Willingness to pay for methadone maintenance treatment in Vietnamese epicentres of injection-drug-driven HIV infection

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Objective Willingness to pay for methadone maintenance treatment (MMT) in three Vietnamese epicentres of injection-drug-driven human immunodeficiency virus (HIV) infection was assessed.

Methods A convenience sample of 1016 patients receiving HIV treatment in seven clinics was enrolled during 2012. Contingent valuation was used to assess willingness to pay. Interviewers reviewed adverse consequences of injection drug use and the benefits of MMT. Interviewers then described the government's plan to scale up MMT and the financial barriers to scale-up. Willingness to pay was assessed using double-bounded binary questions and a follow-up open-ended question. Point and interval data models were used to estimate maximum willingness to pay.

Findings A total of 548 non-drug-users and 468 injection drug users were enrolled; 988 were willing to pay for MMT. Monthly mean willingness to pay among non-drug-users, 347 drug users not receiving MMT and 121 drug users receiving MMT was 10.7 United States dollars [US$] (35.7% of treatment costs), US$ 21.1 (70.3%) and US$ 26.2 (87.3%), respectively (mean: US$ 15.9; 95% confidence interval, CI: 13.6–18.1). Fifty per cent of drug users were willing to pay 50% of MMT costs. Residence in households with low monthly per capita income and poor health status predicted willingness to pay less among drug users; educational level, employment status, health status and current antiretroviral therapy receipt predicted willingness to pay less among non-drug-users.

Conclusion Willingness to pay for MMT was very high, supporting implementation of a co-payment programme.

Abstracts in عربي, 中文, Français, Русский and Español at the end of each article.

Introduction

Over the past decade, there has been a dramatic expansion of services in developing countries to prevent and treat human immunodeficiency virus (HIV) infection and acquired immunodeficiency syndrome (AIDS), with substantial support from global health initiatives. During 2000–2008, overall spending on HIV infection and AIDS in low- and middle-income countries increased approximately 10-fold, to US$ 13.7 billion.[1] Rapid and comprehensive responses to the HIV pandemic have substantially improved the health and social well-being of populations in various settings. For example, in the region denoted by the United Nations as Asia and the Pacific, where the burden of HIV infection is second only to that in Africa, there was an average 20% decline in new infections annually during 2001–2009.[2] In addition, widespread scale-up of antiretroviral therapy (ART) has encouraged HIV testing and early access to health-care services and has improved health status and quality of life among people living with HIV infection.[3,4] HIV transmission in this region is driven primarily by three high-risk behaviours: unprotected sex between males and female commercial sex workers, injection opioid use (hereafter, "injection drugs") and unprotected sex between males. Governments can halt and reverse the HIV epidemic and save money if they achieve universal coverage of comprehensive interventions among these high-risk populations.[4]

Ensuring sufficient resources is central to the success and sustainability of HIV programmes. However, budget constraints due to the global economic slowdown make it more difficult for governments to effectively fund multiple competing social and health issues.[1] Viet Nam has one of the fastest growing epidemics of HIV infection in Asia and is experiencing economic and epidemiologic transitions. Although the HIV epidemic in Viet Nam is still in a concentrated stage, the potential for a generalized epidemic is increasing, as indicated by a very high prevalence of HIV infection among high-risk groups and by a hidden epidemic among females.[5–8] Moreover, resources for HIV services mainly involve funding from international donors, which is rapidly decreasing as Viet Nam emerges as a middle-income country. According to projections of the Vietnamese National HIV Strategic Plan for 2011–2015, over this period the total cost of HIV services will increase by 60%, to approximately US$ 150 million.[9] The costs of ART will increase from 6 to 8% per year and the costs of HIV prevention will double. Meanwhile, the government budget can fund only 6 to 12% of the total cost of all HIV-related services.[9,10] This has created a sense of urgency in efforts to strengthen the health-care system and ensure the sustainability of interventions for the control of HIV infection.

After accounting for contributions from international donors and the national government, Viet Nam remains nearly 50% short of the resources needed to fund HIV services during 2013–2020. The Vietnamese Ministry of Health identified several potential strategies to reduce this deficit, including decreasing costs, improving efficiency and mobilizing resources from a wide variety of sources, such as co-payments from users of health services.[9,10] Of the HIV-related services currently offered free of charge, there are several reasons why methadone maintenance treatment (MMT) is of great interest for piloting the co-payment strategy. First, Viet Nam has a large population of people who inject drugs and more than two thirds of the estimated 210 000 individuals with HIV infection use injection drugs.[10–12] Second, the pilot MMT programme in Viet Nam was proven to be a cost-effective component of HIV prevention and treatment services.[11,13,14] Third, it will cost approximately US$ 97 million to reach the national target of 65% MMT

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coverage among injection drug users by 2015.[11] Assessing the willingness of users to pay for MMT services will help the government determine effective financing mechanisms and contribute to the sustainability of HIV-related interventions in Viet Nam.

