

Uptake of HIV/AIDS testing: Gender based differences in Thailand

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Introduction

HIV testing is essential for HIV/AIDS prevention and care; it represents a unique opportunity to directly inform people on how to protect themselves or their sexual partners. Furthermore, in settings where antiretroviral treatments are available, HIV diagnosis is the gateway to initiate HIV care.

In the absence of effective treatments, guidelines and public health policies were recommending HIV Voluntary Counselling and Testing (VCT) with informed consent. Routine HIV testing was restricted to specific programs such as Prevention of Mother to Child Transmission of HIV (PMTCT) or blood donations.

Since antiretroviral treatments are widely available, the disease is no longer lethal which justifies systematic HIV testing. Moreover, the continued reports of HIV diagnosis of infected persons at the late stages of disease (April et al., 2009; Adler et al., 2009; Girardi et al., 2007) resulting in high morbidity and mortality despite provision of antiretroviral therapy, and the dramatic decrease in transmission when patients are treated with antiretrovirals (Castilla et al., 2005; Reynolds et al., 2009) also support the implementation of systematic HIV testing (CDC, 2006). More recently, the implementation of universal HIV testing together with antiretroviral therapy of all HIV-infected persons regardless of clinical or immune status has been envisioned. Modelling suggests that this strategy could lead to the eradication of HIV by 2032 (Velasco-Hernandez et al., 2002, Granich et al., 2009). However, debate develops over the feasibility and ethics of systematic HIV testing (Hanssens, 2007; Obemayer et al., 2009).

While rates of HIV testing are available in some countries (WHO, 2008), there are limited empirical data on the factors influencing the uptake of HIV testing in specific settings, among which international and national policies, access to HIV testing, prevention and treatment programs, the dynamic of the local epidemic, level of HIV/AIDS related stigma (Kalichman, Simbayi, 2003; Weiser 2006), individual family history e.g. pregnancy or widowhood, medical history, perception and experiences with the health care system, as well as individual risk perception (Obermeyer, 2005; Obermeyer et al. 2009).

In this paper, we therefore assess, with a gender perspective, how global and individual factors impact on the uptake of HIV testing in the general population and influence the circumstances and timing of diagnosis in HIV-infected people.

Background

Of all Asian countries, Thailand was the first and the hardest hit by the HIV epidemic in the middle 1980s. At the beginning of the nineties, the HIV/AIDS epidemic in Thailand rapidly became generalized. Although men were mostly affected in the early stage of the epidemic, the male to female sex-ratio of reported AIDS cases dropped from 680 per 100 in 1992 to 440 per 100 in 1996 (Rerks-Ngarm, 1997). This sex-ratio decreased further to 240 per 100 in 1999 (World Bank, 2000) and to 160 per 100 in 2007 (Ministry of Public Health, 2008). In 2007, it is estimated that, 600,000 adults were living with HIV/AIDS among its 63.8 million inhabitants (UNAIDS and WHO, 2008) including 250,000 women, which represents a male to female sex-ratio of about 140 per 100 (UNAIDS and WHO, 2008).

In Thailand, the national HIV/AIDS prevention program has promoted voluntary HIV counselling and testing (VCT) since 1992. A large training program was implemented at the national level for nurses to become counsellors –including regular refresher courses— and anonymous VCT clinics were established in all government hospitals throughout Thailand (Ungphakorn and Sittitrai, 1994). Currently, VCT is available in every government hospitals, sexually transmitted disease clinics and some health centers. HIV testing is also widely available in private settings, including NGOs, clinics, hospitals and private laboratories (Kawichai et al., 2005).

The Thai government started providing VCT to all pregnant women and their partners, as part of the national program for the prevention of mother to child transmission of HIV (PMTCT). In Thailand, where the antenatal care attendance is very high, antenatal testing is proposed to all women, with very low refusal rate (Kanshana and Kullerk, 1998). While HIV counseling and testing have mostly been individual or sex-specific in Africa (Desgress du loû and Orne-Glieman, 2007), in Thailand, several hospitals have implemented couple HIV counselling and testing in the early years of the generalised HIV epidemic (Kanshana and Kullerk, 1998).

