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Provider-Patient Communication about Substance Abuse in HIV Settings in Hanoi, Vietnam

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Provider-Patient Communication about Substance Abuse in HIV Settings in Hanoi, Vietnam

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Bachelor of Science Sociology

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2008

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An abstract of

A thesis submitted to the Faculty of the
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Abstract

Provider-Patient Communication on Substance Abuse in HIV Settings in Hanoi, Vietnam

By An Thanh Ly

Background: Since 2005, the national ART program in Vietnam has been scale up through a nationwide network of outpatient clinics (OPCs), which providing antiretroviral therapy (ART) to 57,6000 patients. It is estimated that the national ART program prevented 18,110 AIDS-related deaths between 2000 and 2009, cumulatively. However, these achievements are challenged by the substance abuse among ART patients, which is proven to negatively impact on adherence to ART treatment. Although many studies have shown that early detection, screening and treatment for substance abuse could improve HIV care quality and effectiveness, there is a gap of studies on provider-patient communication about substance abuse in HIV settings.

Objectives: This study aims to describe the communication between HIV providers and patients in HIV settings, explore factors that impact on the communication, and compare these communication among three models of treatment integration between ART and MMT treatment.

Methods: The qualitative data from this thesis is drawn from the original parent study on the need of integration substance abuse treatment into HIV antiviral treatment in 17 OPCs in Hanoi. 29 ART patients and 19 HIV providers volunteered to be interviewed.

Results: Five topics of provider-patient communication are patients' health issues, ART treatment adherence, patients' daily life challenges or difficulties, HIV transmission prevention, and substance abuse. Both patients and HIV providers are hesitant to talk about substance abuse. Providers working in the none-integration model seem to be more hesitant to talk about drug use than those working in the integrated model. Four factors influence on the communication are stigma, perceptions of substance abuse's impact on ART treatment, the "poor adherence" label, and limited expertise of HIV physicians.

Discussion: ART patients conceal their substance abuse to maintain their personal image as a good adherence patient to avoid confronting HIV providers. Training on substance abuse screening and treatment for HIV providers, integrating HIV treatment with substance abuse related services, and adding substance abuse screening content into ART treatment standard guideline will improve the communication between HIV providers and ART patients on substance abuse. Moreover, a good provider-patient relationship will make patients feel more comfortable to disclose their substance use behaviors.

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Definition of key terms

- **Substance abuse:** refers to the harmful or hazardous use of psychoactive substances, including alcohol and illicit drug. Psychoactive substance use can lead to dependence syndrome - a cluster of behavioral, cognitive, and physiological phenomena that develop after repeated substance use and that typically include a strong desire to take the drug, difficulties in controlling its use, persisting in its use despite harmful consequences, a higher priority given to drug use than to other activities and obligations, increased tolerance, and sometimes a physical withdrawal state" (World Health Organization, 2013)
- **Treatment integration:** refers to integrating substances abuse interventions and treatment with HIV treatment in OPCs. It is a multiple methods to detect patients, who are dependent to substance use at different level, early and provide behavioral and psychological interventions to reduce substance use, and specific treatment (e.g. methadone…). Treatment integration between HIV and substance abuse treatment have difference levels range from simple to complicated. At simple level, it includes substance abuse screening, brief intervention and referral to treatment (SBIRT). Meanwhile, complicated treatment integration is that a medical staff team will provide treatment for HIV and substance abuse in one clinic.
- **Antiretroviral therapy (ART)**: is the use of the combination of at least three antiretroviral drugs to maximally suppress the HIV virus and stop the progression of HIV disease.

I. Introduction

Since the first reported cases of Human Immunodeficiency Virus (HIV) and Acute Immunodeficiency Syndrome (AIDS) were recognized in 1980s, HIV/AIDS has become a serious health and development challenge, captured global attention and inspired efforts to eliminate the epidemic (The Henry J Kaiser Family Foundation, 2013). This global pandemic, caused 1.6 million AIDS-related deaths in 2012, and more than 0.8% of adults aged 15-49 years are estimated to be living with HIV globally (World Health Organization, 2012). The burden of the epidemic varies considerably between countries and regions (UNAIDS, 2012a). Africa remains most severely affected by HIV/AIDS (UNAIDS, 2012a). Most African countries remain in a "generalized epidemic", which is defined as more than one percent of the general population is HIV-positive (UNAIDS, 2011). Meanwhile, most Asian countries are experiencing "concentrated epidemics" with less than one percent of the general population is HIV-positive but prevalence is greater than five percent in at least one high-risk sub-population such as intravenous drug users (IDUs), men who have sex with men (MSM) or commercial sex workers (CSW) (UNAIDS, 2011).

Like most Asian countries, Vietnam is experiencing a concentrated HIV epidemic (H.T. Nguyen, Nguyen, & Tran, 2004). The epidemic in Vietnam is heavily concentrated in urban areas, and driven by the most at risk populations (MARPs) listed above (MOH, 2011; National Committe for AIDS Drugs and Prostitution Prevention and Control, 2012; H.T. Nguyen et al., 2004; UNAIDS, 2010). In 2011, 0.45% of adults aged 15-49 in Vietnam were HIV-positive (National Committe for AIDS Drugs and Prostitution Prevention and Control, 2012). In the meanwhile, the HIV prevalence in MARPs, such as IDUs, CSWs and MSM remained high, at 13.4%, 3% and

16.7%, respectively (National Committe for AIDS Drugs and Prostitution Prevention and Control, 2012; NIHE et al., 2011). Moreover, the HIV epidemic in Vietnam is predominantly drug-related because IDU accounted for most of the reported HIV infections (53%) as of September 2009, and rates among IDUs have remained high since the beginning of the epidemic (Vietnam Administration of HIV/AIDS Control, 2010). Several strategies and approaches have been implemented in response to the spread of HIV and drug use (National Committe for AIDS Drugs and Prostitution Prevention and Control, 2012; H. T. Nguyen et al., 1999; H.T. Nguyen et al., 2004). One of these strategies is the "treatment as prevention" approach, which emphasizes using ARVs, ART and microbicides for pre-exposure prophylaxis to treat HIV-infected persons to improve their health and reduce the risk of onward transmission(Centers for Disease Control and Prevention). Since 1995, the national antiretroviral therapy (ART) program in Vietnam has scaled-up, increasing ART coverage to 53% in adults and 83% in children in 2011 (National Committe for AIDS Drugs and Prostitution Prevention and Control, 2012). On the other hand, to control the spread of the drug use epidemic and its impacts on HIV/AIDS epidemic, Vietnam has launched Methadone Maintenance Treatment (MMT), which is independent of HIV treatment, with technical and financial support from The U.S President's Emergency Plan for AIDS Relief (PEPFAR) and other international organizations. The MMT program was piloted in two cities, Hai Phong and Ho Chi Minh, in 2008, and in process to scale-up since 2010. Since then, treatment effective and adherence MMT and ART have received huge attention.

In 2013, Center for Research and Training on HIV/AIDS (CREATA) of Hanoi Medical University, a research center receiving funding from Vietnam Administration for AIDS Control (VAAC), conducted a study to explore the attitudes towards, needs and capacity for integrating substance abuse intervention and treatment into ART treatment in outpatient clinics (OPCs) in

Hanoi. The integrating HIV treatment with substance abuse treatment will enhance the access to HIV and substance abuse treatment services, improve the quality and effectiveness of HIV treatment, and decrease substance abuse (Altice et al., 2011; Fiellin et al., 2011; Korthuis, Le, Gregg, & Boverman, 2010; Sullivan et al., 2006; Tran et al., 2012). The study aims to: 1) describe the current level of integration between substance-use-related services (screening, early intervention, and referral) and HIV outpatient clinics (OPCs) in Hanoi; 2) Assess needs and attitudes of HIV patients and health providers in OPCs towards integration between ART services and substance abuse treatment services. By November 2013, 575 HIV patients receiving ART treatment in 17 OPCs in Hanoi were recruited for the cross-sectional survey by stratified random sampling method; 17 health providers and 30 HIV patients were recruited for the qualitative study. With the permission to conduct a secondary analysis using dataset from the qualitative sub-study, I will explore the communication between physicians and patients about substance use behaviors, with a focus on drug use behaviors, in OPC settings to better inform ART treatment.