Measurement of willingness to pay could be facilitated using revealed- or stated- preference methods. In health services research, contingent valuation, a stated-preference method, has been extensively used in studies of health-care demand.[15] Contingent valuation techniques use survey methods to ascertain individuals' valuations of hypothetical scenarios and determine the maximum amount they would be willing to pay for the service they receive. In studies on HIV infection and AIDS, the use of contingent valuation methods and measurement of willingness to pay is still very limited. Few studies have evaluated patients' willingness to pay for MMT; of these, none was conducted in large epidemics of HIV infection driven by injection drug use and none yielded data that are generalizable to Vietnamese settings.[15,16] This article reports findings from a multi-site survey to assess factors associated with willingness to pay for MMT on the part of patients with HIV infection who had a current or past history of injection drug use (hereafter, "drug users") and those with no history of injection drug use but at least one family member who was assumed to be a drug user (hereafter, "non-drug-users").

Methods

Survey design and sampling

This study was a part of the 2012 HIV Services Users Survey conducted during January and February 2012 in seven clinics in Hanoi, Hai Phong and Ho Chi Minh City, three Vietnamese epicentres of injection drug use. The survey aimed to inform HIV programme management and policy development in Viet Nam by evaluating various dimensions of quality and outcomes of HIV services from the perspective of patients. A detailed description of the survey design and sampling methods is presented elsewhere.[8,17]

Survey participants comprised inpatients and outpatients with HIV infection who were attending ART clinics in three district health centres, three provincial hospitals and one central hospital. All patients visiting the clinics during the study period were invited to complete the survey and provided written informed consent if they agreed to participate. A convenience sample of 1016 patients was enrolled in the study.

Measures and instruments

Face-to-face interviews were conducted by well-trained surveyors using structured questionnaires to collect data on socioeconomic characteristics, health status, drug use behaviours and willingness to pay for MMT. Interviewers were health-care professionals working in HIV-related sectors, were not affiliated with the clinics where they invited patients to participate and interviewed patients in designated counselling rooms. Monthly per capita household income was self-reported by patients and included all sources of income for each household member. Household expenditures were estimated on the basis of recurring expenses (e.g. food, utilities, rent and education) in the past month and non-recurring expenses (e.g. construction, health care, furniture, travel and entertainment) in the past year.[18] A household's capacity to pay for injection drugs was determined on the basis of the household's non-subsistence spending.[19] Daily expenditures for injection drugs were determined using self-reported data from the year drug users most recently used such drugs and included the costs of heroin and other opiates, needles and other consumable goods. Equivalent costs of these goods in 2011 were estimated. To date, MMT in Viet Nam has been provided free of charge; thus, expenditures associated with injection drugs do not include MMT expenses.[11] Health status in five dimensions (mobility, self-care, usual activities, pain/discomfort and anxiety/depression) was measured using the five-level EQ-5D (EQ-5D-5L) instrument (EuroQol Group, Rotterdam, Netherlands).[20]

Interviewers summarized several aspects of MMT in Viet Nam to ensure that patients had sufficient background knowledge before completing the willingness to pay valuation. Interviewers first reviewed the adverse consequences of injection drug use (e.g. increased risk of HIV transmission, stigma and economic hardship)[3,7,21,22] and the delivery and benefits of MMT (e.g. effectiveness, cost-effectiveness and improved access to health-care services).[14,23,24] Interviewers then summarized the government's plan for scaling up MMT.[11,25] Although MMT was free as of 2012, interviewers concluded the summary by asserting that, because of decreasing international funding, it will be difficult for the government to expand treatment coverage.

Double-bounded dichotomous-choice questions backed by an open-ended question were used to elicit willingness to pay for MMT. Each patient was first asked whether they were willing to pay US$ 30 monthly for MMT. This initial price was the estimated unit cost for one month of MMT during the pilot MMT programme.[11,14] If the patient was willing to pay US$ 30 monthly, the interviewer asked whether they were willing to pay double the initial price. If the patient was unwilling to pay US$ 30 monthly, the interviewers asked whether they were willing to pay half the initial price. The question was repeated until the amount that the patient was willing to pay was four times or one fourth the initial price. Patients were then asked, "What is the maximum price you would be willing to pay per month for methadone maintenance treatment?"

