

Making Drug Treatment Work

Opportunities and Challenges Towards an Evidence and Rights-Based Approach



Making Drug Treatment Work

Opportunities and Challenges Towards an
Evidence and Rights-Based Approach

Martin P Wegman, Frederick L Altice, Sangeeth Kaur, Vanesa Rajandaran,
Sutayut Osornprasop, David Wilson, David P Wilson, Adeeba Kamarulzaman



Acknowledgements

The report is part of the World Bank's Advisory Services and Analytics for Malaysia under HIV Implementation Support in the East Asia and the Pacific region (P160428). The report preparation was under the overall guidance and supervision of Dr. Sutayut Osornprasop (Senior Human Development Specialist) and Dr. David Wilson (Program Director) of the World Bank and Professor Adeeba Kamarulzaman and Dr. Rumana Saifi of the University of Malaya.

We would like to express our gratitude to the Infectious Disease Control Division, Ministry of Health (MoH) and National Anti-Drugs Agency (AADK), Malaysia for their contributions to this research.

Funding for this research was provided by the World Bank, Malaysian Ministry of Education High Impact Research Grant (HIRGA E000001-20001), University of Malaya Research Grant (RP009A), National Institute of Mental Health for career development (F30MH105153), National Institute on Drug Abuse for research (R01 DA025943 and R01 DA041271) and career development (K24 DA017072), and Doris Duke Charitable Foundation through a grant supporting the Doris Duke International Clinical Research Fellows Program at Yale University School of Medicine.

The team would like to appreciate valuable suggestions from the following technical peer reviewers: Robert Oelrichs, Ernest Massiah, and Fernando Lavadenz. We thank the participants in this study; the staff at Malaysian PUSPEN and Cure & Care facilities; research team and the administrative staff at the Centre of Excellence for Research in AIDS (CERiA). Last but not the least, we thank the World Bank's Southeast Asia Country Management Unit, Health, Nutrition, Population Global Practice, and the communication team from World Bank's Malaysia office and Thailand office.

The content of this report is solely the responsibility of the authors and does not necessarily represent the official views of the funders.

Table of Contents

Acknowledgements	2
Summary	4
Background	4
Methods	4
Findings and Conclusion	4
Background	5
Methods	5
Study Design	5
Participants in the Study	6
Data	6
Findings and Conclusion	6
References	10

Differences in drug relapse rates between patients from compulsory drug detention centers vs voluntary drug treatment centers in Malaysia

Summary

Background

Compulsory drug detention centers (CDDCs) are common throughout Asia. However, medical treatments for substance use disorders, such as opioid agonist treatment (OAT), are generally unavailable in these settings. In this report, we compare the effectiveness of CDDCs with voluntary drug treatment centers (VTCs) offering OAT in Malaysia. Positive urine drug testing (UDT) after release confirmed opioid relapse in both groups. Specifically, we measure the timing of relapse, i.e., we compare when patients that have been discharged from CDDCs and VTCs relapse to opioid.

Methods

We conducted a study on opioid dependent individuals from Malaysian CDDCs and VTCs from August 2012 to September 2014. Baseline (at the starting point of the study) and semi-monthly behavioral assessments and UDTs were conducted for up to one year after release/discharge. Relapse rates between the groups were compared using advanced statistical analysis.

Findings and Conclusion

Screening occurred in 168 CDDC attendees and 113 VTC in-patients, with 89 (CDDC) and 95 (VTC) of these individuals, respectively, having a baseline interview and at least one UDT. We found that opioid-dependent persons that have been released from CDDCs relapse to opioid use significantly faster than those from VTC services. This suggests the services provided by CDDCs have little role in the treatment of opioid use disorders.

