UCLA

UCLA Previously Published Works

Title

Commune Health Workers' Methadone Maintenance Treatment (MMT) Knowledge and Perceived Difficulties Providing Decentralized MMT Services in Vietnam

Permalink

https://escholarship.org/uc/item/5xb4c2g9

Journal

ISSN

Authors

Lin, Chunqing
Tuan, Nguyen Anh
Li, Li

Publication Date

2018-01-28

DOI

Peer reviewed

Commune Health Workers' Methadone Maintenance Treatment (MMT) Knowledge and Perceived Difficulties Providing Decentralized MMT Services in Vietnam

Chunqing Lin, PhD[a], **Nguyen Anh Tuan, MD, PhD**[b], and **Li Li, PhD**[a]

[a]Semel Institute for Neuroscience and Human Behavior, Center for Community Health, University of California, Los Angeles, California, USA

[b]National Institute of Hygiene and Epidemiology, Hanoi, Vietnam

Abstract

Background—With the initial establishment of countrywide methadone maintenance therapy (MMT) system, Vietnam is in the process of expanding and decentralizing the MMT program to community-based healthcare settings.

Objective—The study aimed to measure the MMT-related knowledge and perceived difficulties in treating patient who use drugs (PWUD) among community-based healthcare providers, e.g., commune health workers (CHW), and examine its correlated factors.

Methods—A total of 300 CHW from 60 communes in two provinces of Vietnam completed a survey using Audio Computer-Assisted Self-Interview (ACASI) method. Twelve true-or-false questions were used to assess the CHW's MMT-related knowledge. The CHW's background characteristics and perceived difficulties treating PWUD were recorded.

Results—The mean MMT knowledge score was 8.2 (SD = 1.2; range: 5–11). Misconceptions toward the benefits, procedure, and side effects of MMT were prevalent. The participants perceived varying degrees of difficulties in recruiting, engaging, and communicating with PWUD. With all covariates holding constant, younger age (standardized $\beta=-0.166$; $p = 0.0078$) was associated with less MMT-related knowledge. Number of PWUD seen in a month and MMT-related knowledge was associated with less perceived difficulties treating PWUD.

Conclusions/importance—The finding shed lights on the CHW's knowledge gap, which need to be addressed to facilitate the decentralization of MMT services in Vietnam. In preparation for a decentralized MMT service delivery model, specially designed training is warranted to equip CHW with knowledge and confidence to provide MMT-related services to PWUD.

Keywords

Methadone maintenance therapy; community health worker; people who use drugs; service decentralization; Vietnam

---

CONTACT Dr. Chunqing Lin chunqinglin@hotmail.com UCLA, Semel Institute for Neuroscience and Human Behavior, Center for Community Health, Los Angeles, United States.

Introduction

Injecting drug use is the primary driving force of HIV/AIDS epidemic in Vietnam (UNAIDS, 2014a). The primary type of drug used in Vietnamis heroin, with the vast majority (65–85%) of people who use drugs in Vietnam are using heroin (Do, Minichiello, & Hussain, 2012; Giang, Ngoc, Hoang, Mulvey, & Rawson, 2013; Nguyen & Scannapieco, 2008). The most widespread mode of heroin use is injection (Windle, 2016). The study has shown that the interval of transition time from heroin smoking to injection use was on average 2.5 years, and this period is becoming shorter overtime (Giang et al., 2013). There are approximately 271,000 (range: 100,000–335,000) people who inject drug in the country, among whom as many as 40% are living with HIV (UNAIDS, 2014a). It was estimated that nearly half (45%) of the 14,000 new HIV cases occurred in 2013 were infected through loaning or borrowing of injecting equipment while using drugs (UNAIDS, 2014b).

To combat the drug use and its correlated HIV/AIDS epidemic, Vietnam implemented the first methadone maintenance therapy (MMT) program in 2008 (Nguyen Nguyen, Pham, Vu, & Mulvey, 2012; UNAIDS, 2014a). The MMT program has achieved significant benefits: a prospective cohort study conducted among early MMT clients has shown reduction in heroin use and improvement of quality of life for both clients and their family members (Hoang et al., 2015). Another study comparing MMT-users and non-users has demonstrated that MMT was associated with increment in self-perceived health status and reductions in out-of-pocket health expenditure among HIV-positive drug users (Tran & Nguyen, 2013). With the success of the initial pilot, the MMT program has been rapidly expanding to 240 clinics in 57 provinces serving more than 45,000 patients (United Nations Office on Drug and Crime, 2016).