The Thai national prevention program implemented in the early nineties is also recognized as one of the most successful for slowing down the epidemic. Efforts were made to curtail the HIV epidemic through a multi-sectorial program which emphasized on people responsibility and behaviour changes. In particular, the well-known 100% condom campaign promoted the systematic use of condom in commercial sex encounters.

Gender differences in sexuality and HIV prevention

The rapid shift from a concentrated to a generalized epidemic was documented in Thailand (Weniger et al., 1991, Ford and Suporn 1991) and gender-based differences in sexuality were considered as its main determinant. Indeed, in the traditional Thai society, male dominance is expressed by gender norms in sexuality: while women were only allowed sexual relationships inside the marital setting, patronizing commercial sex workers and multiple partnerships were the normative expressions of men's sexuality (Ford and Suporn 1991, Vanlandingham, 1995). However, the level of tolerance with regards to men's sexual behaviors has decreased as a response to the social discourse about HIV/AIDS as well as the changes in the society such as women empowerment and heterosexual norms (monogamy) diffusion. For example, in some rural areas of Northern Thailand, as a strategy to reduce the spread of HIV/AIDS, some campaigns aimed at changing men sexual behaviors were based on moralistic, family-oriented messages (Fordham, 1995). Indeed, HIV/AIDS prevention discourse labeled male normative sexual practices as "*promiscuous*" and irresponsible. Men were perceived as those responsible for allowing HIV into the family/community while women were seen as the victims. This campaign had at first little impact on changing men sexual behaviours because the construction of the male identity was very much

based on risk taking. Also, this campaign was perceived as an intrusion into the intimate sphere, a threat into men privileges (Fordham, 1995).

On the other hand, the first Access to Care (ATC) antiretroviral treatment program launched in 2002, prioritized mothers identified within the PMTCT program (Phanuphak, 2004). This program was then extended under the family centered approach of "PMTCT Plus" which promoted antiretroviral treatment for husbands/partners and children as needed. In 2005, antiretroviral treatments were integrated in the universal health coverage. By the end of 2007, the scaling up of antiretroviral treatments reached approximately 153,000 persons (UNAIDS & WHO, 2008) in Thailand. In a previous paper, we analyzed the gender differential in access to treatment in Northern Thailand, and showed that women have a better access to treatment than men. This result was partly explained by gender differences in timing and circumstances of HIV testing but needs further investigations (Le Coeur et al, 2009).

To date, the uptake of HIV testing in Thailand is quite high. It has been recently reported at over 40% of the young adults in the Chiang region (Kawichai et al., 2005, Genberg, et al., 2009), a rate higher than most settings in Africa (WHO, 2008). However, in Thailand there have been reports of confidentiality breach or of lack of comprehensive counselling (Paxton et al., 2005; Kawichai et al., 2005).

Study design:

A life-event history approach to the circumstances of HIV testing

The LIWA (Living With Antiretrovirals, ANRS 12141) study was conducted in 2007-2008 among all HIV infected adult patients receiving antiretroviral therapy in four community hospitals in the Chiang Mai province in Northern Thailand (N=513). These hospitals were selected based on their long-term provision of antiretroviral treatments, mostly since 2002. They are also representative of community hospitals in semi-rural/sub-urban areas of the Northern region. A second group of respondents, randomly selected¹ from the general population, matched with the patients on age, sex and place of residence, have been surveyed in 2008-2009 (N=500). This specific "case-control" design allows a comparison of the two populations on many aspects of people's live, from socioeconomic and demographic characteristics to detailed information about their HIV testing experiences throughout their life.

The socioeconomic and demographic characteristics of respondents were assessed in both groups together with their family, residence and occupation histories, using the life-event history approach. This method was already used successfully to investigate the vulnerability to HIV in Thailand (Le Coeur et al., 2005). The history of patient's HIV infection was reconstructed: (1) the estimated period of HIV infection when it was known; (2) the first HIV positive test; (3) the occurrence of symptoms; and (4) the ARV treatment initiation. The study was approved by the Ethics Committee of Chiang Mai University.

