	0.4
Mykolaiv	2.5	0.0	0.4	0.7	0.0	4.1	7.8	6.6	1.5	7.4	1.8	2.4	3.6	0.4	1.9
Total	4.4	1.5	0.8	0.8	0.4	2.9	4.2	4.7	3.4	3.7	1.3	0.9	1.5	0.6	0.7

Another important finding is the reduction in risk-taking behaviour, especially in terms of unsafe injecting. This reduction continues over time, with the exception of Simferopol where unsafe injecting returns to the initial value during the second half of the follow-up period.

There is less reduction in terms of unsafe sex, where also a secondary increase is noted during the second half of the follow-up period in Simferopol and Mikolaiv. In regard to unsafe piercing and tattoo practices (ASI score for skin penetration), the last follow-up values are even higher than the initial ones, in those 2 sites. This calls for intensified prevention education.

During phases 2 and 3, Methadone patients showed similar reductions in risk taking behavior, while the new Buprenorphine patients were less successful and even increased piercing risks. Sexual risk taking increased in all patients during phase 2.

Table 24. Change over time - employment and legal status

	Working days last 30 days					***ASI score employment (min 0, max 1)***				
Phase 1	**BL**	**6mth**	**9mth**	**12mth**	**18mth**	**BL**	**6mth**	**9mth**	**12mth**	**18mth**
	mean	**mean**	**mean**	**mean**	**mean**	**mean**	**mean**	**mean**	**mean**	**mean**
Kiev	5	5	-	11	-	0.81	0.78	-	0.71	-
Donetsk	6	18	-	15	-	0.72	0.61	-	0.63	-
Odessa	13	18	-	14	-	0.76	0.73	-	0.78	-
Simferopol	12	22	-	16	-	0.74	0.62	-	0.76	-
Dniepropetr.	6	15	-	14	-	0.71	0.58	-	0.57	-
Mykolaiv	8	8	-	16	-	0.72	0.75	-	0.66	-
Total	**8**	**14**	**-**	**14**	**-**	**0.74**	**0.68**	**-**	**0.69**	**-**
	Working days last 30 days					***ASI score employment (min 0, max 1)***				
Phase 2	**BL**	**6mth**	**9mth**	**12mth**	**18mth**	**BL**	**6mth**	**9mth**	**12mth**	**18mth**
	mean	**mean**	**mean**	**mean**	**mean**	**mean**	**mean**	**mean**	**mean**	**mean**
Kherson	6	22	-	-	-	0.84	0.69	-	-	-
Vinnytsya	7	22	-	-	-	0.76	0.87	-	-	-
Ivano-Fr.	7	6	-	-	-	0.79	0.82	-	-	-
Sumy	12	14	-	-	-	0.81	0.73	-	-	-
Total	**8.00**	**16.00**	**-**	**-**	**-**	**0.80**	**0.78**	**-**	**-**	**-**
	Working days last 30 days					***ASI score employment (min 0, max 1)***				
Phase 3	**BL**	**6mth**	**9mth**	**12mth**	**18mth**	**BL**	**6mth**	**9mth**	**12mth**	**18mth**
	mean	**mean**	**mean**	**mean**	**mean**	**mean**	**mean**	**mean**	**mean**	**mean**
Kiev	3.2	12.36	9.75	11.8	12.25	0.83	0.68	0.72	0.68	0.65
Donetsk	6	5.63	8.43	8.48	6.95	0.7	0.69	0.66	0.68	0.7
Dniepropetr	6	9.78	9.77	8.64	6.76	0.8	0.75	0.75	0.77	0.75
Mykolaiv	13.52	23.89	22.22	22.22	23.82	0.61	0.41	0.47	0.56	0.63
Total	**7.18**	**12.92**	**12.54**	**12.79**	**12.45**	**0.74**	**0.63**	**0.65**	**0.67**	**0.68**