To increase the accessibility and coverage of MMT program, the Vietnam Administration of HIV/AIDS Prevention and Control is in the process of decentralizing the methadone dispensing network to the primary care system at community level (Duong, 2011; Hanoi news, 2015;UNAIDS, 2014a). The Vietnamese healthcare system is organized into four levels: central (national) level, provincial level, district level, and commune (community) level (Tuan, 2015). The decentralization will mainly involve the commune health center (CHC) system, which is the first tier of the healthcare delivery network at commune (community) level in Vietnam. There are 10,732CHCinVietnamand each CHC normally serve 2,000 to 20,000 people. Commune health workers (CHW) routinely provide a series of basic curative and preventive healthcare services to local residences (Tran & Nguyen, 1995; World Bank, 2001). They also provide prevention-related activities, including referrals for HIV testing, counseling, and preventive education for patients who use drugs (PWUD), and play an important role in HIV care and drug use prevention in Vietnam (Open Society Institute, 2007). For the decentralized MMT model, CHW will be mobilized to dispense MMT liquid for the clients who are in the maintenance phase (MMT Vietnam, 2015).

Decentralizing of the MMT service offers far-reaching significance on the sustainability of the MMT program, as the international financial support are shrinking and the domestic resources remain limited (UNAIDS, 2014a). More importantly, the decentralization plan could potentially increase the accessibility of MMT services, as it could to a large extent

reduce the travel time and cost, which were cited as a major barrier for PWUD (Lin, Wu, & Detels, 2011; Tran, Nguyen, Phan, Nguyen, & Latkin, 2015). However, the effectiveness of the decentralized MMT model largely depends on the CHW, who are the main players of the service delivery. Their knowledge, skill, and attitudes toward the PWUD would profoundly impact the success of the decentralized model and clients' treatment outcome (Jackson, 2002; Li, Wu, Cao, & Zhang, 2012). So far little work has been done to access if the CHW has adequate knowledge to perform the task, and their opinion of providing routine services for PWUD. The objective of this study was to examine the CHW's MMT-related knowledge and to document the difficulties perceived by CHW in treatment of PWUD. The findings could be used to guide CHW training and identify strategies for service improvement.

Methods

Study site and participant

The study used baseline data of a randomized intervention trial conducted in Vietnam. Between October 2014 and February 2015, a total of 60 communes with more than 20 registered PWID were randomly selected from Vĩnh Phúc and Phú Thọ. Provinces (30 communes from each province). There is one CHC in each of the communes. In a typical CHC, there are approximately five CHW (including doctors/assistant doctors, nurses, midwives, and pharmacies), who provide direct service to patients. All of such CHW were invited to participate. The CHW had to be 18 years or older and working in the selected CHC to be in this study.

When recruiting CHW, our research staff introduced the study purpose, procedures, and potential risks and benefits in detail. The potential CHW participants were assured that the study was not part of their work responsibility, and their decision to participate or not would not affect their employment in any way. Written informed consent was obtained before commencement of data collection. A total of 300 CHW (five from each CHC) were recruited with refusal rate less than 5%.

Among the 300 CHW participants, 168 (56.0%) were doctors/assistant doctors and 83 (27.7%) were nurses/midwives. The majority ($N = 227$; 75.7%) of the participants were women. The average age was 39.3 years, and 64.3% ($N = 193$) of the participants were younger than 45 years old. On average, the participants had completed 15.9 years of education. Three-fifths of the CHW ($N=180$) had worked in the medical field above 10 years. Slightly less than one-third ($N = 87$; 29.0%) of the CHW reported that they had not provided healthcare services to PWUD, whereas about half ($N = 162$; 54.0%) reported treating between one to five PWUD in a typical month (Table 1).