To document the HIV testing history, respondents from both groups were asked about the date of all their HIV tests² and their circumstances. To assess the timing of HIV diagnosis, health status of patients was evaluated through their declared health perception and presence of HIV symptoms at the time of the HIV positive test. According to the US Centers for Disease Control, CD4 cells counts together with detailed information on HIV symptoms are necessary to determine the clinical stage of HIV infection (CDC, 1993). Yet, the perceived health status has already been proved

¹ Matched respondents were randomly selected using the registers of the primary health centers affiliated with the same four hospitals.

² Among controls, information about the date, reasons for HIV testing and pre-test counselling was documented for the last three HIV tests only.

as a valuable tool to describe health condition of individual (GRAP, 2009). Participants were also asked whether counselling was provided to them before testing and if the result were announced in the presence of someone else.

Results:

Population socioeconomic and demographic characteristics and HIV test histories

Characteristics of patients and matched respondents from the general population are described in Table 1. For both sexes, the median age of the respondents was 40 years.

Table 1: Gender difference in socio-demographic characteristics of patients and matched respondents

	Patients				Matched respondents			
	All	Men	Women	p*	All	Men	Women	p*
N		241	272			235	265	
Median age in years (Matching criteria)	40	40	40	ns	40	40	40	ns
Current monthly income (in Thai baht)	3700	4500	3000	<0.001	5300	5800	5000	ns
Education level (%)								
Up to primary	67.5	61.7	72.6	<0.01	56.6	53.4	59.5	ns
Secondary	22.3	24.2	20.7		26.9	29.5	24.6	
Higher than secondary	10.2	14.2	6.7		16.5	17.1	15.9	
	100.0	100.0	100.0		100.0	100.0	100.0	
Current marital situation (%)								
Never had a partner	6.6	13.5	0.4	<0.001	9.6	13.3	6.4	<0.05
In a relationship	49.8	48.3	51.1		78.7	74.8	82.2	
Separated	21.5	29.4	14.5		9.2	11.0	7.6	
Widowed	22.3	8.8	34.2		2.4	0.9	3.8	
	100.0	100.0	100.0		100.0	100.0	100.0	
Life time children (%)								
None	35.0	51.9	19.9	<0.001	19.8	29.4	11.3	<0.01
One	37.7	30.3	44.0		38.8	39.1	38.5	
More than one	27.3	17.8	35.5		41.4	31.5	50.2	
	100.0	100.0	100.0		100.0	100.0	100.0	

*The gender difference significance for each variable has been computed using a Pearson's chi-square test for percentages and a Kruskal-Wallis test for medians.

Overall, the socio-economical status and education level of patients is lower than that of the matched respondents³. While there is no gender differential among the general population in terms of education level and income, female patients have a significantly lower income (3000 baht vs. 4500 baht) and lower education level (73% vs. 62% who only attended primary school) than male patients. Female patients therefore appear as a vulnerable group in terms of socio-economical power, a situation that can be aggravated by the consequences of their HIV infection when they have to reduce or stop their income generating activities for medical reasons. We can only speculate as to the possibility that the low socio-economic and/or education situation of the patients, particularly of female patients, could have contributed to increasing the risk of their exposure to HIV.

³ There was no significant difference in terms of education between male patients and male matched respondents.

Patients are also less likely to be in a stable relationship⁴ as compared to the matched respondents (50% vs. 79%), in relation to higher rates of divorce/separation (21.5% vs. 9.2%) and AIDS related widowhood (22.3% vs. 2.4%). Among patients, women are much more likely to be widowed than men (34% vs. 9%). In both patients and matched respondents, 13% of men have never been in a stable relationship, while it is the case for less than 1% of women among patients as compared to 6% of their matched female counterparts. Indeed, since HIV-infection is transmitted sexually, it is expected to have more women patients who have been in a relationship than in the general population.