Statistical analysis

Student t and χ^2 tests were used to examine differences in characteristics associated with injection drug use between drug users who were and those who were not receiving MMT. Because willingness to pay was determined on the basis of double-bounded and open-ended questions, a mixture of censored and uncensored data was generated. An interval data model and a simple Tobit model were used to estimate the average amount different patient groups were willing to pay for MMT.[26] In multivariate analysis, determinants of patients' willingness to pay were examined using a-priori–defined socio-demographic characteristics (sex, age, education, marital status and employment status), economic status (per capita household income and capacity to pay), injection drug use behaviours (current use, history of drug rehabilitation programme enrolment, years since first injection drug use and frequency and expense of injection drug use), clinical characteristics (HIV disease stage, CD4+ T-cell count, duration of ART and current receipt of MMT) and health status (slight or worse problems reported in all five EQ-5D-5L dimensions). The reduced model was

constructed using a stepwise forward selection strategy, with variables determined by the log-likelihood ratio test to have *P*-values of < 0.1 included and those determined to have *P*-values of > 0.2 excluded.[27] Data were analysed using Stata version 12.0 for Windows (StataCorp. LP, College Station, United States of America).

Ethics approval

Ethics approval of the study protocol was granted by the Authority for HIV and AIDS Control at the Vietnamese Ministry of Health and the Health Research Ethics Board at the University of Alberta.

Results

Participant characteristics

Of 1016 patients, 46.1% were drug users, 36.2% were female, 45.0% completed high school, 64.0% were living with spouses or partners and more than 70% were self-employed or had a stable job. A total of 88.8% were receiving ART, with a mean treatment duration of 3 years. Mean monthly per capita income (± standard deviation) among patients' households was US$ 99.6 ± 79.6.

Table 1 describes drug use behaviours among 468 drug users. The mean daily frequency of injection drug use during the most recent period of use was 2 episodes (95% confidence interval, CI: 1.8–2.2), with a mean daily cost of US$ 18.6 (95% CI: 14.4–22.8), or approximately US$ 540 monthly. The Viet Nam Ministry of Health completed the pilot MMT cohort study just before initiation of the 2012 HIV Services Users Survey and planned to scale up the MMT programme during 2012–2020.[11] As such, only 121 drug users (25.9%) were receiving MMT. Drug users who were receiving MMT used injection drugs more often and had more admissions in drug rehabilitation programmes than drug users who were not receiving MMT.

Willingness to pay

The proportion of patients willing to pay for MMT was high and ranged from 93.3 to 98.2% (Table 2). The mean amount that patients were willing to pay was US$ 15.9 per month (95% CI: 15.9 13.6–18.1) and varied across patient groups. Mean willingness to pay for MMT among non-drug-users, drug users not receiving MMT and drug users receiving MMT was US$ 10.7, US$ 21.1 and US$ 26.2 per month, respectively, which is equivalent to 35.7%, 70.3% and 87.3% of MMT costs per person, respectively. Current drug users who had been enrolled in a drug rehabilitation programme were willing to pay more than others for MMT. Table 3 shows that the percentage of patients who were willing to pay 20% and 50% of MMT costs was 37.1% and 26.2%, respectively, among non-drug-users; 57.5% and 46.1%, respectively, among drug users not receiving MMT; and 67.5% and 56.4%, respectively, among drug users receiving MMT.

Table 4 presents findings of reduced multivariate models used to determine factors associated with willingness to pay for MMT. Drug users were willing to pay a smaller amount for MMT if they were living in households with a lower monthly per capita income, had symptomatic HIV infection and reported having mobility problems. Non-drug-users were willing to pay a smaller amount for

Table 1. **Characteristics of HIV-infected Vietnamese patients with a current or past history of injection drug use (IDU), overall and by receipt of methadone-maintenance therapy (MMT)**