Table 25. Change over time - employment and legal status

	Illegal income last 30 days in USD					***Criminal activity last 30 days***					***ASI score Legal (min 0, max 1)***				
Phase1	**BL**	**6 mth**	**9 mth**	**12 mth**	**18 mth**	**BL**	**6 mth**	**9 mth**	**12 mth**	**18 mth**	**BL**	**6 mth**	**9 mth**	**12 mth**	**18 mth**
	mean	**mean**	**mean**	**mean**	**mean**	**mean**	**mean**	**mean**	**mean**	**mean**	**mean**	**mean**	**mean**	**mean**	**mean**
Kiev	76	0	-	0	-	3.0	0.0	-	0.0	-	0.12	0.09	-	0.07	-
Donetsk	128	0	-	0	-	4.6	0.0	-	0.0	-	0.13	0.05	-	0.02	-
Odessa	93	8	-	0	-	8.0	1.3	-	0.0	-	0.30	0.16	-	0.10	-
Simferopol	51	0	-	10	-	6.2	0.4	-	0.0	-	0.17	0.04	-	0.06	-
Dniepropetr.	33	29	-	0	-	0.0	0.0	-	0.0	-	0.05	0.02	-	0.00	-
Mykolaiv	0	3	-	9	-	2.1	0.0	-	0.0	-	0.20	0.09	-	0.06	-
Total	**62.0**	**6.0**	**-**	**4.0**	**-**	**3.9**	**0.3**	**-**	**0.0**	**-**	**0.16**	**0.07**	**-**	**0.05**	**-**
	Illegal income last 30 days in USD					***Criminal activity last 30 days***					***ASI score Legal (min 0, max 1)***				
Phase2	**BL**	**6 mth**	**9 mth**	**12 mth**	**18 mth**	**BL**	**6 mth**	**9 mth**	**12 mth**	**18 mth**	**BL**	**6 mth**	**9 mth**	**12 mth**	**18 mth**
	mean	**mean**	**mean**	**mean**	**mean**	**mean**	**mean**	**mean**	**mean**	**mean**	**mean**	**mean**	**mean**	**mean**	**mean**
Kherson	135	0	-	-	-	0.0	0.0	-	-	-	0.04	0.03	-	-	-
Vinnytsya	1125	111	-	-	-	4.2	0.1	-	-	-	0.33	0.04	-	-	-
Ivano-Fr.	346	282	-	-	-	3.0	0.0	-	-	-	0.16	0.05	-	-	-
Sumy	30	100	-	-	-	0.0	0.0	-	-	-	0.05	0.14	-	-	-
Total	**409.0**	**123.3**	**-**	**-**	**-**	**1.80**	**0.03**	**-**	**-**	**-**	**0.15**	**0.07**	**-**	**-**	**-**
	Illegal income last 30 days in USD					***Criminal activity last 30 days***					***ASI score Legal (min 0, max 1)***				
Phase3	**BL**	**6 mth**	**9 mth**	**12 mth**	**18 mth**	**BL**	**6 mth**	**9 mth**	**12 mth**	**18 mth**	**BL**	**6 mth**	**9 mth**	**12 mth**	**18 mth**
	mean	**mean**	**mean**	**mean**	**mean**	**mean**	**mean**	**mean**	**mean**	**mean**	**mean**	**mean**	**mean**	**mean**	**mean**
Kiev	380	213.64	300	95	150	5.28	0	1.65	0.85	1.5	0.2	0.01	0.07	0.03	0.04
Donetsk	1144	0	0	0	0	3.6	0	0	0	0	0.09	0	0	0.03	0
Dniepropetr	112	0	0	0	105.16	0	0.04	0	0	0	0.09	0.04	0.01	0.01	0.04
Mykolaiv	240	0	0	0	17.65	4	0	0	0	0	0.25	0.03	0.03	0.08	0.07
Total	**469.0**	**53.4**	**75.0**	**23.8**	**68.2**	**3.2**	**0.01**	**0.41**	**0.21**	**0.38**	**0.16**	**0.02**	**0.03**	**0.04**	**0.04**