Background

Criminalization of drug possession and use is common worldwide with many Asian countries confining people who use drugs (PWUDs), or those suspected of using illicit drugs, in specialized facilities called compulsory drug detention centers (CDDCs).¹⁻³ In South and SouthEast Asia, CDDCs continue to operate and now detain more than 400,000 individuals in over 1,000 facilities annually.^{6,7} Grounds for detention in CDDCs range from positive urine drug testing (UDT) to suspicion of illicit drug use.^{8,9} Medical therapies for treating substance use disorders, such as opioid-agonist treatment (OAT), are unavailable in CDDCs. Instead, educational and job skills programs, and physical education are among the approaches often utilized.^{8,10,11} Although it is argued that CDDCs are a key component to a comprehensive response to opioid dependence, and serve to balance the individual's needs for rehabilitation with the right to safety for their family and community¹², there have been few formal evaluations of CDDCs. A recent study on drug detention centers that included compulsory inpatient and outpatient treatment approaches showed little evidence that compulsory drug treatment is effective in promoting abstinence from drug use or in reducing criminal recidivism.

CDDCs were first introduced in 1978 in response to a growing heroin epidemic in Malaysia and are operated by the National Anti-Drug Agency (NADA). In 2010, 28 detention facilities housed nearly 7,000 individuals. According to national drug control laws, individuals who screen positive on urine drug testing (UDT) for any illicit substance and deemed by a government medical officer to be drug-dependent, are mandated to two years of detention and remain under community supervision for another two years following release.¹³ Although the Malaysian government shifted from implementing only punitive drug control measures to implementation of harm reduction initiatives, including needle and syringe programs and some OAT programs beginning in 2005,¹³⁻¹⁵ CDDCs initially remained central to drug control efforts.¹⁶ Expansion of community-based OAT by the Ministry of Health Malaysia and prison-based OAT, and recognition that these programs were effective eventually led to a major policy shift by NADA which began to recognize the role of OAT in substance use disorders in 2010. Several of the CDDCs were transformed to voluntary drug treatment facilities as pilot activities, called 'Cure and Care' centers, which provide methadone in addition to psychosocial interventions, recreational programming, and vocational training, among other activities.¹⁷⁻¹⁹ This study was designed to examine the drug use, health and social outcomes for opioid-dependent persons in Malaysia who were recently released from a CDDC versus those discharged from a voluntary drug treatment center (VTCs). In this analysis, we compare the timing and occurrence of UDT-confirmed opioid and other illicit-drug relapse between the two groups.

Methods

Study Design

We compared individuals from two drug treatment settings: Malaysian CDDCs and VTCs. Baseline and monthly behavioral assessments were conducted along with UDT at baseline and at months 1, 3, 6, 9, and 12 post-release or post-discharge from CDDCs and VTCs. Also, HIV testing was conducted at months 1, 3, 6, 9, and 12 post release or post-discharge. The study was approved by the Medical Ethics Board of University of Malaya Medical Centre and the Yale University Human Investigation Committee; approval was also granted by the National Anti Drug Agency (NADA).

Participants in the Study

The study participants were 18 years or above, could provide consent for the study, met criteria for opioid dependence using the Rapid Opioid Dependence Screen (RODS)²¹ and intending to live in Klang Valley. Those in CDDCs were receiving mandatory rehabilitation programs that included individual, group and family counseling sessions, spiritual programs, physical training such as marching exercises and vocational training for commercial production like farming or electronics. OAT was not available to these individuals. Individuals enrolled from the VTC were those who were seeking OAT enrollment voluntarily. From August 2012 to September 2014, trained research assistants recruited eligible participants at three VTCs providing methadone maintenance therapy in Greater Kuala Lumpur and at six CDDCs. More CDDC than VTC sites were selected due to excess loss of participants from the time of screening to recruitment.

Data

Baseline and follow-up interviews collected information on participants' age, gender, ethnicity, education, marital status, housing status, employment, income, incarceration/detention history, lifetime and recent drug use history, addiction severity²², opioid dependence and abuse²³ opioid cravings, motivation to seek addiction treatment²⁴, HIV testing and treatment history, social support²⁵, and drug and sex-related HIV risk behaviors. Research assistants supervised and recorded UDTs for 5 metabolites: opioids, methamphetamines, benzodiazepines, methadone and buprenorphine using a custom RapiDip InstaTest (Cortez Diagnostics, Inc: California, USA).