Data collection

The assessment was administered individually in a private office inside the CHC in Vietnamese. The CHW completed the survey using Audio Computer-Assisted Self-Interview (ACASI), which offers protection of confidentiality while reducing social desirability and pressure during assessment (Adebajo et al., 2014). The participant listened to the survey questions read in the audio system (also shown on the screen) and directly entered the

responses into a laptop computer. The assessment took on average 45 minutes to complete. A trained interviewer was on standby to provide clarifications for the survey questions and instructions for using ACASI. The participants received 80,000 dông ($4.00 U.S.) as an incentive to complete the assessment. The Institutional Review Boards (IRB) at the participating agencies in both U.S. and Vietnam approved the study documents and procedures.

Measures

The contents of the assessment were originally developed in English and later translated to Vietnamese using a forward-translation and back-translation approach. A Vietnamese public health professional who was familiar with substance use terminologies conducted the initial forward-translation of the assessment from English to Vietnamese, and then the instruments were translated back to English by an independent bilingual translator. An expert panel discussed and solved the discrepancies of the two versions. In addition, a community advisory board consisted of CHW representatives proved the cultural relevancy of the items and confirmed that the questions were understandable to general CHW.

The *MMT-related knowledge* assessment was developed based on review of the literature and the situation of MMT program in Vietnam (Caplehorn, Lumley, & Irwig., 1998; Family Health International, 2015; MMT Vietnam, 2015). Twelve questions concerning MMT availability, usage, benefits, and side effects were used to assess the CHW's level of MMT-related knowledge (Table 2). The response was set to be "true" or "false." The MMT knowledge score was constructed by summing the number of correct responses. The total score ranged from 0 to 12 points, with a high score indicating a high level of MMT-related knowledge. The correctness and appropriateness of the questions and answers were confirmed by a panel of Vietnamese experts.

The *perceived difficulty in treating* PWUD was accessed by a seven-item scale. The scale was specially developed for the purpose of this study based on the qualitative work to explore healthcare professionals' perceptions and experiences treating PWUD (Mclaughlin, Mckenna, Leslie, Moore, & Robinson, 2006) and the previous knowledge of the service provider population in Asia (Lin et al., 2010; Lin, Cao, & Li, 2014). The items are summarized in Table 2. The participants were asked to rate each of the items on a 5-point scale (1 = strongly agree to 5 = strongly disagree). With all the items reversely coded, the scale score ranged from 7 to 35. A higher score indicates higher level of perceived difficulty treating PWUD (Cronbach's Alpha = 0.85).

CHW provided information on *background characteristics* that included age, gender, profession (e.g., doctors/assistant doctors, nurses, midwives, pharmacies, and others), years of education, years of working in the medical field, and average number of PWUD seen in ax month.

Data analysis

Analyses were conducted in SAS software version 9.4 (SAS Institute, Inc., Cary, NC). Descriptive statistics was generated to describe the distribution of the background characteristics, perceived difficulties treating PWUD, and MMT-related knowledge.

Pearson's correlation coefficients were calculated to investigate the relationships among background characteristics, MMT-related knowledge, and perceived difficulties in treating PWUD. Multiple regressions were conducted to identify factors associated with MMT-related knowledge and perceived difficulties. Standardized regression coefficients and their significance levels were reported for the variables included in the models.

Results

MMT-related knowledge

The participants provided on average 8.2 correct answers to the 12 MMT-related knowledge questions (SD = 1.2; range: 5–11). Misconceptions toward the purpose, procedure, and side effects of MMT were prevalent among participants. For example, almost all participants believed that harm reduction is intended to eliminate drug using behavior (95.3%); a vast majority of participants conceived that MMT is effective in treating stimulant use (87.7%); and more than two-thirds had misconception regarding the frequency of visits (67.0%). The misconception about the benefit of MMT, the route of administration, and the availability in Vietnam were less common. Approximately half (N = 155; 51.7%) of the participants possessed three to four types of misconceptions (Table 2).

Perceived difficulties in treating PWUD

The participants perceived varying degrees of difficulties in treating PWUD. Most participants perceived that it was difficult to get in touch with PWUD (N = 215; 71.7%), to have PWUD adhere to the treatment (N=201, 67.0%), and felt despondent if the PWUD were lying (N= 190, 63.3%). More than half reported difficulty to engage PWUD in treatment (N = 176, 58.7%), and they needed more training in order to treat PWUD (N = 167, 55.7%; Table 2).

