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Original article

Online training needs of Methadone Maintenance Treatment clinics in southern Vietnam

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Abstract: ***Introduction:*** Continuing Medical Education (CME) significantly improves the competency of healthcare workers in Methadone Maintenance Treatment (MMT) clinics. However, CME courses are very costly, and a few participants fully attended a course. Online training is an alternative approach to efficiently improve training outcomes. The study assessed needs and possibility of online training courses of MMT clinics in southern Vietnam. ***Methods:*** A google form was designed to collect characteristics, man-powers, facilities, online activities and training needs of MMT clinics. E-mails were sent to all MMT clinics in southern Vietnam to ask for their participants. A representative of MMT clinics who satisfied the inclusion invited to complete the form. ***Result:*** 93 MMT clinics completed the survey. The response rate was 62% (93/150). One MMT clinic had 3 doctors/assistant doctors, 3 pharmacists/drug dispensers, 2 consultants and 3 other professionals on average. The number of clients visiting the clinic in the last month was 150. About 94% (93/95) of MMT clinics provide other additional services. On average, 385 clients came to MMT for other services. All clinics had adequate devices for online and blended training. ***Conclusion:*** MMT clinics had high training needs and were willing to attend online and blended training courses. Online and blended training were possible in MMT clinics.

Keywords: training needs assessment, Methadone Maintenance Treatment, MMT, online survey, blended training.

1. INTRODUCTION

The health system of developing countries mainly depends on primary healthcare workers whose knowledge and skills are not frequently updated [1, 2]. Incompetent healthcare workers failed to perform healthcare activities [3]. Continuing medical education (CME) significantly improves healthcare workers' competencies, thus improving quality of care [4, 5]. However, CME courses are very costly in operation and organization [6].

Online training is a form of e-learning reduces cost and improves accessibility, flexibility and effectiveness [7-9]. Online training uses various electronic media and devices to deliver teaching and learning activities [7, 8], so that learners can be more active and study whenever and whereever they want. In some circumstances, online training is more effective than on-campus training [9-11]. However, learners must have electronic devices (such as computers, smartphones, microphone, softwares, etc...), internet access and basic computer skills [10]. Moreover, educational providers need to develop a website for online training.

Drug use is a global public health problem. It was globally estimated that 275 million people use drug at least once in 2016, in which 11% suffered from drug use disorders, including a half million deaths [12]. According to a report of Ministry of Labour, War invalids and Social Affairs, there were 210,000 drug users in 2016 in Vietnam [13]. MMT (Methadone Maintenance Treatment) program in Vietnam was first launched in 2008 and has achieved certain

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significant results [14]. The number of MMT clinics have increased to 280 serving more than 51,300 drug users [15].

Methadone is a standard treatment for drug users and has been added in the World Health Organisation's guidelines for treatment of opiod dependence and model list of essential medicines [16, 17]. It is an opiod medication but does not cause neurotoxicity and pleasure at theraputic dose [18]. Methdone effectively reduces harmful impacts of opium substances, improves and maintains quality of life of opiod users [18-20]. An improper dose of methadone can be fatal [19]; therefore, it should be used under supervision of well-trained healthcare workers [18, 21]. However, a high prevelence of primary healthcare workers having limited knowledge and misconception of benefits, procedures and side effects of MMT was found [14, 22].

Vietnam Ministry of Health promugated the Decision No. 159/QĐ-BYT on January 19, 2016 defined a MMT training module for doctors, pharmacists and consultants [21]. The MMT training module shows healthcare workers to follow the guideline presented in the Decision No 493/QĐ-BYT on February 18, 2016 by the Ministry of Health [18]. A good MMT guideline helps healthcare workers avoid potential risks of MMT to clients, and provide safe and effective withdrawal management and treatment [19]. So far, few works have been done to assess MMT training needs of healthcare workers and if an online training module is feasible in the local contexts. Therefore, the study was designed to address the issues. Findings of this study may help minimise the operational and organisational costs and increase the accessibility and flexibility of MMT training courses.