Findings and Conclusion

Between August 2012 and September 2014, opioid-dependent individuals were assessed in Malaysian CDDCs (N=168) and in inpatient units of Malaysian VTCs (N=113), with 98 in both groups completing baseline interviews and 89 (CDDC) and 95 (VTC) of these individuals, respectively, having at least one subsequent UDT. Loss of participants was due to inability to locate participants (including early release or discharge) and absence of communication with the study team. Around 50 percent of the participants in each group completed the assessments at month three and one-quarter to one-third at month 12.

While we looked at the background characteristics for each group, CDDC participants were older, had higher education levels, were incarcerated more, were less likely to have injected opioids, and were less likely to be making changes toward addressing their recovery.

Table 1 describes background characteristics for each group. The participants in both groups looked similar except that CDDC participants were older, had higher education levels, were incarcerated more, were less likely to have injected opioids, and were less likely to be making changes toward addressing their recovery.

TABLE 1: Background characteristics of the participants

	Compulsory Drug Detention Centers (number of participants = 89)	Voluntary Treatment Centers (number of participants = 95)
Average Age	39	37
Ethnicity		
Malay	65 (73.0%)	67 (70.5%)
Chinese	9 (10.1%)	11 (11.6%)
Indian	15 (16.9%)	17 (17.9%)
Completed secondary school		
Yes	58 (65.2%)	46 (48.4%)
No	31 (34.8%)	49 (51.6%)
Married		
Yes	68 (76.4%)	80 (84.2%)
No	21 (23.6%)	15 (15.8%)
Previous housing type		
Permanent	28 (32.2%)	25 (26.3%)
Temporary	59 (67.8%)	70 (73.7%)
Times imprisoned (average)	3	3
Times in lockup/jail (average)	7	5
Times detained in CDDC (average)	1	1
Age of first drug use (years)	18	18
Drug of choice		
Other	5 (5.7%)	12 (12.6%)
Heroin	82 (94.3%)	83 (87.4%)
Years of heroin use	16	13
Daily use of heroin before entering facility		
No	14 (16.3%)	11 (12.5%)
Yes	72 (83.7%)	77 (87.5%)
Drug use severity		
Low or Moderate	19 (21.3%)	14 (15.1%)
Substantial	59 (66.3%)	65 (69.9%)
Severe	11 (12.4%)	14 (15.1%)
Opiate cravings (scale of 0-10)	3	3
Ever injected drugs		
No	51 (56.0%)	40 (44.0%)
Yes	60 (68.2%)	28 (31.8%)

	Compulsory Drug Detention Centers (number of participants = 89)	Voluntary Treatment Centers (number of participants = 95)
Alcohol use (lifetime)		
No	17 (19.1%)	25 (26.3%)
Yes	72 (80.9%)	70 (73.7%)
Non-heroin opiate use (lifetime)		
No	73 (82.0%)	76 (80.0%)
Yes	16 (18.0%)	19 (20.0%)
Benzodiazepine use		
No	74 (83.1%)	79 (83.2%)
Yes	15 (16.9%)	16 (16.8%)
Stimulant use (lifetime)		
No	28 (31.5%)	27 (28.4%)
Yes	61 (68.5%)	68 (71.6%)
Use of >1 drug at same time (lifetime)		
No	40 (44.9%)	52 (55.9%)
Yes	49 (55.1%)	41 (44.1%)
Ever received buprenorphine treatment		
No	78 (87.6%)	73 (86.9%)
Yes	11 (12.4%)	11 (13.1%)
Recent buprenorphine treatment		
No	87 (97.8%)	84 (100.0%)
Yes	2 (2.2%)	0 (0.0%)
Recent emergent/urgent care		
No	83 (94.3%)	89 (93.7%)
Yes	5 (5.7%)	6 (6.3%)
Ever tested for HIV		
No	7 (8.0%)	16 (17.8%)
Yes	81 (92.0%)	74 (82.2%)
HIV test result		
HIV-negative	72 (83.7%)	61 (68.5%)
HIV-positive	5 (5.8%)	2 (2.2%)
Unknown	9 (10.5%)	26 (29.2%)