Social integration also made significant progress during the entire follow-up period: the average number of working days during the last month almost doubled, the average illegal income was drastically reduced during the same period and the percentage of patients involved in criminal activities in phase 1 sank from 3.9 to 0.3% after 6 months and to 0.0% after 12 months. The average ASI legal score was reduced, meaning that less days with any illegal acts were observed. Accordingly, the employment scores indicate a slight decrease at first, meaning that the need for counseling regarding employment was reduced; in the second half of the year however, the need was increased again at 3 sites (Donetsk, Odessa, Simferopol).

During phase 2 and 3, the reduction in criminal activities was the same, for Methadone and Buprenorphine patients. Employment however made progress only in the Methadone patients.

Table 26. Change over time – emotional, physical and sexual abuse

	Emotional abuse					***Physical abuse***					***Sexual abuse***				
Phase 1	**BL**	**6 mth**	**9 mth**	**12 mth**	**18 mth**	**BL**	**6 mth**	**9 mth**	**12 mth**	**18 mth**	**BL**	**6 mth**	**9 mth**	**12 mth**	**18 mth**
	% yes	**% yes**	**% yes**	**% yes**	**% yes**	**% yes**	**% yes**	**% yes**	**% yes**	**% yes**	**% yes**	**% yes**	**% yes**	**% yes**	**% yes**
Kiev	48	25	-	12	-	16	5	-	0	-	0	0	-	0	-
Donetsk	8	14	-	0	-	8	0	-	0	-	0	0	-	0	-
Odessa	17	0	-	0	-	4	0	-	0	-	0	0	-	0	-
Simferopol	56	12	-	0	-	12	4	-	0	-	0	0	-	0	-
Dniepropetr.	17	0	-	0	-	0	0	-	0	-	0	0	-	0	-
Mykolaiv	46	38	-	25	-	7	4	-	0	-	0	0	-	0	-
Total	**32.4**	**15.0**	**-**	**6.3**	-	**8.0**	**2.0**	**-**	**0.0**	-	**0.0**	**0.0**	**-**	**0.0**	**-**
	Emotional abuse					***Physical abuse***					***Sexual abuse***				
Phase 2	**BL**	**6 mth**	**9 mth**	**12 mth**	**18 mth**	**BL**	**6 mth**	**9 mth**	**12 mth**	**18 mth**	**BL**	**6 mth**	**9 mth**	**12 mth**	**18 mth**
	% yes	**% yes**	**% yes**	**% yes**	**% yes**	**% yes**	**% yes**	**% yes**	**% yes**	**% yes**	**% yes**	**% yes**	**% yes**	**% yes**	**% yes**
Kherson	30	15	-	-	-	5	5	-	-	-	0	0	-	-	-
Vinnytsya	50	15	-	-	-	5	0	-	-	-	0	0	-	-	-
Ivano-Fr.	10	5	-	-	-	10	5	-	-	-	0	0	-	-	-
Sumy	55	25	-	-	-	5	0	-	-	-	0	0	-	-	-
Total	**36.3**	**15.0**	**-**	**-**	**-**	**6.3**	**2.5**	**-**	**-**	**-**	**0.0**	**0.0**	**-**	**-**	**-**
	Emotional abuse					***Physical abuse***					***Sexual abuse***				
Phase 3	**BL**	**6 mth**	**9 mth**	**12 mth**	**18 mth**	**BL**	**6 mth**	**9 mth**	**12 mth**	**18 mth**	**BL**	**6 mth**	**9 mth**	**12 mth**	**18 mth**
	% yes	**% yes**	**% yes**	**% yes**	**% yes**	**% yes**	**% yes**	**% yes**	**% yes**	**% yes**	**% yes**	**% yes**	**% yes**	**% yes**	**% yes**
Kiev	36	50	45	45	30	4	4.5	5	5	5	0	0	0	5	0
Donetsk	20	0	4.8	9.5	4.5	0	0	4.8	0	0	0	0	0	0	0
Dniepropetr	8	4.3	4.5	0	0	8	0	0	4.5	0	0	0	0	0	0
Mykolaiv	20	5.6	5.6	5.6	17.6	4	0	5.6	0	0	0	0	0	0	0
Total	**21.0**	**15.0**	**15.0**	**15.0**	**13.0**	**4.0**	**1.1**	**3.9**	**2.4**	**1.3**	**0.0**	**0.0**	**0.0**	**1.3**	**0.0**