2. METHOD

Study design and participatnts

The cross-sectional survey identified training needs of MMT clinics and evaluated the availability of electronic devices for online training using an online google form. The list of MMT clinics was obtained from SAMHSA (Subtance Abuse and Mental Health Services Administration) located at University of Medicine and Pharmacy at Ho Chi Minh City. MMT clinics located in three cities (Da Nang, Ho Chi Minh, and Can Tho) and following provinces Quang Nam, Quang Ngai, Phu Yen, Binh Dinh, Kon Tum, Dak Lak, Dak Nong, Lam Dong, Khanh Hoa, Ninh Thuan, Binh Thuan, Binh Phuoc, Binh Duong, Dong Nai, Tay Ninh, Ba Ria – Vung Tau, Long An, Tien Giang, An Giang, Ben Tre, Vinh Long, Tra Vinh, Hau Giang, Kien Giang, Soc Trang, Bac Lieu, and Ca Mau were approached. Researchers called all MMT clinics in the South of Vietnam and invited a representative of each clinic to participate in the survey. A representative of a clinic was a person who satisfied inclusive criteria. Researchers explained the purpose and inclusive criteria to participants to ensure that they satisfied the inclusion and were willing to complete the survey. Inclusive criteria were those who worked at the clinic at least three months and had no intention to quit or change their works in the next 12 months. Exclusive criteria were not applied in the survey. Eligible participants were emailed an invitation and a link to google form. If he/she refused to participate or did not satisfy the inclusive criteria, he/she was asked to introduce his/her colleague who was eligible.

Data collections and tools

The online google form was developed and then reviewed by two independent experts and tested before the survey conducted. Researchers telephoned to remind participants to complete the form, explained unclear questions and guided them how to fill in the form. Data collected including characteristics of MMT clinics, human resources, facilities, online activities, and online training needs.

Characterisitics of MMT clinic included clinic's name, address, founded year, upper administrative organisation (center for HIV/AIDS prevention and control; Department of Labour, War Invalids and Social Affairs; District clinic; Methadone Dispensing site; Private Clinic; and Other), the number of clients visiting for MMT and other services, and other providing services.

Human resources included the number of fulltime/partime doctors, assisstant doctors, pharmacists, drug dispensers, consultants and other employees, the number of staff-members were trained in MMT, and the number of staff-members quit or change their works.

Faciltities included internet line, desktop, laptop, webcam, headphone/earphone, smartphone and others support online training. Preferred modes of online communication such as e-mail, official correspondence, telephone, facebook and other was collected also.

Online activities were collected including modes of online activities that clinics had participated before the survey, the most suitable time for online training to the clinic, the number of training sessions per month the clinic like to attend. Moreover, participants were asked to assess the suitable training modes (online, on-campus or blended training) and in-need training contents for training contents from the Decision No. 159/QĐ-BYT of the Ministry of Health [21]. Blended training is a combination of online and on-campus training [23].

Statistical analysis

The data were stored in a google drive and dowloaded in a csv extension file. The csv was converted into STATA data file. All statistics were performed using STATA13. The frequency and percentage of all variables was calculated and presented.

Ethical considerations

Participants were explained the purpose and process of the survey. Those agreed to complete the survey must click on the agreement icon of the google form before filling in the form. Participants had their rights to withdraw from the survey at any time or refused to answer any question without affecting their lives and works. Their participations were totally voluntary. All personal information were coded and only researchers were accessible.