Finally, patients, in particular men, have fewer children than the matched respondents and, in both groups, childlessness is more common among men than among women. Half of the male patients (52%) never had a child while the majority of female patients (80%) had at least one. The percentage of female patients who have more than two children (35%) was significantly lower than for the female matched respondents (50%). This could be related to the family planning counseling provided to HIV-infected women after delivery. In a study among HIV pregnant women in Thailand, 56% were indeed sterilized after delivery (Lallemant, 2006).

Most patients were diagnosed at their first HIV test (90%). Among the matched respondents, two thirds (67%) had been already tested, half of them within the last 2 years, indicating the remarkably high level of HIV testing in the general population in Northern Thailand. Moreover, it should be noted that among the respondents who have never been tested some had never been exposed to HIV. Indeed, 4% of the male and 6% of the female matched respondents were not sexually active at the time of the survey.

Table 2: Gender difference in HIV test history among patients and matched respondents

	Patients				Matched respondents			
	All	Men	Women	p	All	Men	Women	p
N	513	241	272		500	235	265	
Median age at first HIV test (in years)	32.5	34	32	ns	30	31	30	ns
Median number of HIV test	1	1	1	ns	2	2	2	ns
Had regular test (at least once a year-if ever had an HIV test) ^a	-	-	-		5.6	7.7	3.7	ns
HIV Testing history (%)								
Never had a HIV test	0.0	0.0	0.0	ns	33.4	34.0	32.8	ns
1 test	90.0	89.0	93.0		27.2	25.5	28.7	
2 tests	5.5	7.2	4.8		22.4	22.1	22.6	
3 tests and more	3.5	3.8	2.2		17.0	18.4	15.9	
	100.0	100.0	100.0		100.0	100.0	100.0	
Year of first HIV test^b (%)								
2006-2007	13.1	16.6	9.9	<0.01	21.5	26.0	17.8	ns
2000-2005	54.0	51.4	51.8		30.3	23.6	35.7	
Before 2000	32.9	27.0	38.2		48.2	50.4	46.5	
	100.0	100.0	100.0		100.0	100.0	100.0	
Year of last HIV test (%)								
2006-2008	-	-	-		47.5	53.6	42.1	ns
2000-2005	-	-	-		32.4	25.8	38.2	
Before 2000	-	-	-		19.8	20.0	19.7	
					100.0	100.0	100.0	

a. Reasons for repeated test: work n=7, medical check up n=5, repeat blood donation n=8, fear of HIV infection n=5, other reasons n=3.

b. Matched respondents, N=284 (year 2008 excluded: 8 cases).

⁴ The term "stable relationship" has been defined in the survey by "any relationship lasting for 6 months or more within a shared living".

Matched respondents have undergone more HIV tests than the patients—median 2 vs. 1—. This is expected since after testing HIV positive once, the result being confirmed, the patients are not tested any further. Also, the first HIV test occurred later in life among patients than among the matched respondents (32.5 vs. 30.0 years old). During this delay, patients may have missed opportunities to be diagnosed early in the course of the infection or to get comprehensive counselling for avoiding infection. Yet, we cannot exclude that some patients, focused on their infection, only reported their first positive test, omitting to mention negative tests undergone earlier. Qualitative interviews on the detailed history of HIV testing will enable us to explore further the timing of HIV testing.

The majority (54%) of the first HIV tests were performed between 2000 and 2005 for the patients but before 2000 for the controls (48%). In both groups, there was a significant gender difference in the year of the first HIV test with men being tested more recently than women, indicating a recent catch-up of men in the scaling up of HIV testing (Table 2).

Finally, there are no gender differences regarding the frequency of HIV testing as well as on the number of test undergone throughout life in the matched sample. Among them, 5.6% have regular tests; every month or every year. These tests are often performed as a requirement of their work or voluntary annual health check up, regular blood donation or fear of HIV infection.