Characteristic	No MMT	MMT	Total	*P*
IDU history[a]				
Current				0.08
Overall, no. (%)	50 (14.4)	10 (8.3)	60 (12.8)	
No. of daily episodes, mean (95% CI)	2.1 (1.9–2.3)	1.8 (1.2–2.3)	2.0 (1.8–2.2)	0.89
Estimated daily cost in US$, mean (95% CI)	19.5 (14.8–24.2)	13.5 (2.6–24.4)	18.6 (14.4–22.8)	0.85
Past				
Overall, no., (%)	289 (83.3)	105 (86.8)	394 (84.2)	0.37
Daily no. of episodes, mean (95% CI)	2.3 (2.1–2.5)	2.6 (2.4–2.7)	2.4 (2.3–2.5)	0.03
Daily cost in US$, mean (95% CI)	23.8 (19.8–27.8)	26.8 (22.2–31.5)	25.1 (22.1–28.1)	0.16
Time since first episode in years, mean (95% CI)	10.9 (10.5–11.4)	11.1 (10.4–11.9)	11.0 (10.6–11.4)	0.31
Drug rehabilitation[b]				
No. of episodes, mean (95% CI)	2.2 (1.9–2.4)	3.5 (2.9–4.1)	2.5 (2.2–2.8)	< 0.01
Location, no. (%)				
Compulsory centre	47 (18.7)	23 (28.8)	70 (21.2)	0.03
Voluntary centre	38 (15.1)	19 (23.8)	57 (17.2)	
Home	159 (63.4)	37 (46.3)	196 (59.2)	
Other	7 (2.8)	1 (1.3)	8 (2.4)	
Reason for relapse,[b,c] **no. (%)**				
Boredom	73 (29.1)	30 (37.5)	121 (11.9)	0.16
Craving	61 (24.3)	33 (41.3)	94 (9.3)	0.036
Peer inducement	103 (41.0)	44 (55.0)	147 (14.5)	< 0.01
Unemployment	**37 (14.7)**	**28 (35.0)**	**65 (6.4)**	**< 0.01**

CI, confidence interval; HIV, human immunodeficiency virus; US$, United States dollar.
[a] Data are for 347 patients who did not receive MMT and 121 patients who received MMT.
[b] Data are for 251 patients who did not receive MMT and 80 patients who received MMT.
[c] Data are for relapse after drug rehabilitation and, for those in the MMT group, were obtained before MMT initiation.

Table 2. **Willingness to pay and monthly price willing to pay for methadone maintenance therapy (MTT) among HIV-infected Vietnamese patients, by history of injection drug use (IDU)**

Variable	No. (%) willing to pay	Mean (95% CI) monthly price (US$)
Overall	988/1016 (97.2)	15.9 (13.6–18.1)
No history of IDU	534/548 (97.4)	10.7 (7.9–13.5)
History of IDU		
Overall	454/468 (97.0)	23.4 (18.8–25.9)
Current MMT receipt		
No	338/348 (97.1)	21.1 (17.0–25.1)
Yes	116/121 (95.9)	26.2 (19.1–33.4)
Health service administration level		
Central	81/85 (95.3)	16.3 (5.5–27.0)
Provincial	167/170 (98.2)	24.0 (19.2–28.7)
District	206/213 (96.7)	22.6 (17.0–28.3)
Current IDU		
Yes	56/60 (93.3)	31.2 (20.5–41.9)
No	398/408 (97.5)	21.1 (17.4–24.9)
History of drug rehabilitation		
Yes	361/369 (97.8)	24.2 (20.4–28.0)
No	93/99 (93.9)	13.2 (3.3–23.2)

CI, confidence interval; HIV, human immunodeficiency virus; US$, United States dollar.

Table 3. **Percentage of HIV-infected Vietnamese patients willing to pay up to a given percentage of methadone maintenance therapy (MMT), by injection drug use (IDU) and MMT status**

Percentage of MMT cost	No IDU, % (*n* = 548)	IDU, no MMT, % (*n* = 347)	IDU and MMT, % (*n* = 121)
100	20.2	32.3	41.0
70	26.2	46.1	56.4
50	26.2	46.1	56.4
30	32.2	53.6	64.1
20	37.1	57.5	67.5

HIV, human immunodeficiency virus.
Note: The estimated unit cost for one month of MMT during the pilot MMT programme was 30 United States dollars.[11,14]

MMT if they had a lower educational level, were unemployed, had a poorer immune status, were receiving ART and had anxiety or depression.

Discussion

This study assessed willingness to pay for MMT among patients with HIV infection in three Vietnamese epicentres of injection-drug-driven HIV infection. The majority of patients expressed a willingness to pay for this service. Low per capita income in the household and poor health status predicted a willingness to pay less among drug users; having a lower educational level, being unemployed, having poorer immune status, being on ART and having anxiety or depression were associated with willingness to pay less among non-drug-users.