As mentioned, we compared post-release drug use outcomes for people who were admitted to CDDCs for rehabilitation with participants of VTCs. We found, opioid-dependent participants released from CDDCs had 6 times higher chances of relapse to both opioids or any-illicit-drug post-release, compared to individuals released from VTCs in Malaysia. Not only did we find that opioid dependent persons in CDDCs relapse to opioid use markedly faster than those exposed to VTC services, but relapse to opioid use is rapid after release from CDDCs, suggesting CDDCs might have little role in the treatment of opioid use disorders.

FIGURE 1: A graphical presentation on relapse rates and time of relapse

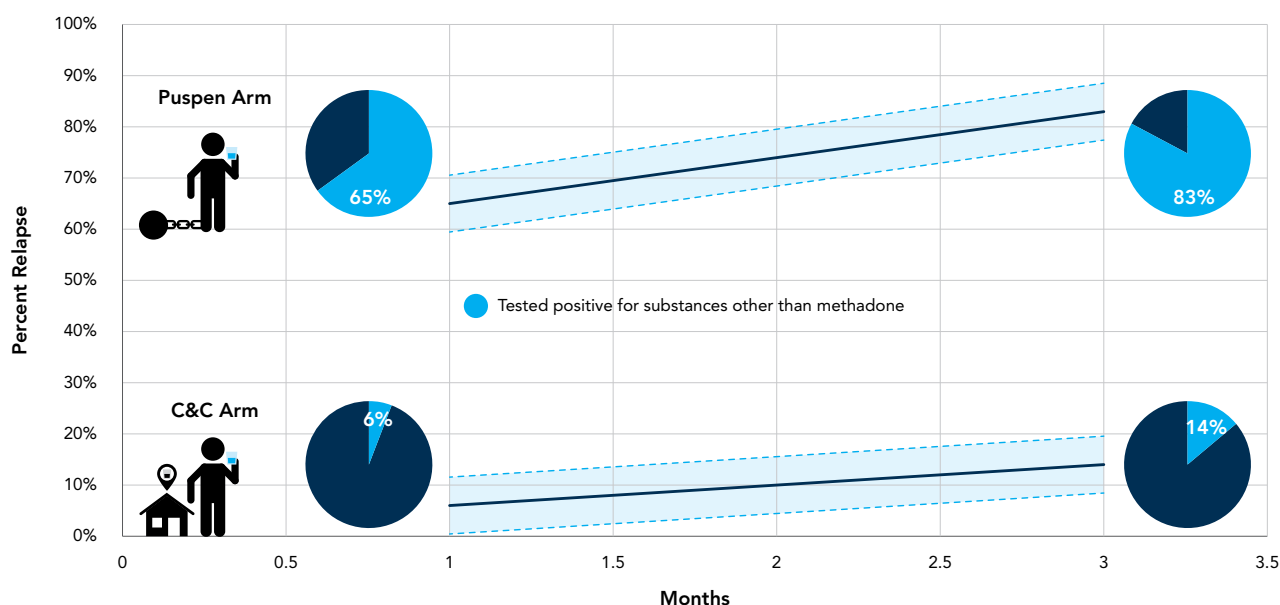


Figure 1 compares participants released/discharged from CDDCs and VTCs in terms of opioid relapse.

The vertical axis shows percentage of participants who had opioid relapse, whereas the horizontal axis shows the time of relapse after release/discharged. The upper line in the figure shows relapse rates among CDDC participants and the lower line shows relapse rates among VTC participants. In the first month after release, 6 percent of the VTC patients relapsed to opioid, in contrast to 65 percent of CDDC participants. In month 3, 14 percent of the patients from VTCs experienced opioid-relapse; this was 83 percent for CDDC patients. This also suggests the first month after release as the most crucial phase for patients in both groups.