HIV testing global guidance and national practices

HIV testing circumstances largely depend on HIV testing and counselling policies of the country. WHO *Guidance on Provider-Initiated Testing and Conselling in Health facilities* consider two types of HIV testing initiation (WHO, 2007):

(1) *the client initiated testing*, referring to a voluntary approach when the person seeks to know his/her HIV status; and

(2) the “*provider initiated testing*” when the individual is proposed an HIV test or is informed by the health care providers that an HIV test will be made and is asked for his/her consent. In the latter case, the guidelines differentiate two situations:

(2.a) *HIV diagnosis testing* provided in case of symptoms or sign of illness attributable to HIV.

(2.b) *HIV preventing testing* provided to asymptomatic individuals when beneficial medical services which require the knowledge of one’s HIV status can be provided, such as to prevent mother to child transmission of HIV.

In our survey, we collected information on the circumstances of the tests. While most circumstances can be easily categorized into either *client initiated testing* or *provider initiated testing*, in some circumstances it is not clear who initiated the test and a combination of client/provider initiative cannot be excluded.

We considered testing to *know one’s HIV status*, when planning for a pregnancy or a marriage, as *Client initiated testing* (1). HIV-testing when assessing HIV related symptoms and tests undergone at the hospital because of health problems were considered as *provider initiated testing for diagnosis purposes* (2a). Tests undergone during pregnancy, for blood donation or pre-surgery were considered as *provider initiated testing for prevention purposes* (2b).

Some reasons for HIV-testing commonly reported in our study population were not included in the WHO categorisation, and therefore we have added two types of HIV-testing:

(3) *Non-medical reasons*: refers to HIV-tests performed for non-medical reasons such as part of application process for a job, scholarship, a loan, an insurance coverage to become a member of a social group, as part of work medical check-ups, or as a participant of a HIV prevalence survey.

(4) *Partner of HIV-infected person*: when HIV-testing was conducted after a sexual partner was confirmed HIV-infected or died from (suspected) AIDS-related illness. These tests may be initiated by the patient or his/her care provider.

Gender difference in HIV testing circumstances

The reported reasons for HIV-testing in the HIV-infected and general population are shown in Table 3. For the patients, we present the circumstances of their first HIV positive test. For the matched respondents, the reasons for HIV testing rarely changed if more than one test was conducted, therefore we present here the reason for the latest HIV test which reflects a more current situation. As we cannot directly compare the reasons for HIV testing among the two groups, we focus here on the gender differences within each group.

As shown in Table 3, there are significant gender differences in the circumstances and reasons for HIV testing for both patients and matched respondents.

Table 3: Gender differences in circumstances of HIV test

	HIV+ test among patients				Most recent HIV test among matched respondents			
	All	Men	Women	p	All	Men	Women	p
N	509	239	270		329	154	175	
WHO types of HIV testing								
(1) Client initiated	9.8	10.0	9.6	<0.001	21.9	27.3	17.1	<0.05
(2) Provider initiated								
(2.a) Diagnosis testing	50.3	64.9	37.4		7.9	7.8	8.0	
(2.b) Preventive testing	11.8	7.6	15.6		40.4	31.8	48.0	
Other types of HIV testing								
(3) Non medical reasons	3.5	4.6	2.6		29.8	33.1	26.9	
(4) Partner of HIV-infected person	24.6	12.9	34.8		-	-	-	
	100.0	100.0	100.0		100.0	100.0	100.0	

(1) Client initiated testing

In our study population, we found that “*client initiated testing*” was relatively uncommon, representing only 10% of the patients’ and 22% of the control’s reasons for HIV testing.

Among patients, 7% underwent HIV testing simply to know their status with no difference by gender. It should be noted that the response “just to know” may incorporate other more specific motives such as recurrent health problems, AIDS related death of a partner or exposure to high risk behavior of oneself or the partners. Nevertheless, the decision to get tested is client initiated. Premarital testing and testing before pregnancy were the reason for few tests (3%).

Nearly one third of the men and 17% of women in the controls underwent an HIV test under a *client initiated approach*. This percentage is relatively high in comparison to

other contexts. For example, in the UK only 10% of the adult population in 2001 underwent an HIV test through a personal initiative (McGarrigle et al., 2005).