This is the first study to report the costs of injection drug use among HIV-infected individuals in Viet Nam. Drug users spent an average of US$ 540 per month for opiates, approximately five times the average income per household resident, which places an enormous economic burden on households that are affected by both HIV infection or AIDS and addiction. The findings of this study provide evidence of the benefits of MMT: more than 80% of drug users receiving MMT were not currently using injection drugs and the treatment cost was only 5% of the self-reported costs of injection drugs.[11,14,23] The observation that patients were willing to pay an average of US$ 15.9 per month for MMT, or 53% of the costs per person, suggests that they also perceived benefits of MMT.

Willingness to pay in this study is higher than that observed in a survey of the general population in Taiwan, China, where the willingness to pay for drug abuse services was approximately US$ 3.3 per month.[15] Bishai et al. estimated a willingness to pay a greater monthly amount for drug rehabilitation in Baltimore, Maryland (US$ 29.2–68.4).[16] However, the proportion of patients in that study who were willing to pay the mean per capita income in their household was as high as 16%. This could be because in large injection-drug-driven HIV epidemics, many patients and their households are inordinately hard hit by the twin epidemics of HIV and drug abuse. The deteriorated health status, diminished social well-being and substantial economic burden of drug abuse could be highly correlated with a willingness to pay more for addiction-related health care.[15,16,28,29]

The findings of this study have several implications. First is the potential for charging co-payments for MMT to ensure the sustainability of HIV-related interventions in Viet Nam. During the study period, co-payment for MMT was piloted in a clinic in Hai Phong City, where patients paid US$ 10.5 per month. Findings reported here suggest that a co-payment of US$ 15 per month would be acceptable, although a subsidy for low-income individuals should be considered. Second, injection drug users with mobility problems were willing to pay significantly less than those without mobility problems. These individuals composed 45% of surveyed injection drug users, which suggests the importance of decentralizing MMT to reduce geographical barriers to care. Finally, injection drug users who experienced other types of drug rehabilitation before taking MMT were more willing to pay for treatment and willing to pay a much greater amount than injection drug users with no history of drug rehabilitation. This indicates a possible preference for MMT among patients who are seeking therapy for drug abuse.[23]

The study's strengths include its large sample size and recruitment at central, provincial and district clinics in three Vietnamese epicentres of injection-drug-driven HIV infection. In addition, the point and interval statistical approach were used, accounting for

Table 4. **Factors associated with willingness to pay for methadone maintenance treatment (MMT) among HIV-infected Vietnamese patients, by injection drug use (IDU) status**

Factor	IDU coefficient (95% CI)	No IDU coefficient (95% CI)
Health service administration level		
Central	Reference	Reference
Provincial	6.9 (−4.5 to 18.2)	6.6** (0.9 to 12.4)
Educational level		
Less than high school	Reference	Reference
High school	−7.5 (−18.7 to 3.7)	8.6*** (2.9 to 14.2)
Employment		
Unemployed	–	Reference
Self-employed	–	9.4*** (2.3 to 16.4)
Stable paying job	–	8.8** (0.8 to 16.8)
Income quintile		
Richest	Reference	–
Poor	−26.4*** (−39.2 to −13.6)	–
Middle	−10.9* (−23.8 to 2.0)	–
Stage of HIV infection		
Asymptomatic	Reference	Reference
Symptomatic	−11.7** (−22.2 to −1.2)	–
AIDS	–	4.1 (−2.0 to 10.3)
CD4+ T-cell count, cells/μL		
≤ 200	Reference	Reference
> 200 but ≤ 350	–	9.8*** (3.3 to 16.3)
> 350 but ≤ 500	10.5 (−2.5 to 23.4)	7.0* (−0.7 to 14.6)
ART duration, years		
ART naive	Reference	Reference
≤ 1	−8.9 (−22.3 to 4.6)	−13.0** (−23.4 to −2.6)
> 1 but ≤ 2	–	−6.7 (−17.7 to 4.3)
> 2 but ≤ 4	–	−10.3** (−20.2 to −0.4)
> 4 but ≤ 7	–	−10.1** (−19.7 to −0.5)
Health status		
Mobility problems	−12.8** (−23.3 to −2.4)	–
Self-care problems	–	5.5 (−1.7 to 12.8)
Anxiety/depression	–	−7.2** (−13.6 to −0.7)
History of drug rehabilitation	1.2 (−0.3 to 2.7)	–
Years since first IDU	−0.8 (−2.2 to 0.6)	–
Being on MMT	4.3 (−3.5 to 12.2)	–