Table 27. Change over time - family problems

	Family status ok					*Living condition ok*					*ASI score family*				
Phase 1	**BL**	**6 mth**	**9 mth**	**12 mth**	**18 mth**	**BL**	**6 mth**	**9 mth**	**12 mth**	**18 mth**	**BL**	**6 mth**	**9 mth**	**12 mth**	**18 mth**
	% yes	**% yes**	**% yes**	**% yes**	**% yes**	**% yes**	**% yes**	**% yes**	**% yes**	**% yes**	**mean**	**mean**	**mean**	**mean**	**mean**
Kiev	68	85	-	99	-	88	80	-	99	-	0.24	0.10	-	0.19	-
Donetsk	56	64	-	53	-	76	82	-	93	-	0.19	0.17	-	0.11	-
Odessa	29	32	-	41	-	33	32	-	35	-	0.23	0.15	-	0.13	-
Simferop.	64	64	-	85	-	44	72	-	65	-	0.25	0.13	-	0.09	-
Dnieprop.	67	83	-	77	-	75	94	-	83	-	0.17	0.04	-	0.06	-
Mykolaiv	54	46	-	55	-	43	50	-	50	-	0.23	0.15	-	0.12	-
Total	**56.9**	**62.3**	**-**	**68.4**	**-**	**59.7**	**68.4**	**-**	**70.7**	-	**0.22**	**0.12**	-	**0.11**	**-**
	Family status ok					***Living condition ok***					***ASI score family***				
Phase 2	**BL**	**6 mth**	**9 mth**	**12 mth**	**18 mth**	**BL**	**6 mth**	**9 mth**	**12 mth**	**18 mth**	**BL**	**6 mth**	**9 mth**	**12 mth**	**18 mth**
	%yes	**%yes**	**%yes**	**%yes**	**%yes**	**%yes**	**%yes**	**%yes**	**%yes**	**%yes**	**mean**	**mean**	**mean**	**mean**	**mean**
Kherson	90	60	-	-	-	90	65	-	-	-	0.08	0.03	-	-	-
Vinnytsya	55	50	-	-	-	65	50	-	-	-	0.31	0.13	-	-	-
Ivano-Fr.	65	60	-	-	-	85	70	-	-	-	0.17	0.12	-	-	-
Sumy	70	70	-	-	-	55	50	-	-	-	0.17	0.73	-	-	-
Total	**70.0**	**60.0**	**-**	**-**	**-**	**73.8**	**58.8**	**-**	**-**	**-**	**0.18**	**0.25**	**-**	**-**	**-**
	Family status ok					***Living condition ok***					***ASI score family***				
Phase 3	**BL**	**6 mth**	**9 mth**	**12 mth**	**18 mth**	**BL**	**6 mth**	**9 mth**	**12 mth**	**18 mth**	**BL**	**6 mth**	**9 mth**	**12 mth**	**18 mth**
	% yes	**% yes**	**% yes**	**% yes**	**% yes**	**% yes**	**% yes**	**% yes**	**% yes**	**% yes**	**mean**	**mean**	**mean**	**mean**	**mean**
Kiev	68	72.7	70	80	80	52	59.1	55	60	60	0.19	0.25	0.19	0.15	0.1
Donetsk	60	58.3	71.4	57.1	59.1	96	95.8	100	95.2	95.5	0.15	0.12	0.07	0.1	0.12
Dnieprop.	60	65.2	68.2	72.7	58.8	68	60.9	54.5	50	52.9	0.1	0.1	0.08	0.06	0.09
Mykolaiv	76	94.4	83.3	94.4	94.1	68	94.4	83.3	94.4	94.1	0.22	0.01	0.05	0.02	0.03
Total	**66.0**	**72.7**	**73.2**	**76.1**	**73.0**	**71.0**	**77.6**	**73.2**	**74.9**	**75.6**	**0.17**	**0.12**	**0.10**	**0.08**	**0.09**