1. Objectives

1. Describe the communication between HIV providers and patients in HIV settings.
2. Explore factors that impact on provider-patient communication about substance abuse in HIV settings.
3. Compare provider-patient communications about substance use among three treatment integration models in Hanoi.

2. Background and Rationale

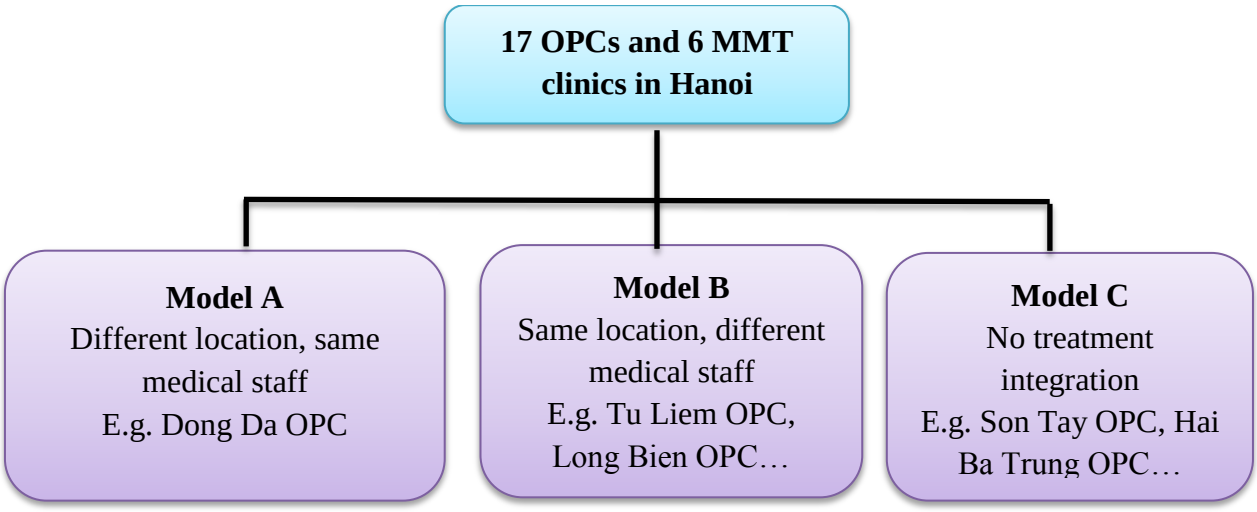
Since 2005, the national ART program has been scaled-up in Vietnam through a nationwide network of OPCs. In 2011, Vietnam had 305 adult OPCs, providing ART to 57,600 patients (National Committe for AIDS Drugs and Prostitution Prevention and Control, 2012). It is estimated that the national ART program prevented 18,110 AIDS-related deaths between 2000 and 2009, cumulatively (National Committe for AIDS Drugs and Prostitution Prevention and Control, 2012). IDUs account for a large proportion of patients receiving ART in the OPCs. In 2010, a study in Ho Chi Minh showed that 73% of patients receiving ART reported having injected drugs (FHI 360, 2010). About 60-70% of ART patients in Vietnam are former or current drug users (Aceijas et al., 2006). It indicates that substances use is common among ART patients, which is challenging for HIV care, treatment and prevention (Uldall, Palmer, Whetten, Mellins, & HIV/AIDS Treatment Adherence Health Outcomes and Cost Study Group, 2004; Wood et al., 2003).

Early detection, screening, and treatment for substances abuse could improve HIV care quality, and health status of people living with HIV and substance use disorders. Studies have shown that integrating ART treatment and MMT can enhance the effectiveness ART, patient's ability to access ART, and can help with early detection of substance abuse disorders (Korthuis et al., 2011; Korthuis et al., 2010; Rothman et al., 2007). A study in Vancouver, British Columbia showed that MMT increases ART treatment adherence and CD4 cell-count, and decreases HIV-1 viral load? (Palepu et al., 2006). However, complicated procedures for referring ART patients to MMT clinics, limited services for ART patients who are alcoholic and/or methamphetamine users and lack of recognition of patients' substance use situation in OPCs were barriers to patients' ability to access needed services (Ministry of Health, 2012; UNGASS, 2010). However,

early detection, screening and intervention have not traditionally been a focus of medical care in the Vietnamese OPCs. Therefore, there are no existing guidelines or specific trainings to guide or standardize communication between HIV health providers and ART patients about substance abuse in the OPCs in Vietnam in general, or in Hanoi, specifically.

In Hanoi, there are 17 OPCs and six MMT clinics providing services to HIV patients and IDUs. There are three models of integration between MMT and ART treatment providing services. In Model A (different location, same medical staff), the OPCs have integrated treatment services. One team of medical staff provides both ART and MMT treatment in separate locations. They provide services for HIV patients in OPC in the morning, and then move to MMT clinics to provide services to IDUs in afternoon. Dong Da OPC is the only clinic that currently follows model A in Hanoi. In Model B (same location, different medical staff), the OPCs have integrated treatment services in the same location, but the medical staff providing ART is different from those providing MMT treatment. Two OPCs following this model are Long Bien and Tu Liem OPC. In Model C (no treatment integration), the OPCs provide ART treatment exclusively. Most OPCs in Hanoi, except three OPCs mentioned above, are in model C.

Figure 1. Models of integration between MMT and ARV treatment



Seven OPCs, where participants were recruited, provide HIV voluntary counselling and testing (VCT), and ART treatment for HIV-infected people. People having positive HIV test results will start ART treatment when their CD4 count is equal or less than 350 cell/mm^3. For HIV-infected patients, who are eligible for ART treatment, 7 OPCs provide HIV care and treatment services, including monthly appointment with HIV physicians; testing for CD4 count, viral load, tuberculosis (TB), liver and kidney function; opportunity infectious disease treatment, harm reduction intervention (needle exchange, condom distribution); counselling, and prevention mother to child transmission. In a monthly appointment, the patients have a health check-up; receive monthly HIV medication, counselling section; and routine blood tests as physicians' requests. The blood test for CD4 count and viral load is conducted every six months. Other tests for TB, liver and kidney function are performed as physician's requirement. If patients have a positive TB test result, they will be referred to other hospital for the treatment. Model B and C are running peer-educator groups to provide extra support and counselling to the patients, but the peer-educator group of model A has been dismissed due to the shortage of financial resource. Nutrition program, which distributes rice and food for patients with low BMI and poor, is implemented in OPC model C only.

None of OPCs provides alcohol abuse-related services, even screening for alcohol abuse. For illicit drug users, in addition to a normal counselling section, they received extra information on the drug abuse's impact on human health and HIV medication, and MMT clinics and MMT application procedure. OPCs model A and B provided referral to MMT clinic, but depending on the eligible requirements and space availability of MMT clinics, patients were approved or rejected to receive MMT. Moreover, it was for heroin users, only. There were no referral for patients who used other types of illicit drugs as crystal meth, amphetamine, LSD…

Model C only provide information on available MMT clinics in Hanoi only. Dong Da OPC, model A, is the only one OPC among seven OPCs using substance abuse screening tools and testing to diagnose drug use. Mobile home care or community outreach units target to drug-use-HIV patients, or severe HIV patients, who cannot go to clinic.

Table 1. List of OPC's health service by model of integration

	Model A	Model B	Model C
Monthly appointment with physician	x	x	x
VCT	x	x	x
Counselling on HIV medication, complication, adherence	x	x	x
Testing (CD4 count, viral load, TB, liver and kidney function, hepatitis B, hepatitis V)	x	x	x
Mobile home care/Community outreach unit	x	x	x
PMTCT	x	x	x
Harm reduction interventions (needle exchange, condom distribution)	x	x	x
Nutrition program			x
Peer educator group		x	x
Illicit drug abuse screening	x	x	
Referral for TB treatment	x	x	x
Referral for MMT treatment	x		

Health providers play an important role in early detection and screening for substance abuse disorders. If physicians communicate to patients about substance use effectively, it will be easier to screen for and detect substance abuse disorders in a timely manner, which in turn can improve HIV care quality. However, the level of communication about substance use is diverse among OPCs, reflecting the diversity in integration models. In Vietnam, the official data on ART patients' substance use behaviors and communication between physicians and patients in HIV settings are lacking. Improved understanding of physician-patient communication about

substance abuse, especially drug use, is critical to identify barriers to early detection and screening substance use among ART patients.