AIDS, acquired immunodeficiency syndrome; ART, antiretroviral therapy; CI, confidence interval; HIV, human immunodeficiency virus. *$P < 0.1$; **$P < 0.05$; ***$P < 0.01$.
Note: Empty cells denote variables that were excluded in multivariate regression analyses.

both uncensored and censored data that could increase the willingness to pay estimates.[26] Nonetheless, there are several limitations to this study. First, a convenience sample was used, which limits the generalizability of the study. Second, the sample did not include drug users who were HIV negative and those who had not accessed health-care services. Previous studies have shown that patients' health status influenced their willingness to pay.[15] This study was conducted soon after Viet Nam piloted its MMT programme and decided to expand its coverage.[11] As such, drug users who were not in care might not have been aware of the availability of MMT and did not have access to the service, since slots were limited, making it unfeasible to survey non-treated drug users. Finally, contingent valuation is subject to potential biases. For example, responses to the follow-up questions may lead to willingness to pay estimates that differ from the willingness to pay estimates from the first valuation question.[15,28,29] In addition, patients might avoid any responses that may be detrimental to them.[28] To minimize social desirability biases, patients were interviewed by surveyors who were not affiliated with the selected clinics, who were well trained in interviewing substance abusers and who clearly explained the purposes of the study and the confidentiality of patients' responses before starting the interview.

In conclusion, rates of willingness to pay and the amount patients were willing to pay for MMT were high in this convenience sample of HIV-infected patients. These findings support the implementation of a co-payment model in MMT clinics in Viet Nam and also provide a foundation for broader assessment of willingness to pay among various patient groups for different service delivery models in Viet Nam. ■

Competing interests: None declared.

ملخص

الاستعداد لدفع تكاليف العلاج الصياني بالميثادون في مراكز عدوى فيروس العوز المناعي البشري الناجمة عن تعاطي المخدرات عن طريق الحقن في فييت نام

الغرض تم تقييم الاستعداد لدفع تكاليف العلاج الصياني بالميثادون في ثلاثة مراكز لعدوى فيروس العوز المناعي البشري الناجمة عن تعاطي المخدرات عن طريق الحقن في فييت نام.

الطريقة تم تسجيل عينة ملاءمة مكونة من 1016 مريضاً يتلقون علاج فيروس العوز المناعي البشري في سبع عيادات خلال عام 2012. وتم استخدام التقييم المشروط لتقييم الاستعداد لدفع التكاليف. واستعرض الأشخاص الذين أجروا المقابلة العواقب السلبية المترتبة على تعاطي المخدرات عن طريق الحقن وفوائد العلاج الصياني بالميثادون. ووصف من أجروا المقابلة خطة الحكومة لتعجيل العلاج الصياني بالميثادون والعوائق المالية التي تقف حائلاً أمام تعجيله. وتم تقييم الاستعداد لدفع التكاليف باستخدام أسئلة ثنائية مزدوجة الحد وسؤال مفتوح للمتابعة. وتم

استخدام نماذج بيانات النقاط وفتراتها لتقدير أقصى استعداد لدفع التكاليف.
النتائج تم تسجيل ما إجماليه 548 غير متعاط للأدوية و468 متعاطياً للمخدرات عن طريق الحقن؛ وأعرب 988 منهم عن استعدادهم لدفع تكاليف العلاج الصياني بالميثادون. وبلغ متوسط الاستعداد لدفع التكاليف على نحو شهري بين غير المتعاطين للمخدرات، والمتعاطين للمخدرات الذين لا يتلقون العلاج الصياني بالميثادون البالغ عددهم 347 شخصاً والمتعاطين للمخدرات الذين يتلقون العلاج الصياني بالميثادون البالغ عددهم 121 شخصاً، 10.7 دولاراً أمريكياً (35.7 ٪ من تكاليف العلاج) و21.1 دولاراً أمريكياً (70.3 ٪) و26.2 دولاراً أمريكياً (87.3 ٪)، على التوالي (المتوسط: 15.9 دولاراً أمريكياً؛ فاصل الثقة 95 ٪: من 18.1 إلى 13.6) وأعرب خمسون بالمائة من متعاطي المخدرات عن استعدادهم لدفع 50 ٪ من تكاليف العلاج الصياني بالميثادون. تنبأت الإقامة داخل الأسر المعيشية التي ينخفض فيها دخل الفرد الشهري وسوء الحالة الصحية بالاستعداد لدفع تكاليف أقل بين متعاطي المخدرات؛ وتنبأ المستوى التعليمي وحالة التوظيف والحالة الصحية وتلقي العلاج بمضادات الفيروسات القهقرية في الوقت الراهن بالاستعداد لدفع تكاليف أقل بين غير المتعاطين للمخدرات.
الاستنتاج كان الاستعداد لدفع تكاليف العلاج الصياني بالميثادون مرتفعاً جداً، مما يدعم تنفيذ برنامج الدفع المشترك.