While the satisfaction with family status and living conditions improved slightly, complaints about any form of abuse became less frequent and the average ASI family score was reduced significantly. This was less expressed during phase 2 for Methadone patients and not at all for the new Buprenorphine patients.

Annexes

1. Terms of Reference External Evaluators

The terms of reference for Prof. Uchtenhagen included

1. To review reports provided by Independent Interviewers (II) on the focus groups with OST project staff and the clients (first and last quarter of the project period);
2. To review reports provided by external expert Dr Emilis Subata on the visits to the OST M&E sites
3. To review by monthly reports provided by Principal Investigator on the project implementation ;
4. To provide recommendations to PI with regard to the further project implementation basing on the II, PI and Dr Subata reports;
5. To respond to queries and provide consultation if needed for PI during the project implementation; with the assistance of Dr Emilis Subata if needed.
6. To review the data submitted by PI on the OST M&E after 6 and 12 months of the project implementation;
7. To provide OST M&E data evaluation and analyses;
8. To prepare intermediate and final reports on the basis of the project findings;
9. To develop recommendations with regard to the further OST M&E implementation in Ukraine and specifically for M&E section of the Ukrainian OST Scaling up Plan for 2008-2011;
10. To provide assistance in dissemination of the project results by preparing publication in peer reviewed journals, jointly with Dr Subata and other interested parties;
11. To present the final report and recommendations in Ukraine for the partners and national stakeholders;
12. Aside from the current project, but in the view of necessity to revise the current Ukrainian Protocol for Methadone Treatment, to provide comments and review the updated version of the Protocol prepared by Dr Emilis Subata.

The terms of reference for Prof. Subata included:

- to meet with PI to get updated on the project implementation and discuss current issues regarding treatment provision;
- to meet in each region with staff of the OST projects to observe treatment practice and get their feedback/provide consultations onsite;
- to meet in each region with the staff and clients involved in the study to get their feedback on their involvement in the project implementation;
- to provide briefing for WHO Country Office in Ukraine upon completion of the mission to the sites
- to provide recommendations for PI with regards to the further project implementation in matters of treatment provision;
- to respond to queries and provide consultation if needed to the further implementation in matters of treatment provision.

2. Site visit reports

First round of Site visits, April 2007

Kiev Aids Centre and NGO "Skhodi"

At Kiev Aids Centre, staff was overall positive about their role in the OST programme. One problem were the tight control measures imposed, especially no take-home of Buprenorphine was allowed. Considerable time had to be spent for crushing the tablets, using glass bottles as no special means for this was available. Differences in taste, effect, and appearance of Buprenorphine tablets were observed. Much time and efforts was needed to fill in all the forms and records by doctors and nurses.

NGO "Skhodi" had no patients nor dispensing staff at the time of the expert's visit, because the license for dispensing was not obtained in time. This NGO however provides a wide spectrum of services for drug injectors, such as inpatient and outpatient psychological therapy, counseling, educational and leisure activities. These activities are also accessible for OST patients and seems to be available in a non-stigmatising and supportive atmosphere.

Baseline interviews were made by the independent interviewer who prepared the 6-month follow-up interviews. No problematic issues in data collection were raised by the independent interviewer.