Such findings support nascent policy modifications in Southeast Asia that have transformed CDDCs to VTCs,⁷ where evidence-based treatments like OAT are made available for individuals who meet criteria for opioid use disorders. These striking findings are also urgently needed in the context of recent developments in Malaysia where VTCs are being suspended or reverted to closed settings, in the absence of evidence of benefit.^{4,34,35} Our results support international calls for all countries in Asia that support CDDCs to scale-up evidence-based services provided by VTCs, including treatments like OAT that can be accessed voluntarily and made potentially available to others as part of an alternative to an incarceration strategy.

References

1. United Nations Office on Drugs and Crime, Economic and Social Commission for Asia and the Pacific, Joint United Nations Programme on HIV/AIDS. Report of the Regional Consultation on Compulsory Centres for Drug Users in Asia and the Pacific. Bangkok, 2010.
2. Jürgens R, Csete J, Amon JJ, Baral S, Beyrer C. People who use drugs, HIV, and human rights. *Lancet* 2010; 376(9739): 475-85.
3. United Nations Office on Drugs and Crime, Economic and Social Commission for Asia and the Pacific, Joint United Nations Programme on HIV/AIDS. Report of the Second Regional Consultation on Compulsory Centres for Drug Users in Asia and the Pacific. Kuala Lumpur, 2012.
4. Bell J, Mattick R, Hay A, Chan J, Hall W. Methadone maintenance and drug related crime. *Journal of Substance Abuse* 1997; 9: 15-25.
5. Thomson N. Detention as Treatment. Detention of Methamphetamine Users in Cambodia, Laos, and Thailand: Open Society Institute, 2010.
6. Mathers BM, Degenhardt L, Ali H, et al. HIV prevention, treatment, and care services for people who inject drugs: a systematic review of global, regional, and national coverage. *Lancet* 2010; 375(9719): 1014-28.
7. Tanguay P, Kamarulzaman A, Aramrattana A, et al. Facilitating a transition from compulsory detention of people who use drugs towards voluntary community-based drug dependence treatment and support services in Asia. *Harm Reduct J* 2015; 12: 31.
8. Organization WH. Assessment of Compulsory Treatment of People Who Use Drugs in Cambodia, China, Malaysia and Viet Nam: An Application of Selected Human Rights Principles. Geneva, Switzerland, 2009.
9. Saucier R, Berlinger N, Thomson N, Gusmano M, Wolfe D. The limits of equivalence: ethical dilemmas in providing care in drug detention centers. *International Journal of Prisoner Health* 2010; 6(2): 37-43.
10. Human Rights Watch. "Where Darkness Knows No Limits": Incarceration, Illtreatment, and Forced Labor as Drug Rehabilitation in China: Human Rights Watch, 2010.
11. Pearshouse R. "Patients, not criminals"? An assessment of Thailand's compulsory drug dependence treatment system. *HIV AIDS Policy Law Rev* 2009; 14(1):11-7.
12. Wu Z. Arguments in favour of compulsory treatment of opioid dependence. *Bulletin of the World Health Organization* 2013; 91(2): 142-5.
13. Kamarulzaman A. Impact of HIV prevention programs on drug users in Malaysia. *J Acquir Immune Defic Syndr* 2009; 52 Suppl 1: S17-9.
14. Reid G, Kamarulzaman A, Sran SK. Malaysia and harm reduction: the challenges and responses. *Int J Drug Policy* 2007; 18(2): 136-40.
15. Noordin NM, Merican MI, Rahman HA, Lee SS, Ramly R. Substitution treatment in Malaysia. *Lancet* 2008; 372(9644): 1149-50.
16. Fu JJ, Bazazi AR, Altice FL, Mohamed MN, Kamarulzaman A. Absence of antiretroviral therapy and other risk factors for morbidity and mortality in Malaysian compulsory drug detention and rehabilitation centers. *PLoS One* 2012; 7(9): e44249.
17. Ghani MA, Brown S-E, Khan F, et al. An exploratory qualitative assessment of self-reported treatment outcomes and satisfaction among patients accessing an innovative voluntary drug treatment centre in Malaysia. *Int J Drug Policy* 2015; 26(2): 175-82.
18. Khan F, Krishnan A, Ghani MA, et al. Assessment of an Innovative Voluntary Substance Abuse Treatment Program Designed to Transition from Compulsory Drug Detention Centers in Malaysia. Submitted.
19. Al-Darraj HAA, Wong KC, Yeow DGE, et al. Tuberculosis screening in a novel substance abuse treatment center in Malaysia: Implications for a comprehensive approach for integrated care. *Journal of Substance Abuse Treatment* 2014; 46(2): 144-9.