Factors associated with MMT-related knowledge and perceived difficulties

In the univariate analysis, age (r = 0.1984, p = 0.0005) and of longer years in medical field (r = 0.1287, p = 0.0258) were significantly associated with higher level of MMT-related knowledge. Perceived difficulties in treating PWUD were significantly associated with higher educational level (r=0.1673, p=0.0037), fewer PWUD see per month (r=−0.2189, p = 0.0001), and less MMT-related knowledge (r= −0.1770, p = 0.0021). Holding constant the covariates, older age remained significantly associated with MMT-related knowledge (β = 0.2964, p = 0.0049). The associations between perceived difficulties and years of education (β =0.1562, p=0.0062), number of PWUD treated in a month (β =−0.2025, p=0.0003), and MMT-related knowledge (β = −0.1510, p = 0.0085) remained statistically significant in the multiple regression model (Table 3).

Discussion

The study revealed that the misconception about MMT was widespread among CHW. Insufficient knowledge and skills would result in inadequate service provision and suboptimal patient outcome (Chawarski, Zhou, & Schottenfeld, 2011; Lin et al., 2010). Appropriate pre-service and in-service training is essential to ensuring smooth

implementation of the decentralized MMT plan and service quality. The findings of this study would provide some insights on how CHW should be trained in order to deliver MMT-related services to PWUD.

CHW's most major misconception lies in the purpose of harm reduction. This might be due to the conflict between the prolonged domination of traditional addiction treatment methods in Vietnam and harm reduction as a relatively new approach (Edington & Bayer, 2013). Drug use has historically been defined as "social evil" in Vietnam, and the main modalities for managing heroin addiction have been home/community detoxification and mandatory rehabilitation camp (Giang et al., 2013). Medication-assisted treatment for opioid dependency has not been expanded at scale until recent years, and its confusion with the deeply-rooted conventional drug rehabilitation approaches is not easy to eliminate (Khuat et al., 2012). The education of harm reduction approach not only involves simple addition of new knowledge, but also deliberates "unlearning" of outmoded practices (Aron & Gupta, 2015; Cirnu, 2015). The unlearning involves several distinctive but overlapping steps, including experience of a mismatch between the expectation and the result of the traditional detoxification methods, and doubt resolution which is making sense of the mismatch that was experienced (Coombs, Hislop, Holland, Bosley, &Manful, 2013).

The study documented CHWs' perspectives of the difficulties in recruiting, engaging, and treating PWUD. These perceived difficulties might hinder the CHW's motivation to provide services (Lin et al., 2010). To enhance the CHW's confidence in treating PWUD, the first step would be acknowledgement of difficulties, as it may lead to open discussion and potential solutions so that CHW's concern could be appropriately addressed. Literature has long demonstrated that traditional didactic medical training is effective in improvement of MMT-related knowledge and skills, yet is inadequate in changing attitude and behavior (Davis et al., 1999). In this study, the association between MMT-related knowledge and perceived difficulties, though reached statistical significance, was not strong. The finding suggested that changing knowledge alone would not necessarily allay the CHW's concerns associated with providing care for PWUD. It is important that CHW network with and seek support from MMT service providers and other addiction treatment specialists to learn strategies to cope with the challenges associated with treating PWUD (Lin et al., 2010). Our study finding also indicated that the perceived difficulties might gradually decline as the acquisition of experience in treating PWUD. Concrete real-world experience working with PWUD would prepare the CHW in provision of MMT-related services. Healthcare providers with leadership abilities could be identified and mobilized to distribute harm reduction knowledge and convince their peers to be more accepting of PWUD. For example, a previous intervention in China trained respected, trustworthy, and influential providers as popular opinion leaders to disseminate HIV stigma reduction message among colleagues, and the intervention group providers showed significant improvements in reducing prejudicial attitudes and avoidance intent towards people living with HIV (Li et al., 2013). Similar strategies have great potential to be utilized in Vietnam to improve the CHW's MMT knowledge and acceptance of PWUD.

The study has some limitations. The cross-sectional design made it impossible to make causal inferences based on the association identified. In addition, the study used unvalidated

measures, which limited the confidence in the findings and inhibit comparison across studies. Nonetheless, examining the study findings in the context of Vietnamese CHC system sheds lights on the areas that need to be addressed in CHW training to facilitate implementation of the decentralized MMT model in Vietnam.