II. Literature Review

Substance abuse and HIV/AIDS have been global twin epidemics since the early of the AIDS epidemic, especially in countries where the epidemic is driven by IDU population, as it is in Vietnam (National Committe for AIDS Drugs and Prostitution Prevention and Control, 2012). IDU contributes to 10% of HIV infection worldwide, with at least 25 countries reporting at least 20% HIV prevalence attributable to IDU. Substance abuse disorders are not only increasing HIV transmission, but they also decrease the efficacy of ART treatment (Chander, Himelhoch, & Moore, 2006; Cook et al., 2006; Cook et al., 2001; Krüsia, Wooda, Montaner, & Kerr, 2010; Loughlin et al., 2004). Research has shown that early screening and detection for substances abuse disorders could improve treatment adherence (Altice et al., 2011; Korthuis et al., 2011; Lucas et al., 2010). Additionally, medical therapy for opioid dependence with MMT or buprenorphine/naloxone therapy has been shown to decrease HIV risk behaviors and improve ART treatment efficacy (Krupitsky et al., 2011; Sullivan et al., 2008; Tetrault et al., 2012). However, substance-using HIV-infected patients in Vietnam may have limited access to these treatments because of complicated approval process, and limited available MMT clinics. Communication among providers and HIV-infected patients about substance use is one potential barrier or facilitator that has not yet been explored comprehensively.

1. Substance abuse and ART treatment

A large body of research has examined the impact of substance abuse on ART treatment and shown that substance abuse is associated with poorer immunological and virological outcomes

(Chander et al., 2006; Cook et al., 2001; Lucas, Cheever, Chaisson, & Moore, 2001; Lucas, Gebo, Chaisson, & Moore, 2002; Wood et al., 2003) as well as lower utilization of outpatient care (Cunningham et al., 2006). In a national cross-sectional survey of 4,042 HIV-infected adults receiving medical care conducted in US, Mathews et al. (2000)found that injecting drug users were one of groups with the highest prevalence of HIV-related symptoms. Moreover, patients who are alcoholic or acquired HIV through drug use are more likely to be hospitalized over time (Fleishman et al., 2005; Palepu, Horton, Tibbetts, Meli, & Samet, 2005). Medical complications and behavioral problems that accompany substance use can complicate the medical management of HIV-infected patients. IDUs are more likely to experience delayed initiation of ART treatment among HIV-infected patients with substance abuse disorders (Tegger et al., 2008). Similarly, research has shown that many physicians will not prescribe ART treatment to HIV-positive patients who are known to abuse alcohol (Bogart, Kelly, Catz, & Sosman, 2000; Loughlin et al., 2004).

In order to reach HIV viral load suppression, patients' ability to adhere to ART treatment is one critical. Many studies have demonstrated a negative impact of substance use on adherence (Chander et al., 2006; Cook et al., 2001; Hsu & Fishman, 1999; Mellins et al., 2009; Uldall et al., 2004; Wood et al., 2003). In a review of studies on substance abuse and psychiatric disorders in HIV-positive patients, Chander et al. (2006) found that 12 out of 14 prospective and cross-sectional studies examining the association between substance use and ART adherence provided the evidence of associations between substance abuse and lower or decreasing adherence. The negative impact of alcohol abuse on adherence has been confirmed in many studies, but illegal drug use's negative impact on adherence remains unconfirmed in some cases (Cook et al., 2001; Lucas et al., 2002; Shacham, Agbebi, Stamm, & Overton, 2011; Stein et al., 2000).

In addition to substance use, physicians' perception of substance users influences on ART treatment for HIV-infected substances users in particular and HIV-infected patients in general. Physicians' stereotypes of poor adherence among active drug users may lead to the disparities in health and health services (Balsaa & McGuire, 2003; Ware, Wyatt, & Tugenberg, 2005). Moreover, physicians are often resistant to prescribe HAART treatment to HIV-positive substance users even if they have met criteria for highly active antiretroviral therapy (HAART) eligibility. Physicians' attitudes toward IDU behaviors vary considerably, with important implications for care. Ding et al.(2005) found out that IDUs whose physicians had negative attitudes had a significantly lower adjusted rate of exposure to HAART (13.5%) than non-IDUs who received care from the same physicians (36.1%), or IDUs who received care from physicians with positive attitudes (32.3%).

Early screening, intervention and treatment for substance abuse disorders that is integrated into outpatient HIV clinical care would improve patients' adherence ability and ART treatment effectiveness. A randomized controlled trial comparing HIV clinic-based treatment with buprenorphine/naloxone (clinic-based BUP) with case management and referral to an opioid treatment program in US found that patients in clinic-based buprenorphine had significantly better attendance in HIV primary care than those in referred-treatment (Lucas et al., 2010). Lucas's study findings are supported by the outcomes of studies conducted by Korthuis et al. (2011) and Altice et al. (2011), which indicated a positive association between initiating substance abuse disorders treatment in HIV clinical setting and improving HIV treatment outcomes. In addition to buprenorphine and naloxone, MMT has also been proven to reduce HIV risk behaviors and enhance HIV treatment outcomes (Metzger et al., 1993). In early screening and detection for substance use, the relationship between providers and patients plays an

important role. The more comfortable the provider-patient communication is, the more likely patients are to disclose their substance use behaviors to health providers.

2. Provider-patient relationship in ART treatment

The relationship between physician and patient is a source of healing that can occur in chronic diseases (Kaplan, Greenfield, & Ware, 1989). Therefore, it is widely accepted assertion that better physician-relationships lead to a better adherence to HIV medication since when HIV/AIDS has become a chronic illness due to the advent of ART treatment (Beach, Keruly, & Moore, 2006; Palella, Delaney, Moorman, & al., 1998). There is emerging evidence suggesting the association between provider-patient relationships with patients' adherence to ART treatment. Bakken et al. (2000) found that patients who reported good relationships with their health providers presented better adherence and immune health than those having less-good relationships. Garcia, Lima, Gorender, and Badaro (2005) reported a single case of HIV patient reinforced the importance of a good physician-patient relationship in HIV medication and maintain patient's adherence. Findings from a cross-sectional study of 120 HIV-positive patients attending an urban university hospital infectious diseases clinic in US indicate that some clinician-patient relationship factors (organizational access, financial accessibility) served as protective, and some (continuity of care, interpersonal treatment) served as risk factor for adherence to HIV medication (Ingersoll & Heckman, 2005). In a cross-sectional study, Beach et al. (2006) found that HIV-infected patients who reported their provider knows them "as a person" were less likely to use illicit drugs and alcohol (22% vs. 33% used drugs, P<.001; 42% vs. 53% used alcohol; P<.001) (2006). Schneider et al. (2004) found that in multivariable models accounted for the clustering of patients within physician's practices, six out of seven physician-patient relationship qualities (general communication, HIV-specific information, overall

physician satisfaction, willingness to recommend physician, physician trust and adherence dialogue) were significantly ($P < .05$) associated with adherence.

3. Communication about substance abuse in HIV settings

As mentioned above, substance abuse decreases ART treatment adherence and outcomes, and early prevention and treatment for substance abuse disorders can navigate the negative association. However, less than half of HIV-infected patients, who are likely to benefit from discussion of substance use, reported discussing substance use with their providers (Metsch et al., 2008). They were half as likely to report high comfort with their physicians when compared to their peers, who were non-substance users (Ray et al., 2013). Meanwhile, other studies have found that providers were hesitant to diagnose substance abuse or provide resources to substance users (Johnson, Booth, & Johnson, 2005). We have known a little about the frequency or the extent of patient-providers communications about substance abuse in primary care settings as well as HIV settings. There is a need for research to further explore the communication between physicians and patients about substance abuse in HIV settings and its challenges to better addressing the issue and improve HIV medication outcomes and treatment. This study addresses these gaps and contributes to existing literature by exploring: 1) provider-patient communication about substance abuse from both perspective of HIV-infected patients on ART, and HIV treatment providers in different models of integrating substance abuse disorders treatment into ART treatment in Hanoi, Vietnam; and 2) barriers to physician-patient communication about substance abuse. The analysis describes the communications, compares those communications among three different integrating treatment models.