20. Wegman M. Replication Data for: Differences in drug relapse rates between alternative rehabilitation strategies in Malaysia. Harvard Dataverse; 2015.
21. Wickersham JA, Azar MM, Cannon CM, Altice FL, Springer SA. Validation of a Brief Measure of Opioid Dependence The Rapid Opioid Dependence Screen (RODS). *Journal of Correctional Health Care* 2015; 21(1): 12-26.
22. Skinner HA. The drug abuse screening test. *Addict Behav* 1982; 7(4): 363-71.
23. Sheehan DV, Lecrubier Y, Sheehan KH, et al. The Mini-International Neuropsychiatric Interview (M.I.N.I.): the development and validation of a structured diagnostic psychiatric interview for DSM-IV and ICD-10. *J Clin Psychiatry* 1998; 59 Suppl 20: 22-33;quiz 4-57.
24. Miller WR, Tonigan JS. Assessing drinkers' motivation for change: the Stages of Change Readiness and Treatment Eagerness Scale (SOCRATES). *Psychology of Addictive Behaviors* 1996; 10(2): 81.
25. Zimet GD, Powell SS, Farley GK, Werkman S, Berkoff KA. Psychometric characteristics of the Multidimensional Scale of Perceived Social Support. *J Pers Assess* 1990; 55(3-4): 610-7.
26. Harkness J, Pennell B-E, Schoua-Glusberg A. Survey Questionnaire Translation and Assessment. *Methods for Testing and Evaluating Survey Questionnaires*: John Wiley & Sons, Inc.; 2004: 453-73.
27. Brislin RW. Back-Translation for Cross-Cultural Research. *J Cross Cult Psychol* 1970; 1(3): 185-216.
28. Austin PC. Balance diagnostics for comparing the distribution of baseline covariates between treatment groups in propensity-score matched samples. *Stat Med* 2009; 28(25): 3083-107.
29. Vaughan AS, Kelley CF, Luisi N, del Rio C, Sullivan PS, Rosenberg ES. An application of propensity score weighting to quantify the causal effect of rectal sexually transmitted infections on incident HIV among men who have sex with men. *BMC Med Res Methodol* 2015; 15: 25.
30. Kleinbaum DG, Klein M. *Survival analysis : a self-learning text*. New York: Springer; 2012.
31. Lin DY, Wei L-J, Ying Z. Checking the Cox model with cumulative sums of martingale-based residuals. *Biometrika* 1993; 80(3): 557-72.
32. Allison PD. *Survival analysis using SAS: a practical guide*: Sas Institute; 2010.
33. Cole SR, Hernán MA. Adjusted survival curves with inverse probability weights. *Comput Methods Programs Biomed* 2004; 75(1): 45-9.
34. Springer SA, Chen S, Altice FL. Improved HIV and substance abuse treatment outcomes for released HIV-infected prisoners: the impact of buprenorphine treatment. *J Urban Health* 2010; 87(4): 592-602.
35. Torrens M, Domingo-Salvany A, Alonso J, Castillo C, San L. Methadone and quality of life. *The Lancet* 1999; 353(9158): 1101.
36. Kinlock TW, Gordon MS, Schwartz RP, Fitzgerald TT, O'Grady KE. A randomized clinical trial of methadone maintenance for prisoners: results at 12 months post-release. *J Subst Abuse Treat* 2009; 37(3): 277-85.
37. Kinlock TW, Gordon MS, Schwartz RP, O'Grady K, Fitzgerald TT, Wilson M. A randomized clinical trial of methadone maintenance for prisoners: results at 1-month post-release. *Drug Alcohol Depend* 2007; 91(2-3): 220-7.
38. Kinlock TW, Gordon MS, Schwartz RP, O'Grady KE. A Study of Methadone Maintenance For Male Prisoners: 3-Month Post release Outcomes. *Crim Justice Behav* 2008; 35(1): 34-47.
39. Dolan KA, Shearer J, MacDonald M, Mattick RP, Hall W, Wodak AD. A randomised controlled trial of methadone maintenance treatment versus wait list control in an Australian prison system. *Drug Alcohol Depend* 2003; 72(1): 59-65.
40. Rich JD, McKenzie M, Larney S, et al. Methadone continuation versus forced withdrawal on incarceration in a combined US prison and jail: a randomised, open-label trial. *Lancet* 2015.