Acknowledgments

References

Adebajo S, Obianwu O, Eluwa G, Vu L, Oginni A, Tun W, Karlyn A. Comparison of audio computer assisted self-interview and face-to-face interview methods in eliciting HIV-related risks among men who have sex with men and men who inject drugs in Nigeria. PLoS ONE. 2014; 9(1):e81981.doi: 10.1371/journal.pone.0081981 [PubMed: 24416134]

Aron, D., Gupta, D. Oral presentation at the 8th Annual Conference on the Science of Dissemination and Implementation in Health. Washington, DC: 2015 Dec. A theory of deimplementation based on the theory of healthcare professionals' behavior and intention (THPBI) and the Becker model of unlearning.

Cirnu CE. The Shifting Paradigm: Learning to Unlearn. IL. 2015; doi: 10.18278/il.4.1.7

Caplehorn JR, Lumley TS, Irwig L. Staff attitudes and retention of patients in methadone maintenance programs. Drug and Alcohol Dependence. 1998; 52(1):57–61. DOI: 10.1016/s0376-8716(98)00047-7 [PubMed: 9788007]

Chawarski M, Zhou W, Schottenfeld R. Behavioral drug and HIV risk reduction counseling (BDRC) in MMT programs in Wuhan, China: A pilot randomized clinical trial. Drug and Alcohol Dependence. 2011; 115(3):237–239. DOI: 10.1016/j.drugalcdep.2010.09.024 [PubMed: 21159452]

Coombs C, Hislop D, Holland J, Bosley S, Manful E. Exploring types of individual unlearning by local health-care managers: An original empirical approach. Health Services and Delivery Research. 2013; 1(2):1–126. DOI: 10.3310/hsdr01020

Davis D, O'Brien MA, Freemantle N, Wolf FM, Mazmanian P, Taylor-Vaisey A. Impact of formal continuing medical education. JAMA. 1999; 282(9):867.doi: 10.1001/jama.282.9.867 [PubMed: 10478694]

Do K, Minichiello V, Hussain R. HIV risks among injecting drug users in Vietnam: A review of the research evidence. CHR. 2012; 10(6):479–486. DOI: 10.2174/157016212802429767

Duong, BD. Adapting Treatment 2.0 in Viet Nam-Toward Universal and Sustainable Access. 2011. Retrieved from http://www.who.int/hiv/events/duong_treatment2.0.pdf

Edington C, Bayer R. When grammars collide: Harm reduction, drug detention and the challenges of international policy reform efforts in Vietnam. Global Public Health. 2013; 8(sup1):S75–S91. DOI: 10.1080/17441692.2012.763045 [PubMed: 23363324]

EPP Technical Working Group, Ministry of Health. Preliminary results of HIV estimations and projections in Viet Nam 2013. 2013

Family Health International (FHI). Patient information booklet on methadone maintenance therapy. 2015. Retrieved from http://mmtvietnam.com/wp-content/uploads/2015/02/Methadone-Handbook-EN.pdf

Giang LM, Ngoc LB, Hoang VH, Mulvey K, Rawson RA. Substance use disorders and HIV in Vietnam since Doi Moi (Renovation): An overview. Journal of Food and Drug Analysis. 2013; 21(4):S42–S45. DOI: 10.1016/j.jfda.2013.09.032 [PubMed: 25278736]

Hanoi news. Hanoi struggles to attract new methadone treatment patients. 2015. Retrieved from http://en.hanoi.vietnamplus.vn/Home/Hanoi-struggles-to-attract-new-methadone-treatment-patients/20158/4875.vnplus

Hoang TV, Ha TT, Hoang TM, Nhu NT, Quoc NC, Tam NT, Mills S. Impact of a methadone maintenance therapy pilot in Vietnam and its role in a scaled-up response. Harm Reduction Journal. 2015; 12(1)doi: 10.1186/s12954-015-0075-9

Jackson TR. Treatment practice and research issues in improving opioid treatment outcomes. Science & Practice Perspectives. 2002; 1(1):22–28. DOI: 10.1151/spp021122 [PubMed: 18567961]

Khuat T, Nguyen VA, Jardine M, Moore T, Bui T, Crofts N. Harm reduction and "Clean" community: can Viet Nam have both? Harm Reduction Journal. 2012; 9(1):25.doi: 10.1186/1477-7517-9-25 [PubMed: 22769430]