III. Method

The qualitative data from my thesis is drawn from the "Assessing the need and capacity for integration substance abuse treatment into HIV antiviral treatment in HIV/AIDS outpatient clinics in Hanoi" study conducted by Center for Research and Training on HIV/AIDS (CREATA), Hanoi Medical University, in 2013. The primary study aimed to evaluate levels of integration of substance abuse treatment into HIV treatment in outpatient clinics (OPCs), and HIV patients' needs and attitude as well as medical staff's capacity related to the integration. The study utilized a mixed methods approach, including cross-sectional surveys, in-depth interviews with patients, and key informant interviews with medical staff at 17 OPCs in Hanoi. In this thesis, only qualitative data drawn from in-depth and key informant interviews is used. Ethical approvals for the primary study were obtained from the IRBs at Hanoi Medical University in Hanoi, and Ministry of Health in Vietnam. Ethical approval for the secondary data analysis using the qualitative sub-dataset was obtained from CREATA.

1. Population and study setting

Hanoi has one of the highest HIV prevalence in Vietnam. Hanoi has 17 OPCs providing antiretroviral (ARV) treatment to more than 5,000 people living with HIV (PLWH), and six methadone maintenance treatment (MMT) clinics providing substance abuse treatment to heroin users, who failed drug rehab many times. According to clinicians and managers working in the HIV field, substance use such as alcohol and drugs is common among PLWH. There are three models of integration between MMT and ARV treatment, as described in the introduction section.

Study participants were recruited from five out of 17 OPCs. In order to compare among the three models and obtain a large enough sample frame for the survey, the five OPCs were selected based on their model of treatment integration (the goal was to represent all three models) and the number of HIV patients that they served (see Table 1).

Table 2. Characteristic of study sites

	Model A	***Model B***		***Model C***	
	Dong Da (*)	*Tu Liem*	*Long Bien*	*Ha Dong*	*Hoang Mai*
# ARV patients	232	395	234	550	680
# MMT patients	267	268	259	8	15

(*)Dong Da OPC is the only one OPC following Model A in Hanoi.

2. Participants

Prior to study implementation, six key informants (three HIV program managers at the Hanoi Provincial AIDS Center, and three OPC senior clinicians) were recruited directly for semi-structured interviews, in order to collect data on MMT and HIV treatment integration in Hanoi. Key informants were also asked to comment on the questionnaire and advise the investigators regarding logistics of study implementation.

After participating in the cross-sectional survey portion of the study, 17 medical staff members and 30 HIV patients were recruited between May and December 2013 for participation in qualitative interviews. Medical staff and HIV patients were eligible to participate in the study if they were: (1) Working in or receiving ARV treatment in the selected OPCs within last 6 months, (2) Capable of understanding the informed consent form, (3) living in Hanoi, and (4) at least 18 years old. HIV patients were also purposively sampled (see Table 2 below) based on their substance use (including alcohol and drugs) behavior and gender, with the goal of recruiting

both active substance users and non-users, and of representing males and females equally. The study team had a plan to recruit study participants as described in the Table 2 below.

Table 3. Sampling for in-depth interviews

	Model A		**Model B**		**Model C**	
Medical staff (n=17)						
Clinicians	2		3 (Tu Liem: 2 Long Bien: 1)		3 (Hoang Mai: 1 Ha Dong: 2)	
Nurses/ Counselors	3		3 (Tu Liem: 1 Long Bien 2)		3 (Hoang Mai: 2 Ha Dong: 1)	
HIV patients (n=30)						
	Male	*Female*	*Male*	*Female*	*Male*	*Female*
Use substance in last 3 months	3	2	3	2	3	2
No substance use in last 3 months	3	2	3	2	3	2

3. Data Collection

Among 600 survey participants, 30 participated in the qualitative sub-study. After completing the quantitative survey, study staff explained the goals of the in-depth interviews to eligible participants and invited them to participate. Those who agreed to participate in the qualitative sub-study returned on a separate date to participate in an individual in-depth interview. All interviews were conducted in a private room of the OPC where participants received HIV treatment. In-depth interviews only started after interviewers explained the qualitative sub-study thoroughly, reviewed informed consent forms, and received participant's signatures on the forms indicating understanding and consent. Separate interview guides were developed for interviewing medical staff and patients. The core domains of medical staff interview were: (1) Personal information, (2) Care and treatment services for HIV patients using drugs, and (3) Treatment integration between MMT and ARV in OPCs. The core domains of patient interview

were: (1) Personal experiences with ARV treatment, (2) Substance use, and (3) Opinions of treatment integration of MMT and ARV. All interviewers had previous research experience and education related to health services and HIV research. The interviews averaged 45-60 minutes in length and were all digitally audio-recorded and subsequently transcribed verbatim.

4. Thematic Analysis

All analysis was done using Atlas.ti 6.2, a qualitative data analysis software package. My aims were to describe the communication between medical staff and patients. First, I read each interview transcript in detail and highlighted the portions of text related to the communication between medical staff and patients for subsequent review. Next, I wrote case summaries for each participant, in which I described their demographic characteristics, HIV treatment experience, patient-provider communications, difficulties and challenges, and substance use histories. In addition to facilitating cross-case comparisons, the case summaries also served as analytic memos in which I recorded insights and observations about the data as I was analyzing it. I next developed a codebook. In the next step, I analyzed interview transcription further to organize emergent themes into a codebook, which I then applied to each transcript. Finally, I generated a new conceptual framework to explain patient-provider communication about substance use within our sample

IV. Results

1. Participant characteristics

Prior to data collection, we planned to conduct in-depth interviews with 30 patients and 17 health providers, evenly split between the three treatment integration models. Nineteen health providers

volunteered to be interviewed. However, only 29 patients, including 12 patients in model A, 10 in model B, and seven patients from model C, agreed to participate in the study, leaving 29 patients interviews transcripts and 19 health providers transcript available for analysis. The 29 HIV patients included in this qualitative analysis were primarily of middle socioeconomic status (the majority reported monthly income from 1.5 – 3.5 million VND, equal to 70 - 170 USD), and were young adults aged 20-40. Five participants were receiving MMT treatment. All of these MMT patients were provided HIV care and treatment by OPC model A and B, which had integrated treatment services. Alcohol consumption was more common among male patients that female patients, but no one reported themselves to be alcohol dependent. The majority of patient participants had been receiving ART treatment from one to five years.

Table 4. Demographic characteristics of participants (ART patients)

	Number of participants (N)	Percent (%)
Age range		
20 – 30	6	20.7%
31 – 40	18	62.1%
41 – 50	4	13.8%
51 – 60	1	3.4%
Marital Status		
Single	10	34.5%
Married	12	42.4%
Separated	1	3.4%
Divorced	4	13.8%
Widowed	2	6.9%
Employment		
Unemployed	2	6.9%
Working for family's business	3	11.5%
Employed, unskilled work	18	62.1%
Employed, skilled work	6	20.7%
OPC treatment model		
Model A	12	42.4%
Model B	10	34.5%
Model C	7	24.1%
Number of years receiving ART treatments		
≤1 year	4	13.8%
>1 – 5 years	19	65.5%
> 5 years	6	20.7%
Ever used illicit drugs	20	69.0%
Ever been in drug detention center	9	31.0%
Receiving MMT treatment	5	17.2%
Total	**29**	**100%**

Illicit drug use was common among participants with nearly 70% reporting being a former or current drug user. Patients reported using a diverse range of illicit drugs including heroin,

amphetamines, crystal meth, and marijuana; but heroin injection were reported to be the most common drug use among patients.

The 19 health providers were included in this qualitative analysis included nine physicians, five nurses and six counselors. All health provider participants had at least 6 months experience working in the OPC, and were certified to provide health care, treatment and counseling to HIV-infected people. Eight health providers were trained in both ART and MMT treatment and counseling. Among these eight heath providers, six persons were working in OPC model A, and the remainder were working in the model B.