A focus group discussion with patients revealed a positive attitude about participating in the study and about the effects of OST on their life, with the exception that the need for daily attendance interferes with finding and maintaining a job. There was great concern about the sustainability of OST in the Ukraine.

Donetsk Oblast Narcological Centre

OST was provided within the dispensary. Social support was expected to be provided by drug using peers from PLWHA NGO; however, it was considered as not very qualified and sufficient, by the staff at the dispensary and also by the patients themselves.

No problems with data collection were identified.

A focus group discussion with patients revealed a generally positive attitude to OST, it's positive effects and the evaluation study. There is a hope to expand OST in the Ukraine, and some patients showed their willingness to participate in a Methadone maintenance programme. The need for daily attendance at the site, and the discontinuation of OST in case of hospitalisation (in infectious disease and Tbc hospitals) were mentioned as negative aspects of the programme.

Dniepropetrovsk City Narcological Dispensary

OST was provided on the ground floor of the city policlinic, social support at the NGO "Virtus" individually and in regular group meetings on Saturdays. OST can be continued in case of hospitalisation, as all hospitals belong to the municipality where this decision was taken.

No problems with data collection were mentioned.

In the focus group discussion, patients were very positive about OST effects on their lives and about their participation in the study.

Odessa

The location for OST is too small and not convenient for staff and patients.

There is sufficient professionalism of social workers.

Doctors do not use urine tests because positive tests would not lead to termination of OST and can not be used for increasing treatment motivation.

Simferopol

The OST dispensing unit is very small and has no separate entrance; many other patients enter through the same corridor.

HIV specialists were praised due to their individual humanistic attitudes and good care.

There is sufficient professionalism of social workers.

Urine tests are made at random, but no patient is excluded from OST on the basis of drug-positive urines.

Retention rate over 18 months is 73%. 10% of patients discontinued OST, 6.5% died and 7.4% were detained by militia or court. 2 patients detoxified successfully.

Staff and patients indicated that there are about 100 persons on the waiting list.

Some problems with data collection were mentioned. Staff complained about problems with filling in the patient records, because they had no appropriate medical education. Handwriting often is difficult to read. Data on HIV/AIDS and ARV therapy are hard to get on the basis of data protection and needed complicated formal steps.

Patients are generally aware of their participation in the study and positive about it. Informed consent forms were present in the medical records with 2 exceptions.

Mikolaiv

OST is provided in a separate unit at the narcological hospital. The location is central and recently renovated. A well equipped room is available for counseling. Patient can stay in a nearby yard for informal contact.

Social workers and NGO representatives are very professional in supporting OST patients. Counseling includes also legal consultations.

Urine tests are made at random, but no patient is excluded from OST on the basis of drug-positive urines.

After his first visit in April 2007, Prof. Subata summarized his findings as follows:

1. Patients in all sites were generally satisfied with OST and staff. At all sites patients indicated that the staff could be quite easily accessed and the staff was supportive. Patients were also satisfied with HIV/AIDS services, which were provided outside the OST programs by AIDS centres: HIV testing, laboratory monitoring, ARV therapy provision. ARV medications were provided for patients up to 1 month. All HIV/AIDS services accessibly and free of charge.
2. The main concern of patients was that participation in OST created difficulties in finding and maintaining jobs as no take-home medication doses were allowed by the legal acts. Patients also indicated that everyday or almost everyday travel required considerable amount of time and additional financial resources.
3. Patients were concerned that at some sites (Kiev and Donetsk) there was no possibility to continue OST in case of hospitalization (including for the reason of AIDS or TB).