Li L, Wu Z, Cao X, Zhang L. Provider–client interaction in methadone treatment clinics in China. Journal of Drug Issues. 2012; 42(2):147–155. DOI: 10.1177/0022042612446593

Li L, Wu Z, Liang L-J, Lin C, Guan J, Jia M, Yan Z. Reducing HIV-related stigma in health care settings: A randomized controlled trial in China. American Journal of Public Health. 2013; 103(2): 286–292. https://doi.org/10.2105/AJPH.2012.300854. [PubMed: 23237175]

Lin C, Wu Z, Detels R. Opiate users' perceived barriers against attending methadone maintenance therapy: A qualitative study in China. Subst. Use Misuse. 2011; 46(9):1190–1198. DOI: 10.3109/10826084.2011.561905 [PubMed: 21417558]

Lin C, Wu Z, Rou K, Pang L, Cao X, Shoptaw S, Detels R. Challenges in providing services in methadone maintenance therapy clinics in China: Service providers' perceptions. International Journal of Drug Policy. 2010; 21(3):173–178. DOI: 10.1016/j.drugpo.2009.09.002 [PubMed: 19818591]

Lin C, Cao X, Li L. Integrating antiretroviral therapy in methadone maintenance therapy clinics: Service provider perceptions. International Journal of Drug Policy. 2014; 25(6):1066–1070. DOI: 10.1016/j.drugpo.2014.04.021 [PubMed: 24939555]

Mclaughlin D, Mckenna H, Leslie J, Moore K, Robinson J. Illicit drug users in Northern Ireland: Perceptions and experiences of health and social care professionals. Journal of Psychiatric and Mental Health Nursing. 2006; 13(6):682–686. DOI: 10.1111/j.1365-2850.2006.01015.x [PubMed: 17087670]

Nguyen VT, Scannapieco M. Drug abuse in Vietnam: A critical review of the literature and implications for future research. Addiction. 2008; 103(4):535–543. DOI: 10.1111/j. 1360-0443.2007.02122.x [PubMed: 18261190]

Nguyen TT, Nguyen LT, Pham MD, Vu HH, Mulvey KP. Methadone maintenance therapy in Vietnam: An overview and scaling-up plan. Advances in Preventive Medicine. 2012; 2012:1–5. DOI: 10.1155/2012/732484

Open Society Institute. HIV/AIDS policy in Vietnam-a civil society perspective. 2007. Retrieved from https://www.opensocietyfoundations.org/sites/default/files/vietnam_20071129.pdf

Tran BX, Nguyen LT. Impact of methadone maintenance on health utility, health care utilization and expenditure in drug users with HIV/AIDS. International Journal of Drug Policy. 2013; 24(6):e105–e110. DOI: 10.1016/j.drugpo.2013.07.007 [PubMed: 23937854]

Tran BX, Nguyen LH, Phan HT, Nguyen LK, Latkin CA. Preference of methadone maintenance patients for the integrative and decentralized service delivery models in Vietnam. Harm Reduction Journal. 2015; 12(1)doi: 10.1186/s12954-015-0063-0

Tran BX, Nguyen LH, Phan HT, Latkin CA. Patient satisfaction with methadone maintenance treatment in Vietnam: A comparison of different integrative-service delivery models. PLOS ONE. 2015; 10(11):e0142644.doi: 10.1371/journal.pone.0142644 [PubMed: 26556036]

Tran, TT., Nguyen, TN. Linking with primary health care services: Experiences from Vietnam. In: O'Toole, B., McConkey, R., editors. Innovations in developing countries for people with disabilities [Internet]. Cheshire, UK: Enabling Education Network; 1995. Retrieved from http://english.aifo.it/disability/documents/innovations/13vietnam.pdf

Tuan, PL. Vietnam health system and health infrastructure: achievements, challenges and orientation. 2015. Retrieved March 3, 2017 from: www.designandhealth.com/upl/files/122262/pam-le-tuan-2015.pdf

UNAIDS. Optimizing Viet Nam's HIV Response: An Investment Case. 2014a. Retrieved from http://www.unaids.org/sites/default/files/country/documents/VNM_narrative_report_2015.pdf

UNAIDS. Vietnam AIDS response progress report 2014. 2014b. Retrieved from http://www.unaids.org/sites/default/files/country/documents/VNM_narrative_report_2014.pdf