Table 5. Job position of health provider participants

	Physicians	Nurse	Counselor	Total
Model A	3	1	2	**6**
Model B	3	2	2	**7**
Model C	3	2	2	**6**
Total	**9**	**5**	**6**	**19**

Table 6. Demographic characteristics of health provider participants

	Number	Percent
Age range		
20 – 30	9	47.4%
31 – 40	3	15.8%
41 – 50	1	5.3%
51 – 60	6	31.8%
Sex		
Female	8	42.1%
Male	11	58.9%
Total	**19**	**100%**

2. Content of communication between providers and ART patients

In the three models, communication between health provider and ART patients usually occurs during the monthly appointment. The entire visit is 30-60 minutes in average. Our analysis highlighted five topics that HIV providers communicate about with their ART patients: (1) patients' health issues, (2) ART treatment adherence, (3) patients' daily life challenges or difficulties, (4) HIV transmission prevention, and (5) substance abuse.

Patients' Health Issues

Patients' health condition received much attention from both ART patients and providers in all three models because it indicates the treatment progress and outcomes. The 29 patient participants reported that they had a conversation on their health, which is their top priority, with providers in each appointment. In these conversations, they informed physicians about their daily diets, and discussed any unusual symptoms as fever, cough, sleeplessness, or stomachaches that might indicate complications or side effects of HIV medication. Some patient participants stated that they had physicians clarify the possible impact of medication that they self-prescribed for those common symptoms, on their HIV medication.

> The physician asks everything [health issues]. First, they ask whether I had dizziness, headache, fever or any other symptoms in the last month or not. Then, they will prescribe medication or supplements. *(Patient interview)*

> I usually come to OPC in morning to be in line early. When my name is called, I will go to the physician's office. He will do the regular check-up. He asks me about the side effects, any fever, cold, or opportunistic infectious disease that I had since the last appointment. Then, they check my weight to know whether I have lost weight or not. If I have any symptoms, the physician will prescribe medications. For example, medication for mycosis fungoides, sore throat… Once time, I got a prescription for 60 Biseptol pills, 30 ARV pills, and supplements because I had sore throat. *(Patient interview)*

ART Treatment Adherence

Treatment adherence was strongly emphasized by health providers. They repeatedly reminded patients about the importance of adherence to HIV medication, asked patients about the reasons for poor adherence, and provided tips to enhance it (*e.g.*using mobile phone or alarm clock

reminders, choosing suitable time slot to take HIV medications). Physicians also checked patients' adherence by counting the number of leftover medication, monthly. At times, however, the huge emphasis on adherence made patients feel so much pressure that they threw away leftover pills to conceal their poor adherence.

> Because we [physicians] count the leftover pills [HIV medication] to cross-check [patients' adherence], many patients are willing to throw leftover pills away, so we cannot find out about their missed doses. For example, there are supposed to be 2 leftover pills, but a patient has 10 pills left. They will throw away 8 pills right outside of the OPC. I have seen so many pills thrown away in front of this OPC. *(Health provider interview)*

Daily life challenges or difficulties

In several of these transcripts from the three models, challenges in patients' personal life were mentioned in conversation between providers and ART patients, because health providers, including nurses, physicians and counsellors considered it as a factor influencing on treatment adherence and outcomes. Several patients shared more about their personal life (such as family issues, friends...) with health providers as their relationship was getting closer.

> *Interviewee:* Tell me what do you usually share with your physician?
>
> *Participants:* Well, if I don't feel well [health], I will tell them. And, even personal things such as family issues, I can tell them too, because we are so close. For me, they are a family member, so I can confide everything. And they treat me as other normal people, so I don't feel afraid to talk to them. I feel happy. *(Patient interview)*

This quote demonstrates not only the content of the conversation between the patient with physician but also the quality of the relationship. However, this degree of closeness with

physicians did not happen to all 29 participants. Although all patients participated in the study reported feeling comfortable with health providers and satisfied with the OPC's services, few of them had shared issues related to their personal life to providers. Some patients preferred to talk about these issues to peer educators rather than providers.

HIV transmission prevention

The next topic of communication between providers and patients was HIV transmission prevention. We find that it does not come up in every conversation; and physicians and counsellors talked to patients about the topic more than nurses and pharmacists in OPCs. In the counselling sessions prior to the beginning of ART treatment, patients were provided information about HIV transmission prevention, PMTCT, and available harm reduction programs of OPC such as condom distribution and needle exchange. Several providers confirmed that patients usually asked physicians and nurses for condoms, but were more likely to ask peer educators for clean needles. Physicians would communicate about PMTCT only if patients expressed the wish of having baby.

> They [counsellor] taught me how to protect and improve my health, told me to stop using drugs. They also said that I had to use condoms when having sex. *(Male patients, model B)*

> We have harm reduction intervention activities such as clean needle and condom distribution. Patients can take what they need from the condom box and the clean needle box in the counseling office or in the hall. *(Health provider interview)*

Substance Abuse

The substance abuse was the least frequently mentioned topic of communication between patients and health providers, especially for those in OPC model C. Physicians were more likely

to ask patients about substance abuse than other health providers in OPCs. However, illicit drug use was mentioned more than alcohol use. Most health providers included in this analysis confirmed that drug use was brought into the conversation only if patients performed a poor adherence or treatment outcomes. The communication about substance use will be analyzed in detailed in the next section.

3. Communication about substance abuse

We explored the communication between health providers and ART patients by asking both health providers and ART patients about when, how and to whom substance abuse came up, and which substances were mentioned in the conversation. The participants described that illicit drugs use, especially heroin use, emerged in the conversation more than alcohol use; and physicians were more likely to talk about substance abuse than other health providers were. All participants were asked about history of drug use in the first day of treatment, and warned about the harmfulness of substance abuse.

> Physicians forbid us to use addictive drugs, and alcohol, too. They warn us that we should not drink much alcohol *(Patient interview)*

During ART treatment, the participants who were receiving ART treatment in OPC models A and B seemed to be asked about or provided information about substance abuse more than their peers receiving treatment in OPC model C. Ten participants reported that they had been asked about drug use by their health providers; half of them were receiving ART treatment in OPC model A.

All the participants shared similar ideals about substance use's impact on ART treatment. According to health providers, drug use had negative impacts on patient's health, treatment

adherence and treatment outcomes. The theme of how substance use ruined the ART treatment was found in many transcripts.

> When a patient uses drugs, all providers in this OPC can see clearly how bad it influences ART treatment. I have not mentioned how toxic it is, yet. The most important thing to have a good HIV treatment outcome is adherence. But, patients will not adhere to the medication if they use drugs. There are some cases of failed treatment or death because patients were using drugs and receiving ART at the same time. If you cannot stop using drugs, you relapse. If you relapse, you will skip doses, skip appointments, then drop out of the treatment. There are some cases that die of overdose. So, using drugs makes patients switch their priority from taking HIV medication to taking illicit drugs, then leads to poor adherence. Besides, as a physician, I understand how toxic drugs are to the human body. *(Health provider interview)*

> As I'm working here [OPC], I see that the adherence of patients who are alcoholics or drug users seems to be not good. For instance, they usually take HIV medication late, or a small number of them skip doses. Those on ART for a long time will not skip doses, but they often take doses late, so their CD4 count becomes unstable. If we [health providers] do not repeatedly remind them to take the medication on time, their [patients] CD4 will decrease. Moreover, it also increase the risk of getting co-infected with diseases such as Hep B, Hep C, or TB, which ruins patients' health faster *(Health provider interview)*

Moreover, drug use was seen to reduce the reliability of CD4 count test. One health provider said:

> Their [ART patients who use drugs] CD4 count is increased, but it is not reliable. It's fake because the actual CD4 count has not increased […] For example, the CD4 count has not increased since the last test. In the other case, it sharply increases to a thousand or a hundred thousand. The sharply increasing CD4 count happens because of patient's drug use. The

> CD4 count increase is inaccurate. It will reduce when we do the test again. *(Health provider interview)*

The patient participants also thought that substance use would decrease adherence and substance users' health. However, several patients in the study stated that drug use did not make them skip doses or appointments because they did not use drugs enough to get high and forget to take their ART medications. Moreover, even they were high, they could make sure that they would not be under the influence of drug at the time they have to take HIV medication because their drug use time were far from the time they need to take the medication.