4. In none of the sites patients indicated problems with law enforcement (e.g. ungrounded search of IDU or harassment)
5. Qualified social support was not always available. Peers from NGO often lacked skills to assess the social status and needs of the patient, to build a plan for social assistance and implement it.
6. M&E study was well accepted by the staff and patients of the OST program. There was full cooperation from patients' side. Independent interviewers and responsible study staff didn't indicate any problems in collecting assessment and transfer data.
7. The staff indicated that a lot of time and energy had to be invested in the control of medication use and prevention of diversion. Tablets were crushed in Kiev and Donetsk sites, nurses observed the use of medication and verified their absorption. To ensure control, OST programs had to implement strict sanctions for the attempts to conceal tablets with a threat of the discharge from OST. So far, there were no problems with the law enforcement sector because of diversion of Buprenorphine.
8. Physicians identified comparatively big amount of paperwork, which had to be done according the legal acts to which control the use of Buprenorphine.
9. Some of the staff complained about the inadequate space for OST programs. Most of the sites lack rooms for confidential counseling.
10. Staff is generally well trained and professional. Some physician asked for improvement of the quality of continuous training.
11. Some of the staff indicated that they did not feel being a part of national policy of drug dependence therapy and HIV prevention among IDUs and suggested to make efforts of greater institutionalization of OST.

Second round of site visits, May/June 2007

After his second visit in May-June 2007, Prof. Subata made observations on a wide range of issues:

Staff education and knowledge with regard to OST, use of treatment protocols and guidelines

Not all physicians, working directly with patients had high degree of knowledge of OST, while coordinators of OST projects demonstrated good knowledge of OST protocols and guidelines. Only very limited number of narcologists are engaged in OST. Nurses were professional in dispensing Buprenorphine.

Most of the staff still see OST as a "treatment" tool rather as a "public health intervention". They still often speak about the need to "select properly patients for OST", instead of expanding coverage of IDU with OST in order to prevent HIV/AIDS.

Staff education and knowledge with regard to psychosocial support

At the same time not always good cooperation was seen among medical and psychosocial support staff. Some tensions/adversity and apparently inadequate communication between medical specialists and social workers was observed at some sites.

Availability of treatment plan, including a plan for psychosocial support

The treatment plans for individual patients lacked clearly defined, specific objectives set for the specific time. Often treatment plan included "a consultation of social worker", but were not specified which concrete objectives of social improvement for individuals were to be reached. Treatment plans were not preceded often by the assessment and documentation of social status and the nearest needs. The consultant was not able to view a written comprehensive time-bound therapy plan in medical records.

Availability and effectiveness of psychosocial support available for the clients

In focus groups discussions (FGD) OST clients indicated that psychosocial support was available for them, availability of psychosocial support staff everyday at program. The effectiveness of psychosocial support was unknown. Some cases were presented as successful in psychosocial reintegration, but it was not possible to evaluate how effective it is overall.

Clinical management of the clients (doses, etc.)

During FGD clients indicated that they can ask the medical staff to increase and decrease doses of OST medication. Their requests were not always taken into account by physicians. As the decision about the dose increase is made by a commission, at some sites it could take three weeks before the dose could be increased (Mykolaiv).

The current practice is to administer higher Buprenorphine doses in the beginning to suppress the withdrawal syndrome (usually 12-14 mg, could be more). Then the doses are gradually reduced and the maintenance dose usually is from 2 to 8 mg. This happens usually with the initiative of the patient, who usually has plans to leave the program altogether in the long run.

Co-morbid conditions, e.g. depression is not routinely screened, diagnosed and treated with antidepressants. Screening and therapy of depression are not currently integrated into OST delivery.

Management of clients with HIV, TB, Hepatitis C

There were generally big obstacles to continue OST for patients hospitalized for AIDS and TB as usually hospitals have no possibility to continue OST (some of them do not have license to store controlled medications). Hospitalized patients are usually allowed to leave the hospital to pick-up their opioid medication. Patients with HIV have generally good access free of charge to CD4 monitoring, consultations of infectious disease specialists and ARV therapy in AIDS centres or infectious disease units. There is an open question which members of the staff make pre-test and post-test HIV counseling in the sites. At some sites (Mykolaiv) physicians maintain they do VCT. There is a need of clarification of responsibilities at sites. Hepatitis C diagnosis and therapy are generally not available free of charge.

