Journal of Substance Abuse Treatment 87 (2018) 9–15

Contents lists available at ScienceDirect

Journal of Substance Abuse Treatment

Outcomes of compulsory detention compared to community-based voluntary methadone maintenance treatment in Vietnam

Thu Vuong [a,*], Alison Ritter [a], Marian Shanahan [a], Robert Ali [a,b], Nhu Nguyen [c], Khue Pham [d], Thu T.A. Vuong [c], Giang M. Le [e]

[a] The Drug Policy Modelling Program, The National Drug and Alcohol Research Centre, UNSW Sydney, Australia
[b] University of Adelaide, Australia
[c] FHI360 Vietnam, Viet Nam
[d] Haiphong University of Medicine and Pharmacy, Viet Nam
[e] Hanoi Medical University, Viet Nam

ARTICLE INFO

Article history:
Received 30 May 2017
Received in revised form 11 January 2018
Accepted 12 January 2018
Available online xxxx

Keywords:
Compulsory treatment
Compulsory rehabilitation
Methadone treatment
Effectiveness
Vietnam
Southeast Asia
Heroin addiction

ABSTRACT

Introduction: In Vietnam, like many countries in East and Southeast Asia, the government has invested heavily in center-based compulsory treatment (CCT) as the mainstay demand reduction strategy for illicit drug use. This approach has been criticised on human rights grounds. Meanwhile, community-based voluntary methadone maintenance treatment (MMT) has been implemented for nearly a decade with promising results. To date, there have been no comparative Vietnamese studies of these approaches.

Material and methods: The study, involving 208 CCT participants and 384 MMT participants with heroin dependence, was a combined retrospective and prospective observational study conducted over three years between 2012 and 2014 (with data at five time-points). The primary outcome was: self-report heroin use (confirmed by urinalysis). The four secondary outcomes were: illegal behaviours, overdose, blood-borne virus (BBV) risk behaviours, and monthly drug expenditure. Mixed effects regression analyses, which took into account baseline differences between the groups, were used to analyse the data. This study is registered with ClinicalTrials.gov, number NCT03071315.

Results: The study found MMT was more strongly associated with four outcome measures compared to CCT (reduction in heroin use ($\beta = 3.39$, SE = 0.31, $p < .0001$) (equivalent to an odds ratio of 29.67 (95% CI 21.76–40.45)), reduction in illegal behaviours ($\beta = 0.94$, SE = 0.39, $p < .0001$), (equivalent to an odds ratio of 2.56 (95% CI 1.79–3.78)), reduction in BBV risk behaviours ($\beta = 1.08$, SE = 0.17, $p < .0001$), (equivalent to an odds ratio of 2.94 (95% CI 2.48–3.49)), and reduction in monthly drug spending ($\beta = -$VND1,515,200 (equivalent to US$72.00), SE = VND452,900, $p < .0001$)). The analyses did not support the hypothesis that MMT was associated with better outcomes pertaining to overdose ($\beta = -0.27$, SE = 0.30, $p = .62$), probably due to the infrequency of these self-reported events.

Conclusions: Our observational study suggests that MMT is associated with greater reductions in heroin use, BBV risk behaviours, drug-related illegal behaviours, and monthly drug spending compared with CCT. In the context that the CCT approach has been criticized for human rights violations, this study provides evidence to support the scale up of MMT and the transition of CCT to voluntary community based treatment.

1. Introduction

Like many countries in Asia, center-based compulsory treatment (CCT) is a common approach for addressing illicit drug use problems in Vietnam (Hall et al., 2012; Tanguay et al., 2015; United Nations, 2012; United Nations Office of the High Commissioner for Human Rights, 2011). These countries (including Cambodia, China, Indonesia, Malaysia, Philippines, Thailand and Vietnam) have endorsed policies that force people who use illicit drugs into some form of compulsory rehabilitation (World Heath Organization, 2009). Largely based on a philosophy of 'social re-education', compulsory rehabilitation gained momentum during the 1990s with the construction of large-scale centers in Malaysia, China and Vietnam (Juergens & Csete, 2012; Pearshouse & Amon, 2012). This approach was replicated by neighbouring countries with an estimated 2 million people placed in compulsory centers in China and South East Asia in 2006 (International Drug Policy Consortium, 2013). CCT centers resemble low security prisons where people who use illicit drugs can be confined

* Corresponding author at: Drug Policy Modelling Program, National Drug and Alcohol Research Centre, UNSW Sydney, Sydney, New South Wales 2052, Australia.
E-mail address: thu.vuong@unsw.edu.au (T. Vuong).

https://doi.org/10.1016/j.jsat.2018.01.011
0740-5472/

up to two years (Hall et al., 2012) with the main activities being drug education, moral teaching, basic health care and non-voluntary manual labour (Clark, Busse, & Gerra, 2013). However, these centers are not part of the criminal justice system or subject to judicial oversight and their detainees have not necessarily committed any crime other than illicit drug use (Clark et al., 2013). In Vietnam, the number of people who have ever been in CCT centers is not known, however, at any point in time, there is an average of 45,000 people in a total of 121 CCT centers (Vietnam Ministry of Labor Invalid and Social Affairs, 2013). The first CCT center in Vietnam was built in 1993. Over the past two decades, the Vietnamese government has invested approximately US$47 million/year into this approach (Government of Vietnam, 2010). Yet, the success of the centers remains under debate (Hall et al., 2012; Hall & Carter, 2013; Wu, 2013).