Communication about illicit drug use

As mentioned earlier, drug use is common among ART patients in general and among the participants included in this analysis in particular. The majority of patients reported being former drug users, and several others were current drug users. However, even health providers in model A, who seemed to be the most confident about their understanding of patients' drug use, did not have a comprehensive view of patients' current drug use because patients did not disclose it. The health providers in this study only asked about patient's drug abuse to whom had physical signs of substance users in combination with one of the following signs: 1) poor adherence (miss doses, skip doses, skip monthly appointment); 2) unrealistically high CD4 count; 3) losing weight; and 4) having a history of drug use.

> *Interviewee:* How can you know that a patient is still using drugs?
>
> *Participant:* I base it on the patient's history of drug use; asking them, directly […], or if their CD4 count result seems not real. For example, the CD4 count is high, but the patient is exhausted, pale, sleepless, and having no appetite […] The last one is their adherence, such as

> whether they skip doses and/or monthly appointment or not. They usually don't drop out of the treatment, completely. They just skip doses or appointments for several days, and then, show up in the OPC later. *(Health provider interview)*

> We will ask patients about their drugs use only if we are suspicious about their CD4 count. Usually, we don't suddenly ask about substance use during the appointment for no reason. *(Health provider interview)*

The providers' hesitance to diagnose substance abuse was explained more in the transcripts of health providers.

> We do not dig deep in what type of drugs patients are using. We do not dare. Why? Because most of our patients got HIV from injecting drugs, and some of them are still using it, so how dare we ask whether they still use drug or not??? ... If a patient is high when he comes to OPC, the physician will ask whether they have just used drugs or not, but physicians will not dare to ask more detail on what kind of drug they use [even patients answer yes]. *(Health provider interview)*

This quote demonstrated that physicians might hold a negative attitude toward drug-using ART patients. Some providers did not probe more about patients' drug use when patients denied it, even though the patients showed many physical and clinical sign of drug use. One physician showed the concern that the patients would have negative reactions if physicians kept asking about drug use.

> It is tough to work with drug users. We have to be gentle and nice to them [drug-use-ART patients], cannot say something too harsh. Because if we do, they might react crazily […] to be honest, they are dangerous when they get mad. They can do anything. *(Health provider interview)*

Other reason for providers' hesitance to diagnose drug abuse was that drug treatment was not OPC's duty. Health providers in model B and C claimed that they were not trained in drug abuse screening and treatment, thus if patients disclosed their drug use, physician could not provide any extra services, except for counselling.

> We have not been trained for substance abuse disorders treatment, and it is not a function of this OPC, too. […] Health providers of this OPC have been trained for ART treatment and health care services for patients in the last stage of AIDS. […] For ART patients, who are drug users, we will focus more on the adherence during counselling sections. *(Health provider interview)*

> Normally, OPC does not conduct substance abuse screening for patients […] We don't conduct urinary test for drug use because this is OPC providing ART for HIV-infected people only. So, we do not have any method to screen or detect substance abuse. *(Health provider interview)*

Several providers shared that they had to choose an appropriate time, and prepare a script to encourage patient to disclose their drug use.

> Actually, I cannot ask patients about their drug use any time. It depends on patient's feelings. If patients are in a good mood, seem to be happy and open with me, I will go ahead, and ask. If they are in bad mood or have a close-off attitude, I would not ask them about drug use. If I want to talk about substance use, I usually go through a sequence of questions, such as: How do you feel today? How is your health? Do you have any unusual symptoms? Have you taken the medication as prescribed? After that, I will look at the CD4 count result, say something like "wow, the CD4 is so high", then, look straight at patient's face, and ask about drug use. If patients say no, I will say: "I only ask for your good sake. Because your CD4 count is

> unusual, so I need to know about your drug use to adjust the treatment". *(Health provider interview)*

However, most patients wanted to conceal their drug use. The patients' hesitance to disclose their drug use behaviors to health providers was shown in many transcripts.

> We do ask patients in monthly appointment [about patient's drug use], but patients are hesitant [to tell the truth], so the information on patients' drug use that we have is not reliable. *(Health provider interview)*

In order to get more reliable information about patients' drug use, physicians had to rely on multiple sources such as peer educators, patient's family, and other patients receiving ART treatment in the same OPC. Some participants said that patients were more receptive to discussing drug use with peer educators than with health providers, because they had similar past experience.

> They [drug-user-ART patients] usually choose peer educators to share about their drug use […] because they come from the same context; it is easier for them to share with each other. Peer educators can understand better because they are used to be a drug user, too. *(Patient interview)*

A few patient participants expressed that they were comfortable talking to health providers about their drug use. All of these participants were receiving treatment in model A or B, or wanted to be in the MMT program. In other cases, patients would talk about their drug use, if the relationship with physician were close enough.

> Some patients, who have a trust in physicians, they will tell [physicians about drug use]. If they don't really trust their physician, they will never tell until they feel so close to

> physician as a member of their family. They will hide it [drug use] if they feel that the physician will impose stigma on them. *(Patient interview)*

All 29 patient participants said that they had a good relationship with their HIV physician, but only four of them reported feeling comfortable enough to talk to physicians about their drug use. Three of them were enrolled in the MMT program, which meant their drug use behavior had already been disclosed in a healthcare setting. These findings indicate that patients are not willing to share about their current drug use with health providers in general and with physicians in particular.

> In general, they [patients] only share about their former drug use. No one dares to share his current drug use [with physician] *(Patient interview)*

When patients did admit to ongoing drug use, they would be provided counselling only, due to the limited available services for drug using HIV-infected people in OPCs. Although OPC models A and B made referrals to MMT clinics for their patients, few patients met the eligibility requirements and were actually approved to attend the MMT program. Therefore, the health providers expressed the focus on counselling, where they provided information about the harmfulness of drug use, and forbid drug use. They usually emphasized only the negative effects of drug use when communicating with patients, as was found in several transcripts. A health provider said:

> When we [physicians] provide ART counselling, we always say that patients are not allowed to use drugs or alcohol, especially no drug use. Physicians emphasizes that if patients adhere to the ART treatment well, they will have a long life ahead, but if they keep using drugs, they will not die of HIV, but from drug abuse *(Health provider interview)*

Moreover, they also emphasized that drug use would reduce patients' adherence to the medication, which prevented the treatment progress, to encourage patients to at least reduce their drug use. However, a few patients could reduce or stop their drug use. A patient participant reported seeing a physician shouting at a patient because the patient had not followed the instruction.

> *Interviewee:* What will physicians do if patient do not follow their instruction [of reduce or stop using drug]?
>
> *Participant:* Well, to some patients, physicians are bad-tempered. They shout at patients.
>
> *Interviewee:* Have you ever seen it before?
>
> *Participant:* Yes, one time
>
> *Interviewee:* What did the physician say?
>
> *Participant:* He said that you are not allowed to use it […] You have to stop using it.

In short, on one hand, patients usually concealed their drug use behaviors. On the other hand, health providers, especially those working in OPCs model B and C, were hesitant to address drug use because of their limited knowledge and skills on substance abuse disorders screening and treatment, and available services for substance users in OPCs. However, providers did feel comfortable communicating with patients about drug use in the context of its impact on patient's adherence and treatment progress. Providers addressed drug use with patients drug abuse almost exclusively in two situations: 1) prior to ART treatment when patients have to report their history of drug use; and 2) patients' treatment adherence and outcomes have not been improved for several months.

Communication about alcohol abuse

There is no difference in the communication about alcohol use among the three models. Alcohol abuse was seen to be easier to bring into the conversation between health providers and ART patients than illicit drug use because it was legal and common in Vietnam. The health providers from all three models expressed that alcohol abuse was brought into the conversation with patients primarily in the two following situations: 1) patients' liver enzymes were elevated; 2) patients came to OPC while being drunk or smelling of alcohol.

> We usually do many medical tests for ART patients, so based on the liver function test result, I will know whether patients are drinking alcohol or not. If the liver enzymes are elevated, I will meet the patient in person and ask about his alcohol use, inform them about the test results, and how to fix it. *(Health provider interview)*

> I only know about it [patient's alcohol use] if patients have alcohol-smelling breath, or a red face when they are in the OPC. *(Health provider interview)*

However, alcohol abuse rarely emerged in the communication between providers and patients because alcohol abuse disorders screening and treatment services were not available in OPCs of three models.