United Nations Office on Drug and Crime. Viet Nam shares best practices on methadone maintenance therapy with Bangladesh. 2016. Retrieved from https://www.unodc.org/southeastasiaandpacific/en/vietnam/2016/05/mmt-bangladesh/story.html

Windle, J. A Slow March from Social Evil to Harm Reduction: Drugs and Drug Policy in Vietnam. 2016. Retrieved from: https://www.brookings.edu/wp-content/uploads/2016/07/WindleVietnam-final.pdf

World Bank. Vietnam Growing Healthy: A Review of Vietnam's Health Sector. 2001. Retrieved from http://unpan1.un.org/intradoc/groups/public/documents/apcity/unpan005940pdf

Table 1

Background characteristics.

	Number	Percentage
Age		
30	81	27.0
31–44	112	37.3
45	107	35.7
Gender		
Male	73	24.3
Female	227	75.7
Education		
Associate degree or below	132	44.0
Undergraduate	109	36.3
Graduate	59	19.7
Profession		
Doctor/assistant doctor	168	56.0
Nurse/midwife	83	27.7
Others	49	16.3
Years in medical field		
<10 years	120	40.0
10–19 years	84	28.0
20 years	96	32.0
Number of PWUD usually see per month		
0	87	29.0
5	162	54.0
>5	51	17.0

Table 2

CHW's knowledge of MMT and perceived difficulties in treating PWUD.

Knowledge of MMT	Misconception (Number)	%
The purpose of harm reduction is to eliminate drug using behavior (False).	286	95.3
MMT is effective in treatment of stimulant users (False).	263	87.7
MMT generally requires patients to visit the dispensing clinic on a weekly basis (False).	201	67
Methadone, when given as a maintenance program, can introduce the same euphoria as heroin does (False).	174	58
Methadone given in a stable dose as part of a maintenance regime significantly interferes with the ability to drive a vehicle (False).	118	39.3
MMT reduces the risk of HIV infection (True).	47	15.7
MMT reduces addicts' criminal activities (True).	17	5.7
Long term treatment with sufficient dosage is a basic requirement for MMT (True).	12	4
MMT decreases addicts' risk of dying (True).	8	2.7
MMT reduces addicts' cravings for opioids (True).	3	1
Methadone maintenance therapy (MMT) is available in Vietnam (True).	2	0.7
Methadone is used orally (True).	1	0.3
Number of items representing misconceptions		
1–2	100	33.3
3–4	155	51.7
5 and above	45	15
Perceived difficulties in treating PWUD	Strongly agree or agree (Number)	%
PWUD are hard to get in touch with.	215	71.7
It is hard to have PWUD adhere to the treatment.	201	67
You feel despondent that your PWUD are devious and not telling you the truth.	190	63.3
It is hard to engage PWUD in treatment programs.	176	58.7
You do not have enough training or skill to treat PWUD.	167	55.7
It is almost impossible to change drug using behavior.	109	36.3
It is hard to engage the family members in support of PWUD's treatment.	82	27.3

Table 3

Univariate Analysis and Multiple regression models on MMT-related knowledge and perceived level of difficulties treating patients who use drugs.

Variable	MMT-related knowledge				Perceived difficulties			
	Univariate analysis		Multiple regression model		Univariate analysis		Multiple regression model	
	Correlation Coefficient	*p*-value	Standardized *β*	*p*-value	Correlation Coefficient	*p*-value	Standardized *β*	*p*-value
Age	0.1984	0.0005	0.2964	0.0049	− 0.0852	0.1410	−0.0261	0.8012
Female	0.0221	0.7031	0.0794	0.1925	0.0914	0.1142	0.0594	0.3186
Yeas of education	−0.0802	0.1662	−0.0617	0.288	0.1673	0.0037	0.1562	0.0062
Doctor/assistant doctor	−0.0220	0.7047	−0.0511	0.4182	−0.0736	02034	−0.0763	0217
Years in medical field	0.1287	0.0258	−0.0747	0.4835	−0.0543	0.3491	0.0181	0.8619
Number of PWUD seen in a month	0.0671	02467	0.0674	0.2351	−02189	0.0001	−0.2025	0.0003
MMT-related knowledge					−0.1770	0.0021	−0.151	0.0085