3. RESULTS

Table 1: The characteristics of Methadone Maintenance Treatment Clinics (n = 93)

Characteristic	N	%
The clinic belongs to		
Center for HIV/AIDS prevention and control	39	41.9
District Health Center	37	39.8
Methadone Dispensing Site	14	15.1
Department of Labour, War Invalids and Social Affairs	3	3.2
The clinic was founded		
< 1 year	12	12.9
1-3 years	51	54.8
> 3 years	30	32.3
Providing other services than MMT (yes)	87	93.5
Types of other services (n=87)		
HIV testing and counselling	74	85.1
HIV treatment	47	54.0
Harm reduction services (needles)	40	46.0
Harm reduction services (condom)	40	46.0
Tuberculosis treatment	26	30.0
Treatment Drug Detoxification	8	9.2
Employees changed their work (yes)*	28	30.1
Facilities		
Internet (yes)	92	98.9
Desktop computer (yes)	91	97.8
Webcam (yes)	34	36.6
Laptop (yes)	25	26.9
Headphone (yes)	25	26.9
Microphone (yes)	16	17.2
Smartphone (yes)	88	94.6

*one missing case

Researchers contacted 95 MMT clinics in which two refused to participate. The characteristics of 93 clinics was presented in table 1.

On average, one clinic had 3 doctors/assisstant doctors, 3 pharmacists/drug dispensers, 2 consultants and 3 other employees. The number of clients visiting for MMT in the last month was 150±144 (median was 115), ranging from 5 to 740. There were 87 MMT clinics providing other services, in which 10 had no clients visiting for other services. The number of clients visiting for other services were 385±657 clients (median was 90), ranging from 0 to 3,275.

All clinics (100%) preferred using e-mail for communication. One third of clinics experienced online activities before the survey. The percentage of clinics choosing 14:00 and 9:00 as the best times for online training activities was 34% and 28%, respectively. Nearly half of MMT clinics agreed to have 4 sessions per month. Other online activities such as discussions for new treatments, discussions for difficult cases, seminars and monthly meetings were recommended (table 2).

In all training contents, <30% MMT clinics selected on-campus training for all professionals, including doctors/assisstant doctors, pharmacists/drug dispensers and consultants. Blended training was highly selected in all training contents for all professionals. Online training was more likely selected in those theorectical contents whereas blended training was more likely selected in those tutorial and practical contents (table 3-6).

Table 2: Online activities, suitable time and preferred number of training sessions per month (n=93)

	N	%
Modes of preferred communication		
E-mail	93	100
Telephone	68	73.1
Official correspondence	55	59.1
Facebook	10	10.8
Other (Zalo, e-office)	2	2.2
The clinic participated in online training before (yes)	34	36.6
Online training modes the clinic attended before (n=34)		
Discussing HIV cases	19	55.9
HAIVN project	16	47.1
Online meeting	14	41.2
Online medical consultation	2	5.6
USAIDS SHIFT project	1	2.9
The suitable time for online training		
9:00	26	28
14:00	32	34.4
15:00	8	8.6
8:00	4	4.3
Other timea	27	29.0
The number of online training sessions per month		
4 sessions	40	43
2 sessions	16	17.2
8 sessions	16	17.2
1 session	5	5.4
Other numbers of sessionsb	16	17.2
Other online activities		
Online discussion for new treatments	76	81.7
Online discussion for difficult cases	69	74.2
Online seminars	70	75.3
Monthly online meeting	51	54.8

[a]the frequenc y of each other time <4
[b]the frequency of each other number sessions <5

Table 3: Appropriate training contents and mode for all professionals (n=93)

Training contents for all professionals	Online training N (%)	On-campus training N (%)	Blended training N (%)
Basic knowledge on HIV/AIDS	47 (50.5)	8 (8.6)	38 (40.9)
Overview of the harm reduction program	47 (50.5)	9 (9.7)	37 (39.8)
New addictive substances (methamphetamine, ketamine)	36 (38.7)	16 (17.2)	41 (44.1)
Psychotropic drugs, sleeping pills, anti-depressant	40 (43.0)	15 (16.1)	38 (40.9)
Addictive mechanism	38 (40.9)	14 (15.0)	41 (44.1)
Clinical pharmacology of methadone	38 (40.9)	16 (17.2)	39 (41.9)

Training contents for all professionals	Online training N (%)	On-campus training N (%)	Blended training N (%)
Regulations related to treatment and management of addictive substances	42 (45.2)	12 (12.9)	39 (41.9)
Forms and records are used in methadone maintenance treatment program	24 (25.8)	23 (24.7)	46 (49.5)
Tutorials on methadone management software	23 (24.7)	20 (21.5)	50 (53.8)
Methadone treatment for smokers and alcoholics	36 (38.7)	10 (10.8)	47 (51.5)