> We only provide counselling to alcohol-using ART patients to help them gradually reduce the amount of alcohol they drink. If they can quit, it is great. It depends on the patients because we do not provide any alcohol abuse treatment […] Counselling is the only service we provide to those patients. *(Health provider interview)*

> OPC does not make referral for alcohol-use-ART patients because it is not our focus *(Health provider interview)*

In model A and B, health providers are less likely to mention alcohol abuse than drug use because the alcohol-abuse-related services in these OPCs were more limited than drug-abuse-related-services. Most health providers participating in this study mentioned drug abuse only when they were asked about patients' substance abuse, impacts of substance abuse on ART treatment, and available substance-abuse-related-services. It indicates that health providers pay more attention to drug abuse issue than alcohol abuse in all three clinic models.

In summary, health providers only talk about substance abuse to patients when patients have physical signs of intoxication, and/or poor ART treatment outcomes or suspected non-adherence. Although alcohol abuse received less attention than substance abuse in all three models, it was more difficult for health providers to talk about illicit drugs abuse than to talk about alcohol abuse because patients were more likely to conceal their drug use. When communicating with patients about substance abuse, providers always mention the harmfulness to patients' health, ART outcomes and adherence. The emphasis is attributable to the patients' hesitance to disclose substance use. The providers of model B and C seem to be more hesitant to diagnose drug abuse than those of model A.

4. Factors influencing communication about substance abuse

Once the communication between providers and patients about substance abuse was described, factors influencing on the communication were analyzed. The health provider participants were asked about the barriers to communication with patients about substance abuse,. All 29 patient participants, regardless of their personal drug use history, were asked about the reasons that

might prevent drug using ART patients from disclosing their substance abuse to HIV providers. Descriptions of the influencing factors were salient, with various factors by both health providers and patients. The findings that follow were derived from all 54 individual interview transcripts.

Stigma

The stigma theme emerged in many transcripts. Substance abusing ART patients were suffering from a double stigma, stigma toward HIV and stigma toward substance use. Therefore, the patients included in this analysis reported that they concealed their drug use (except from their drug-using friends) to minimize stigma.

> *Interviewee:* Why don't you tell physicians about your drug use?
>
> *Participants:* I hide it all. […] I do not want anyone know that I'm addicted. I will lose my honor and many things else [if people know about my drug use] […] afraid of being adrift *(Patient interview)*

In other cases, patients claimed to feel ashamed of their substance use.

> I have to hide because it [alcohol use] is not a good thing to brag or proud of. *(Patient interview)*
>
> I'm ashamed to admit to physicians because I am not strong enough to quit drugs. There are so many people who can do it, but I cannot. I keep telling the shameful lies to physician that: "I've quit drugs". But, I still use it, stealthily *(Patient interview)*

Drug-using ART patients did not tell their HIV physicians because they were afraid that providers might discriminate against them or tell their family members about their drug use.

> I think they do want to tell us that they use drugs. They worry that if we know about it [drug use] we will tell their family. I think that is the reason why they don't want us know about their drug use *(Health provider interview]*

> Some patients are afraid of stigma. They hide it [substances use] from physicians and other medical staff because they do not dare to tell them [physicians] about it. They try to conceal it. *(Patient interview)*

Moreover, a number of physicians expressed a negative attitude toward illicit drug users, which prevented them from communicating with patients about substance abuse. Several health providers were concerned that ART patients, who were drug users, could have a negative response, such as not coming back to care, aggressively arguing with providers, or a violence response, when they kept asking about substance abuse. Therefore, although they knew a patient used drugs while receiving ART treatment, they stop asking and providing information about drug use if a patient said that they did not use drugs.

> As you know, patients here are at the bottom of the society. We are providing the same services to them every time. If they are happy, everything is fine. If they are in a bad mood, they can call us mean names. Drug use is very personal issue, so I cannot just ask them about it in a straightforward manner. They could say no and strike me if I do so. *(Health provider interview)*

In short, drug-using ART patients concealed their drugs use to avoid stigma, meanwhile several health providers were hesitant to probe patients about drug use due to their negative attitudes toward drug users.

Perceptions of substance abuse's impact on ART treatment

As mentioned in the previous section, the health providers in this study had the perception that substance abuse would reduce adherence and ART progress. They also developed a set of signs to detect the patient, who was more likely to use drug, to communicate about substance abuse. It was said to help providers to reduce their workload. However, the health providers did confirm that they would miss those patients who used drug and had a good ART treatment progress with high CD4 count, as a physician said:

> If patient's health is stable, every test results are good, and CD4 count is 800, 900 or more than 1000, I will think that the patient's adherence is good, so he might not use alcohol, drugs or any other addictive stimulant. I know that we might miss those cases like that […] But our workload is huge. We have 200 ART patients; provide ART treatment in afternoon on seven days a week. Every afternoon, we have more than 20 visits, and provide examination and counselling for 20 patients. We cannot spend too much time on it [substance use] *(Health provider interview]*

The quote illustrated that the perception of substance abuse's impact on ART treatment had influence providers' decision of whom to communicate about substance abuse.

Most patient participants acknowledged that substance abuse was harmful to their health, such as ruin neuron systems, liver and memory, and reduced treatment adherence. Several patients admitted that they missed doses under the influence of substances use. However, a few patient participants, who reported to use substances while receiving ART treatment, claimed that it did not influence on their adherence, thus they would not tell ART providers about it.

The "poor adherence" label

The health providers included in this analysis believed that substance abuse would lead to poor adherence, thus they would ask about substance abuse to any patient who was suspected of having poor adherence. This perception about poor adherence among those patients using drugs was found in several patient interview transcripts. The label of poor adherence and its consequences were attached to drug-using ART-patients. Therefore, once a patient was known to use drugs, the health providers would provide counselling on substance abuse, encourage patients to quit drug use, repeatedly remind patients to take HIV medication on time and the consequences of substance use. To avoid all of this counselling and reminders from HIV providers, many patients decided to hide their drug use from their physicians. Moreover, they were also afraid that physicians would blame them for suboptimal treatment outcomes or poor adherence.

> They [patient who use substance] do not tell physicians because they know that they cannot have a good treatment outcome when they use it [substances]. If they tell physician, they will hear a lot from physicians those things as how bad it is, they should not use it… They do not want to let physician know that they might skip doses or appointment because of drug use. *(Patient interview)*

In some cases, patients reported concealing their substance abuse because physicians had threatened to cancel their ART treatment if they kept using drugs, or if they continued skipping doses and missing monthly appointments.

> Hiding it [substance use] because if I tell [that I have used drug], the physician will criticize me, or he will warn me that if I break the rule [OPC's regulations] one more time, he will cancel my ART treatment. I know that it is just a warning. He just wants me to reduce

> alcohol and drugs, so it not going to do harm to my health or reduce my adherence any more. *(Patient interview)*

> Some patients don't dare to admit it because they were afraid that physicians will stop providing HIV medication. They are also afraid that physicians will criticize them, or have bad attitude toward them if physicians have to counsel [about substance use] too many times. But, it is not true. Physicians do not have that kind of attitude *(Patient interview)*

In short, patients conceal their substance abuse because they do not want to be labelled as having poor adherence.

HIV physician's expertise

The last factors influencing substance abuse communication that came up from transcripts was the expertise of the HIV physician, which was mentioned by both the physicians and patients. A number of patients stated that HIV providers could not help them to stop substance use.

> *Interviewee:* Why don't patients want to tell physicians about their drug use?

> *Participant:* Because even if physicians know about it, they only say to you: "quit it". That's all. They cannot do anything else to help you. They are able to tell you only that you have to quit drugs to make HIV medication work and you get better. They have no other way or treatment to help you. *(Patient interview)*

The health providers agreed with patients' opinion that counseling was the only extra service for substance-abusing ART patients, in addition to the ART treatment. A health provider working in model A said:

> Prior to the MMT program, we were able to diagnose drug use, and provide counselling to patients to reduce their drug doses, and quit drug use. […] Now, if patients want to use

> MMT, they can come to see us. We will guide them through the application process. […] For patients who drink alcohol, we provide counselling only, tell them to gradually reduce the quantity of alcohol they drink every day, or stop drinking. Other than that, we have no treatment to provide. *(Health provider interview)*

Moreover, the health providers, especially those in model B and C, also stated that substance abuse screening and treatment was not in the procedure of ART treatment, thus they were not trained on substance abuse treatment.