摘要

越南药物注射导致的艾滋病感染集中区美沙酮维持治疗付费意愿
目的 评估越南三个注射药物导致的艾滋病感染集中区美沙酮维持治疗付费意愿。
方法 采用 2012 年在七个诊所接受艾滋病（HIV）治疗的 1016 名病人的便利样本。使用条件价值评估法评估付费意愿。调查者评估注射药物不良后果和美沙酮维持治疗（MMT）的好处。调查者然后说明政府扩大 MMT 的计划以及扩大计划的财务困难。使用双界二元问题和后续开放式问题评估付费意愿。使用点和区间数据模型估计最大付费意愿。
结果 纳入合计 548 名非吸毒者和 468 名注射吸毒者；988 名愿意为 MMT 付费。非吸毒者、347 名未接受 MMT 的吸毒者和 121 名接受 MMT 的吸毒者的每月平均付费意愿分别是 10.7 美元（治疗成本的 35.7%）、21.1 美元（70.3%）和 26.2 美元（87.3%）（平均：15.9 美元；95% 置信区间，CI：13.6 – 18.1）。50% 的吸毒者愿意支付 50% 的 MMT 成本。在吸毒者中，每月人均收入较低和健康状况不良的家庭用户预测愿意支付更少费用；在非吸毒者中，教育程度、就业状况、健康状况不良和当前接受抗逆转录病毒治疗的用户预测愿意支付更少费用。
结论 支付 MMT 的意愿非常高，有助于实施共付计划。

Résumé

Volonté de payer pour le traitement d'entretien à la méthadone dans les épicentres vietnamiens d'infection par le VIH résultant de l'injection de drogue
Objectif On a évalué la volonté de payer pour le traitement d'entretien à la méthadone (TEM) dans trois épicentres vietnamiens d'infection par le virus de l'immunodéficience humaine (VIH) résultant de l'injection de drogue.
Méthodes Un échantillon de commodité de 1016 patients, recevant un traitement VIH dans sept cliniques, a été effectué en 2012. L'évaluation contingente a été utilisée pour évaluer la volonté de payer. Les enquêteurs ont examiné les conséquences néfastes de l'utilisation de drogues injectables, ainsi que les avantages du TEM. Ils ont ensuite décrit le plan du gouvernement visant à intensifier le TEM, ainsi que les obstacles financiers relatifs. La volonté de payer a été évaluée à l'aide de questions binaires doublement liées et d'une question ouverte de suivi. Des modèles de données par point et par intervalle ont été utilisés pour estimer la volonté maximale de payer.
Résultats Un total de 548 non-toxicomanes et de 468 utilisateurs de drogues injectables ont été interrogés; 988 étaient prêts à payer pour le TEM. Le montant mensuel moyen que les non-toxicomanes, les 347 toxicomanes ne recevant pas le TEM et les 121 toxicomanes recevant le TEM étaient disposés à payer s'élevait à 10,7 dollars des États-Unis [$] (35,7% des coûts de traitement), 21,1 $ (70,3%) et 26,2 $ (87,3%), respectivement (moyenne: 15,9 $; intervalle de confiance de 95%, IC: 13,6 à 18,1). Cinquante pour cent des consommateurs de drogues étaient prêts à payer 50% des coûts du TEM. Le fait de vivre dans des foyers dont le revenu mensuel par habitant était faible et un mauvais état de santé étaient liés à une moindre volonté de payer chez les toxicomanes. Le niveau d'éducation, le statut professionnel, l'état de santé et une thérapie antirétrovirale en cours étaient liés à une moindre volonté de payer chez les non-toxicomanes.
Conclusion La volonté de payer pour le TEM était très élevée, ce qui soutient la mise en œuvre d'un programme de copaiement.