Table 4: Appropriate training contents and mode for doctors (n=93)

Training contents for doctors	Online training N (%)	On-campus training N (%)	Blended training N (%)
Classifying opioid addictive substances according to ICD-10	35 (37.6)	10 (10.8)	48 (51.6)
Withdrawal syndrome and opioid poisoning	28 (30.1)	15 (16.1)	50 (53.8)
Initial screening, examination and initial dosage of methadone	24 (25.8)	22 (23.7)	47 (50.5)
Methadone treatment at first stage to detect suitable dose	33 (35.5)	18 (19.3)	42 (45.2)
Methadone treatment at maintain stage	34 (36.6)	13 (14.0)	46 (49.5)
Reducing methadone dose, stopping treatment and restarting treatment	29 (31.2)	15 (16.1)	49 (52.7)
Management of adverse events on methadone treatment	34 (36.6)	18 (19.3)	41 (44.1)
Management of special issues in methadone treatment	30 (32.3)	18 (19.3)	45 (48.4)
Management of drug interactions on methadone treatment	31 (33.3)	18 (19.4)	44 (47.3)
Methadone treatment for special populations and patients with co-morbidities	33 (35.5)	14 (15.0)	46 (49.5)

Table 5: Appropriate training contents and mode for consultants (n=93)

Training contents for consultants	Online training N (%)	On-campus training N (%)	Blended training N (%)
Psychological, physiological, social and health characteristics of opioid dependent patients	33 (35.5)	14 (15.0)	46 (49.5)
Knowledge and skills essential to consultant	31 (33.3)	21 (22.6)	41 (44.1)
Stages of behavior change and interviewing skills for motivation	31 (33.3)	21 (22.6)	41 (44.1)
Skills to establish objectives and solve problems	31 (33.3)	17 (18.3)	45 (48.4)
Initial assessment for methadone patients	28 (30.1)	17 (18.3)	48 (51.6)
Educating groups for preparation before treatment	28 (30.1)	21 (22.6)	44 (47.3)
Consulting for comprehensive assessment of adherence to treatment and psychosocial support needs	31 (33.3)	17 (18.3)	45 (48.4)
Preventing patients from re-addiction	41 (44.1)	12 (12.9)	40 (43.0)
Consulting for reducing risk of HIV transmission	43 (46.2)	12 (12.9)	38 (40.9)
Management of adverse effects and harms of methadone	38 (40.9)	14 (15.0)	41 (44.1)
Management of patients having abnormal behaviours	31 (33.3)	14 (15.1)	48 (51.6)
Recording and using forms and medical records	28 (30.1)	21 (22.6)	44 (47.3)
Assessment of patient's stabilities	42 (45.1)	13 (14.0)	38 (41.9)

Training contents for consultants	Online training N (%)	On-campus training N (%)	Blended training N (%)
Management of multi-substances abuse	36 (38.7)	14 (15.1)	43 (46.2)
Support in reducing dose and processing to stop treatment	37 (39.8)	16 (17.2)	40 (43.0)
Mental comorbidities	30 (32.3)	16 (17.2)	47 (50.5)

Table 6: Appropriate training contents and mode for pharmacists/drug dispensers (n=93)

Training contents for pharmacists/drug dispensers	Online training N (%)	On-campus training N (%)	Blended training N (%)
Process to manage methadone management	34 (36.6)	16 (17.2)	43 (46.2)
Process to deliver and receive methadone	33 (35.5)	16 (17.2)	44 (47.3)
Process to preserve methadone at clinics	35 (37.6)	16 (17.2)	42 (45.2)
Process to manage inventory methadone	33 (35.5)	16 (17.2)	44 (47.3)
Process to dispense methadone at clinics	32 (34.4)	15 (16.1)	46 (49.5)
Using and preserving Cabribrex	25 (26.9)	22 (23.7)	46 (49.4)
Process to plan and report methadone use	30 (32.3)	20 (21.5)	43 (46.2)
Process to solve problems in managing methadone at clinics	27 (29.0)	16 (17.2)	50 (53.8)
Handling of unusual situations in managing and dispensing Methadone	28 (30.1)	16 (17.2)	49 (52.7)
Record and store information on methadone management	28 (30.1)	21 (22.6)	44 (47.3)