> We don't have substance screening and treatment services. It is not included in the HIV treatment and care procedure. If I remember correctly, we have not been trained on basic knowledge of substance screening and treatment. Even training on the signs or clinical symptoms of substance abuse, no… I have not participated in any training like that. *(Health provider interview)*

In this quote, the providers mentioned MMT referral service that was only available in OPCs following model A and B. However, a few of patients referred to MMT clinics were approved to receive the treatment as mentioned in the section of OPC's services above.

Other health providers declared that alcohol abuse related issues were not a priority of OPC.

> *Interviewee:* Could you explain for me why you said that the issue of patients' alcohol drinking was not prioritized in your work in OPC?
>
> *Participant:* OPC has an obligation to provide HIV treatment and care to HIV-infected people, so our main duties are distributing HIV medication, follow-up services, and help ART patients to manage their health. Other services regarding the factors influencing on

> treatment adherence are additional. That's why I said it was not our priority. *(Health provider interview)*

In short, the lack of knowledge and services related to substance abuse screening and treatment, and the OPC's priority of providing HIV treatment prevent patients to disclose their substance abuse, and make health providers in OPCs hesitant to communicate about substance abuse with patients.

V. Discussion

The findings of this thesis describe the communication between ART patients and providers about substance abuse in three different OPC models in Hanoi, and also shed light on various factors influencing this communication. It is easier for ART patients and providers to talk about alcohol abuse than illicit drug abuse because there is less stigma associated with alcohol use than illicit drug use. However, ART providers seem to less likely to talk to their patients about alcohol use than about illicit drug use. Although substance abuse is seen as a barrier to ART treatment adherence, both ART patients and their HIV providers are hesitant to talk about substance abuse issues. ART providers working in OPCs model C with no integration treatment between MMT and ART service seem to be more hesitant to talk about drug use than those working in OPCs having integrated treatment services. Providers decide whom to question about substance abuse issues based on their own set of eligibility criteria, including suspected poor adherence, unrealistically high CD4 level, weight loss and a known history of substance abuse. While communicating with patients about substance abuse, providers always emphasize the harmfulness to patients' health and potential impact on worsening adherence capacity and treatment outcomes. Four key factors emerged as influences on physician-patient

communication, including the stigma towards drug users, perception of impacts of substance abuse on ART treatment, the "poor adherence" label, and the limited expertise of HIV providers.

Since the appearance of ART treatment, HIV/AIDS has become a chronic disease and the important role of adherence regarding ART effectiveness has received much attention from HIV providers. We have found that the ART providers included in this analysis strongly emphasized adherence in their communications with patients. They use the label of "poor adherence", which is usually attached to substance-abusing ART patients, to label those who they needed to remind to have punctual HIV medication intake, continuously. By labeling patients in this way, health providers adjust the treatment as well as content of conversation with patients. However, the characterization also establishes a new hierarchy in the OPC regarding patient's ability to adhere. Poor adherence patients are treated as deviants, who need to be guided and constrained to do the "right" thing – punctual HIV medication intake. Those patients will be encouraged to follow HIV physician's instructions to take medication punctually every day, and to reduce or stop substance abuse. In other words, HIV treatment is serving a similar role as the state - to govern ART patients' life by telling them to this, and not do that to protect their health. In the article on the enrolment and experimentality in mass HIV treatment programs in Africa, Nguyen (2009) argues that the global forces shaping mass HIV treatment directly govern the lives of HIV-infected population in the most intimate detail, and driving the need for "self-validating evidence" to show the effectiveness of HIV treatment as a HIV prevention method. To illustrate the success of HIV treatment programs, various statistics, such as the number of people maintain in HIV care and number of loss follow-up patients, are cited by many leading donors in HIV prevention field as Global Fund for AIDS, Tuberculosis and Malaria (Global Fund), the US President's Emergency Plan for AIDS Relief (PEPFAR). It subtly indicates the emphasis on

adherence of the major donors. In Vietnam, with 73% of AIDS national expenditure funded by international partners such as PEPFAR and Global Fund (UNAIDS, 2012b), the global forces also have influence on the HIV programs in Vietnam resulting in the emphasis on adherence. Therefore, with the perception that substance abuse reduces patient's adherence, HIV providers have to communicate with patients about their substance use behaviors even though they are hesitant to talk about the problem.

The "therapeutic citizens" notion, described as "a system of claims and ethical projects that arise out of the conjugation of techniques used to govern populations and manage individual bodies" by Nguyen (2004), , have been used in many recent studies on ART treatment adherence. Nguyen and his colleague argue that HIV-infected patients perform an exceptional adherence, follow providers' instructions because they see "appropriate ART as a set of rights and responsibilities", which is useful for them to deal with their conflict moral economies (V. K. Nguyen, Ako, Niamba, Sylla, & Tiendrébéogo, 2007). However, in this analysis, ART patients are hesitant to follow the HIV providers' instructions related to substance abuse. Their hesitance to disclose substance use behavior has found in this analysis. ART patients conceal their substance abuse to maintain their personal image as a good adherence patient to avoid confronting HIV providers' power when they cannot follow their instruction. In the given context of multiple stigmas toward substance-using HIV-infected patients (Ware, Wyatt, & Tugenberg, 2006), it is also a way for these patients to minimize the stigma towards them even though most of them are aware of substance abuse's impact on their health and HIV treatment. It is the way patients negotiate with the government of HIV providers in particular and HIV treatment in general.

This thesis represents a secondary analysis of qualitative data. All of the analysis was conducted after data collection had completed, and our research questions were not the only focus of the original parent study, so we might not have reached theoretical saturation. More nuances of communication about substance abuse, and the way HIV providers and patients deal with it could have emerged if we had focused more on the topic, and conducted field observations in the OPCs. Coding and data analysis were all done by one researcher, which is another limitation of this analysis. I tried to reduce this limitation by discussing with thesis adviser at several points during the coding and analyzing process. In spite of these limitations, our findings still contribute to an improved understanding of social and structural factors influencing the communication about substance abuse in HIV settings because of the insight gained from obtaining explanations from both ART patients, including substance users and non-substance users, and providers in HIV settings. Our analysis highlights the ways in which ART patients negotiate with providers' emphasis on adherence and their frequent practice of labelling patients regarding adherence ability.

The findings of this thesis indicate the need to update ART treatment guideline and strengthen HIV providers' capacity on substance abuse screening and treatment. More training on substance abuse screening is needed for HIV health providers to improve their knowledge and skill to communicate with ART patients about substance abuse, which in turn could improve the effectiveness of ART treatment. I suggest adding substance abuse screening content into ART guidelines, and integrating ART and substance abuse treatment to diversify the health services being provided to ART patients. Such integration of services could reduce the barriers of the communication about substance abuse in HIV settings by making patients aware of the extra services available to them. At the same time, HIV providers have to establish good relationships

with patients and build trust to make patients feel more comfortable to disclose their substance use behaviors. More studies on provider-patient communications about alcohol use are needed due to the limited body of literature on the issue. Subsequent studies should aim to compare the ART treatment outcomes between substance-abusing ART patients who reported to frequently communicate about substance abuse with their HIV providers and their peers, with those who reported not to do so. Moreover, studies looking at the characteristics of substance-abusing ART patients who are willing to disclose their substance use behaviors to HIV providers and other substance-abuse-ART patients, who conceal their substance abuse, are needed as well. These future studies will bring a comprehensive understanding of the context of communication about substance abuse in HIV settings, and factors influencing patients' decisions to disclose their substance abuse to HIV providers.rs influencing patient's decision to disclose their substance abuse to HIV providers.

In summary, by addressing barriers to communication about substance abuse in HIV settings, this thesis is attributable to the improvement of quality of HIV care for ART patients as well as substance abusers, who are HIV positive, to help them to have a healthy live.

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