Range of services available for clients of OST program: psychosocial support, referral to other medical and social institutions

Social workers are available for referrals to the existing sources of social support. There are not printed materials about medical and psychosocial resources for OST patients outside treatment facility. The impression is that social workers do not often attend together with patients' different social institutions and provide direct support for them.

Staff satisfaction and attitudes

Generally the staff had a feeling they were doing an important job. In the interviews staff members of different sites expressed complaints about the constant tension with patients in trying to prevent diversion of Buprenorphine. At some sites, Buprenorphine tablets are crushed. Staff complained about a huge amount of paperwork which is required to be kept for controlled substance. The management complained about difficulties to get a license to work with controlled substances.

Client satisfaction and attitudes

In FGD clients generally were very much satisfied with OST and some still thought about OST as an unbelievable and wonderful opportunity for them to stop drug use. Most clients admitted that their criminal behavior has reduced and the family life improved. The dissatisfaction was related with the necessity to attend the program everyday, absence of the possibility to travel outside the city for weekends and vacation, long travel distances everyday to pick up medications.

Needs in OST (waiting lists)

OST programs indicated big numbers of willing to enter OST.

Discharge the clients from the program

The most frequent reasons for the discharge of the program were attempts of diversion. The management of programs usually thought that the diversion put programs at risk. On the other hand, the next reason for the discharge was to keep a discipline in OST programs and prevent further diversion. The next other reason for the discharge were not showing up due to detention. Neither OST program denied that patients are discharged for positive urine screens.

Retention rate in the program and reasons for drop out

Patients were willing to reduce the dose and quit OST as soon as possible due to requirement of everyday attending for pick up of medication, which restricted their possibility to work and relax during weekends and vacations.

Retention is generally high.

Collaborations with regional health administrations

Heads of narcological centres have good contacts in regional health administrations. The management expressed that OST is left totally to the responsibility of narcological dispensary and still have to operate in generally adverse conditions and without enough public support. Some of administrators complain that it is difficult to get medical license for using controlled medications, and if not received in time, difficult situations in providing OST emerge.

Relationship with law enforcement agencies

Administrators are compliant with requirements of regional units of drug controls and try to keep good relations with them. Representatives from regional drug control/security service units make regular visits to some of centres. There is some tension because of that and the management of health facilities felt as suspected of something. Clients in FGD did not report the harassment from the law enforcement and indicated improved relations with militia.

Collaboration between Narcological and HIV/TB services : Narcological and HIV/TB services had contacts, but did not have common workshops or events.

Implementation of OST M&E protocol: The OST M&E protocol overall was implemented. But, as observed, personnel of M&E project did not always feel confident about the OST M&E protocol.

Conducting focus groups : No problems were identified in conducting FGD.

Availability of the data (computer data base, forms, focus groups reports) : Computer data base, forms, FGD reports were available

Clients' awareness about their participation of the study, availability of the consent forms: :Patients were generally aware of their participation in the study and were positive about it.

Feedback and recommendations of the OST multidisciplinary teams and clients (OST MDT)

OST MDT complained about the need to control sublingual consumption of Buprenorphine, it took considerable times and efforts. Complying with the requirements of drug control paperwork was also tiresome. OST MDT often did not feel a part of national health care system.

Training needs of OST MDT

OST MDT would benefit from training on building treatment plan and its implementation. Better integration of medical therapy and psychosocial assistance is needed. Training and piloting in case management.

Medical staff (narcologists) and OST MDT should receive training on OST as a public health intervention with the goal to prevent HIV and infectious diseases, reduce mortality, etc., rather then traditional narcological “treatment” and “cure” concept.

Feedback and suggestions provided by clients

Patients were generally very positive about OST. Generally they showed high motivation to participate in OST and were positive about the staff and dosages, valued their participation in the OST program. They advocated expanding OST programs in Ukraine. They complained about the necessity to come for medication everyday and long travelling distance to pick up their medicines.