4. DISCUSSION

The study provided baseline information regarding the feasibility and training needs of MMT clinics in the southern provinces of Vietnam. The invitation reached to 95 out of 150 MMT clinics, in which two refused to complete the survey. The response rate was 62% (93/150) that was higher than that of a previous study (20%) [22].

This study measured which training contents of the Decision No. 159/QĐ-BYT promulgated by the Vietnam Ministry of Health were in high needs of online training. The findings showed that blended training was the most frequently selected in almost training contents. Blended training creates an interactive and borderless learning environment so that learners experience learning process and achieve learning objectives at their own speed regardless of time and space [23, 24]. As blended training is a combination between online and on-campus training, so it needs electronic devices and media. Online and blended training efficiently reduce costs of operation and organisation, and potentially become training approaches of choice in this century [6, 10, 11, 23, 24]. The study found that all MMT clinics had adequate devices for online training and activities.

Almost 100% health workers of MMT attended at least one training course and nearly 40% attended online training activities in this study. A previous study conducted in Nova Scotia, Canada showed that only 40% primary physicians were willing to attend MMT academic courses, seminars, symposia and mentorship [22]. As they did not fully attend training courses, they had improper knowledge and skills of MMT and used abstinence-based treament rather than maintenance approach and were less likely to prescribe MMT for drug users [14, 22]. However, this study did not measure knowledge and skills of healthcare workers.

The study showed that more than 90% MMT clinics providing additional health services. It was estimated that 42% of MMT clients having comorbid substance use disorders, 80% having at least one psychological disorder, and 68% having at least one physical comorbidity [25, 26]. Anxiety was the most frequent and accounted for 43% of psychological disorders [25]. Depression was also an important psychological disorder and correlated with anxiety. The percentage of MMT clients suffering severe depression was 28% [25]. Drug use is illegal and unacceptable in Vietnamese culture and links to HIV infection that increases the risk of psychological disorders [27-29]. A lack of support services was identified as barrier to MMT delivery [22]. Therefore, integrating other health services including HIV treament, testing and couselling, harm reduction services and other general health services that improves the outcome and accessibility of MMT services [22, 30].

Another potential barrier to MMT services was that healthcare workers are incompetent [22]. Training courses should be launched to improve their competencies for better MMT outcomes as suggested in a previous study [30]. Good guidelines are also important to increase the accessibility, sustainability, effectiveness and efficiency of MMT services [19, 22, 30]. So that, training courses should guide learners

follow regulated guidelines.

A limitation of this study was that data provided by one representative of the clinics that may not reflex responses of all MMT staff-members. A representative of the clinic may not know all the answers, although he/she were asked to discuss with his/her colleagues before completing the survey. Moreover, a representative asked for acceptance from managers of MMT clinics before submitting the survey as it is a managerial regulation in all organisations in Vietnam. However, the findings provide policy makers a reference of the training needs in MMT clinics that would be useful to develop training activities to improve competencies of MMT healthcare workers.

In conclusion, this rapid assessment showed that online CME courses for MMT clinics are feasible and in-needs. An online CME course should have four sessions each month and be at 14:00 or 9:00. E-mail was the most preferable communication. Seminars, meeting and other online activities can be added. Online training activities should be deployed as soon as possible to improve the capacity and durability of MMT clinics in southern Vietnam. It is suggested that further studies should assess training needs of northern MMT clinics and measure other aspects of MMT clinics such as competencies of healthcare workers and quality of the MMT services from viewpoints of experts and clients.

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CONFLICT OF INTERESTS

We declared that we do not have any conflict of interest.

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