References

41. Wickersham JA, Zahari MM, Azar MM, Kamarulzaman A, Altice FL. Methadone dose at the time of release from prison significantly influences retention in treatment: Implications from a pilot study of HIV-infected prisoners transitioning to the community in Malaysia. *Drug Alcohol Depend* 2013; 132(1-2): 378-82.
42. Binswanger IA, Stern MF, Deyo RA, et al. Release from Prison — A High Risk of Death for Former Inmates. *New England Journal of Medicine* 2007; 356(2): 157-65.
43. Merrall ELC, Kariminia A, Binswanger IA, et al. Meta-analysis of drug-related deaths soon after release from prison. *Addiction* 2010; 105(9): 1545-54.
44. Langendam MW, van Brussel GH, Coutinho RA, van Ameijden EJ. The impact of harm-reduction-based methadone treatment on mortality among heroin users. *American Journal of Public Health* 2001; 91(5): 774-80.
45. Larney S, Dolan K. A literature review of international implementation of opioid substitution treatment in prisons: equivalence of care? *Eur Addict Res* 2009; 15(2): 107-12.
46. Baharom N, Hassan MR, Ali N, Shah SA. Improvement of quality of life following 6 months of methadone maintenance therapy in Malaysia. *Substance Abuse Treatment, Prevention, and Policy* 2012; 7(1): 1-6.
47. MacArthur GJ, Minozzi S, Martin N, et al. Opiate substitution treatment and HIV transmission in people who inject drugs: systematic review and meta-analysis. *BMJ* 2012; 345.
48. Thu T.H. Vuong NN, Giang Le, Alison Ritter, Marian Shanahan, Robert Ali, Khue Pham, Thu A. Vuong, Thuy Dinh. Economic evaluation comparing center-based compulsory rehabilitation (CCT) and community-based methadone treatment (MMT) in Hai Phong City, Vietnam. 6th NATIONAL SCIENTIFIC CONFERENCE ON HIV/AIDS, 2015.
49. Kamarulzaman A, Aramrattana A, Wodak A, et al. Transition from compulsory centers for drug users to voluntary community-based treatment and services: Discussion Paper, 2015.
50. Harm Reduction International. (2012). *The Global State of Harm Reduction 2012. Towards an integrated response.* London: Harm Reduction International.
51. Jurgens R, Ball A, Verster A. Interventions to reduce HIV transmission related to injecting drug use in prison. *Lancet Infect Dis* 2009; 9(1): 57-66.
52. Dole VP, Robinson JW, Orraca J, Towns E, Searcy P, Caine E. Methadone treatment of randomly selected criminal addicts. *N Engl J Med* 1969; 280(25): 1372-5.
53. Larney S, Toson B, Burns L, Dolan K. Effect of prison-based opioid substitution treatment and post-release retention in treatment on risk of re-incarceration. *Addiction* 2012; 107(2): 372-80.
54. Farrell M, Marsden J. Acute risk of drug-related death among newly released prisoners in England and Wales. *Addiction* 2008; 103(2): 251-5.