Резюме

Готовность платить за поддерживающую метадоновую терапию в очагах распространения ВИЧ-инфекции, связанной с инъекционными наркотиками, во Вьетнаме
Цель Оценить готовность платить за поддерживающую метадоновую терапию (ПМТ) в трех вьетнамских очагах распространения вируса иммунодефицита человека (ВИЧ), связанного с инъекционными наркотиками
Методы В 2012 году была изучена нерепрезентативная выборка из 1016 пациентов, получающих лечение от ВИЧ в семи клиниках. Для оценки готовности платить был использован метод условной оценки. Интервьюеры рассказывали о негативных последствиях употребления инъекционных наркотиков и преимуществах ПМТ. Затем интервьюеры рассказывали про план правительства по расширению ПМТ и финансовые препятствия для расширения масштаба мероприятий. Затем с помощью

вопросов, предполагающих два варианта ответа, и следующего за ними вопроса с описательным ответом оценивалась готовность пациентов платить. Для оценки максимальной готовности платить использовались точечные и интервальные модели данных.

Результаты В общей сложности в исследовании приняли участи 548 лиц, не употребляющих наркотики, и 468 потребителей инъекционных наркотиков; 988 из них были готовы платить за ПМТ. Среднемесячная готовность платить среди лиц, не употребляющих наркотики, 347 потребителей наркотиков, не получающих ПМТ, и 121 потребителей наркотиков, получающих ПМТ, составила 10,7 долл. США (35,7% стоимости терапии), 21,1 долл. США (70,3%) и 26,2 долл. США (87,3%), соответственно (в среднем: 15,9 долл. США; 95% доверительный интервал, ДИ: 13,6–18,1). 50% потребителей наркотиков были готовы оплачивать половину стоимости ПМТ. Проживание в семьях с низким месячным доходом на члена семьи и плохое состояние здоровья снижали готовность платить среди потребителей наркотиков, а уровень образования, занятость, состояние здоровья и текущее получение антиретровирусной терапии снижали готовность платить среди лиц, не употребляющих наркотики.

Вывод Готовность платить за ПМТ была очень высокой, что свидетельствует в пользу реализации программы совместной оплаты.

Resumen

La disposición a pagar por el tratamiento de mantenimiento con metadona en los epicentros de la infección por VIH contraída por el consumo de drogas por vía intravenosa en Vietnam

Objetivo Se evaluó la disposición a pagar por el tratamiento de mantenimiento con metadona (TMM) en tres epicentros de la infección por el virus de la inmunodeficiencia humana (VIH) contraída por el consumo de drogas por vía intravenosa en Viet Nam.

Métodos En 2012, se inscribió una muestra de 1016 pacientes que recibían tratamiento contra el VIH en siete clínicas. Se empleó una valoración contingente para evaluar la disposición a pagar. Los entrevistadores estudiaron las reacciones adversas por el uso de drogas inyectables y los beneficios del tratamiento de mantenimiento con metadona. A continuación, describieron el plan del gobierno para ampliar el tratamiento de mantenimiento con metadona, así como las barreras financieras para dicha ampliación. Se evaluó la disposición a pagar mediante la realización de preguntas dicotómicas binarias y de una pregunta abierta de seguimiento. Se emplearon modelos de datos de punto y de datos de intervalo para estimar el grado máximo de disposición a pagar.

Resultados Se inscribieron un total de 548 no consumidores de drogas y 468 consumidores de drogas inyectables; 988 estaban dispuestos a pagar por el tratamiento de mantenimiento con metadona. La disposición media mensual a pagar entre los no consumidores, 347 consumidores de drogas que no recibían tratamiento de mantenimiento con metadona y 121 consumidores de drogas que recibían tratamiento de mantenimiento con metadona fue de 10,7 dólares estadounidenses [US$] (35,7% de los costes de tratamiento), US$ 21,1 (70,3%) y US$ 26,2 (87,3%), respectivamente (media: US$ 15,9; intervalo de confianza del 95%, IC: 13,6 a 18,1). El cincuenta por ciento de los consumidores de drogas estaba dispuestos a pagar el 50% de los costes del tratamiento de mantenimiento con metadona. Se predijo una menor disposición a pagar entre los consumidores de drogas procedentes de unidades familiares con un ingreso mensual per cápita bajo y con un estado de salud precario. El nivel educativo, la situación laboral, el estado de salud y la recepción de la terapia antirretroviral actual predijeron una menor disposición a pagar entre los no consumidores de drogas.

Conclusión El grado de disposición a pagar por el tratamiento de mantenimiento con metadona era muy alto, lo que respalda la puesta en marcha de un programa de copago.

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