The burden on the Vietnamese health-care system of illicit drug use (with heroin being the primary drug of concern) is considerable. HIV prevalence among people who inject drugs dramatically rose, with heroin injecting accounting for two-thirds of all HIV cases (Government of Vietnam, 2010). Methadone maintenance treatment (MMT) has been internationally recognised as an efficacious treatment for heroin dependence (Connock et al., 2007) and for the management of HIV risk. The medication, methadone, is a synthetic opioid which is provided as a daily dose to the patients preventing heroin cravings whilst allowing the resumption of participation in the community, through employment, restoration of family relationships and everyday life activities.

While considerable evidence of effectiveness for MMT exists (Kwiatkowski & Booth, 2001; Mattick, Breen, Kimber, & Davoli, 2009), there is a lack of evidence regarding CCT, particularly in the Asian context. Previous literature reveals only two effectiveness studies have been conducted in Asia. The first study, conducted in Thailand (Johnson et al., 2012), evaluated the effectiveness of the Therapeutic Communities program delivered in closed settings. While it found a large reduction in illicit drug use over 6-months, there was no comparison group and the highly significant contextual factors (the study was conducted from 2005 to 2007, only 2 years after the commencement of the Thailand war on drugs) may account for the results (Vuong & Ritter, 2013). The second study, completed in Malaysia (Wegman et al., 2016) compared the effectiveness of two residential drug treatment modalities: 1) compulsory drug detention centers (CDDCs) (similar to CCT, where methadone treatment was not available); and 2) voluntary treatment centers (VTCs, where inpatient methadone treatment was provided, followed by outpatient methadone treatment upon discharge). The Malaysian study showed that opioid-dependent individuals in CDDCs were significantly more likely to relapse to opioid use after release, and sooner than those treated in VTCs. While the Malaysian study provides important empirical evidence of effectiveness comparing CDDCs and VTCs, the context is unique to Malaysia because Malaysia is currently the only country in East and Southeast Asia where a proportion of compulsory centers have been converted to voluntary centers. For most other East and Southeast Asian countries (e.g. Vietnam, China, Cambodia, Indonesia) where compulsory detention centers are dominant, the contrasting approach is voluntary community-based methadone treatment (not voluntary treatment centers).

To address this limited evidence, we conducted an evaluation of the relative effectiveness (as measured by heroin use, drug-free days, illegal behaviours, overdose, blood-borne virus risk behaviours and monthly drug spending) and cost-effectiveness (as measured by the cost to achieve 'drug-free days' over three years) of CCT compared to MMT in Vietnam (Vuong et al., 2016). The results of the cost-effectiveness study are reported elsewhere (Vuong et al., 2016), where MMT was found to be superior to CCT in terms of both cost and effectiveness. This paper presents the results comparing the effectiveness for five outcome measures, which form a broader array of outcomes for evaluating drug dependence treatment options.

2. Material and methods

2.1. Study design

The study design was a combined retrospective and prospective three-year cohort study with data collected at 5 time-points (baseline, two years after treatment commencement, and 3, 6, and 12 months after the initial two years). Fig. 1 depicts the study design, sample sizes and follow-up rates. It was not ethical to randomise people to CCT - an intervention which violates human rights (Amon, Pearshouse, Cohen, & Schleifer, 2013; Human Rights Watch, 2011). The sample size calculation is presented in our study protocol paper (Vuong et al., 2017).

2.2. Participants

The CCT group was recruited at point of exit from three CCT centers (that is, after two years in CCT) in Hai Phong City. All CCT participants released from the three CCT centers during January–November 2013 were invited to take part in the study (385 eligible participants). Interviews with 208 CCT participants (54% of 385) were conducted during July–November 2013 (data for Baseline and T1 in Fig. 1). At the first interview (T1), retrospective behavioural data three months prior to treatment and current data (from date of release from CCT centers to interview date) were collected. At follow-up interviews, data on the preceding 3 months and 30 days were collected. At the completion of the study 166 CCT participants were interviewed; a follow-up rate of 80%.

An MMT cohort study was conducted in Hai Phong City between 2008 and 2011 (Vietnam Ministry of Health, 2010) with a total of 462 MMT patients recruited at treatment entry and reassessed at 3, 6, 9, 12, 18 and 24 months. At the 24-month time point, 384 patients (83% of 462) were interviewed. This group became the sample for the current study as both groups were comparable having received 2-year treatment exposure. As such, 384 MMT participants were invited to participate in the current study and 314 (82%) agreed to participate and were interviewed at T2, T3 and T4. At the completion of the study, the follow-up rate was 78% (298). For MMT participants, secondary data for T1, the first two years in MMT treatment, were used with primary data collected at the other time points.

Inclusion criteria for CCT participants were: (1) 18 years or older; (2) heroin dependence (daily heroin use during 3 months prior to treatment as a proxy); (3) in CCT under the compulsory track; (4) official confirmation of recent release from CCT centers; and (5) consented voluntarily to participate in the study. Inclusion criteria for MMT participants were: (1) 18 years or older; (2) participated in the previous MMT cohort study; and (3) consented voluntarily to participate in this study.

2.3. Procedures

At the end of each interview with CCT participant, a urine sample was provided by the participant for opioid drug screening. The urine drug test results of MMT participants were retrieved from their patient records at the MMT clinics. As per the treatment protocol, opioid urine drug testing was carried out at random for MMT patients on a monthly basis. The urine drug test results were used to verify the validity of the main outcome measure, which was self-reported heroin use. For both CCT and MMT participants, the Alere© MOP One Step Morphine Test was used for urine drug screening. The concordance between self-reported heroin use and urine drug screens was high for both groups (CCT: 80–86%; MMT 82–88%, see (Vuong et al., 2017)) indicating that participants of both groups reported their heroin use accurately, and providing confidence in using the self-reported data as the outcome measure.

The study received ethical approval from the UNSW Australia Human Research Ethics Committee, US-based FHI360 Internal Review