(2.a) Diagnosis testing

Half of the patients (50%) were tested for *diagnostic reasons* with a significant difference between men and women (65% vs. 37%). Indeed, many patients had experienced health problems, sometimes severe immunodeficiency or serious opportunistic infection, before or at the time of the HIV test (Table 4). Men appear to have been in a poorer health condition than woman: respectively 45% vs. 32% reported a poor health status at the time of test, and more men had HIV/AIDS related symptoms before or at the time of the HIV test (67% vs. 43%). Our results are similar to those of a recent study in four Asian countries (India, Indonesia, The Philippines and Thailand) indicating that men were mainly tested if they had HIV/AIDS related symptoms, while women were more often tested when their partner were diagnoses HIV infected (Paxton et al., 2005).

Table 4: Gender difference in perceived health status before or at the time of HIV diagnosis and history of symptoms.

	All Patients	Men	Women	p*
N	513	241	272	
Perceived health status before or at the time of HIV (%)				
Poor	38.0	45.2	31.6	<0.01
Ok	25.5	22.4	28.3	
Good	36.5	32.4	40.7	
	100.0	100.0	100.0	
History of HIV symptoms (%)				
Never	13.6	10.0	16.9	<0.001
Before or at the time of HIV test	53.2	66.8	43.0	
After HIV test	32.2	23.2	40.1	
	100.0	100.0	100.0	

Although HIV testing appears quite accessible in the general population, a large proportion of HIV infected patients, mostly men, only get tested when they become ill. Therefore it appears that a high uptake of HIV testing in the general population does not necessarily translate into early HIV diagnosis in HIV infected patients, especially for men, who have less opportunities to be tested. We have previously demonstrated, that sex-specific opportunities of HIV testing have an impact on women and men access to HIV care. Women tested earlier in the course of their infection were more likely to timely initiate ARV treatment (Le Coeur et al.; 2009). Also, when HIV diagnosis is performed late in the intercourse of the infection it may damaged the physical appearance which has a negative impact on collective representations of HIV/AIDS and leads to stigmatisation (Pannetier, 2009).

(2.b) Preventive testing in matched respondents

Matched respondents were mostly getting tested for *preventive purposes* (40.0%) primarily during antenatal care inside PMTCT programs⁵. In addition to a very high attendance of antenatal care, antenatal HIV testing uptake is very high in Thailand, at more than 95% (Amornwichee et al., 2002, Kanshana and Simonds, 2002). Yet, it is interesting to note that a significant percentage of men (22%) are tested during the pregnancy of their partner, indicating that couple counselling and testing is well established in Thailand. In the four hospitals where our study was carried out pre-test counseling during pregnancy is provided in group sessions. As a result, opting-out HIV-testing is rarely observed –although theoretically possible--.

Although *preventive testing* appears common in Thailand, it is mostly undertaken at the time of marriage or pregnancy and therefore fails to reach single and childless individuals (mostly men). It should be noted that with the low (1.8) total fertility rate in Thailand (United Nations, 2007), antenatal testing only reaches a fraction of the population, and only once or twice in their life.

(3) HIV testing for non-medical reasons

In the matched respondents, a non-medical reason was the next most frequent motivation for HIV testing (30%) and was slightly more frequent for men than women (33% vs. 27%). This is due to the societal context where men are more likely to have a formal job, apply for a loan or be a member of a fund-based association. In such circumstances, there are limited options to refuse VCT and there is a narrow threshold between perceived reasonable justifications and discriminatory purposes, even in a confidential setting. This type of testing is not primarily aimed to benefit the health of the individuals and systematic referral to a health care setting for follow-up can be absent. These issues are intrinsically related to the protection of human rights and highlight the need for integrated and non discriminatory policies on VCT.

(4) Partner of HIV infected person

For patients, the next most frequent reason for undergoing a test was because the partner was ill or had died of HIV (25%). This reason was significantly more common in women than in men (35% vs. 13%). This is explained by the dynamic of the HIV epidemic in Thailand where men usually get infected outside the marital union and only secondarily pass the infection to their wives (Weniger et al., 1991).

Counselling and HIV testing

Since 2006, in order to reduce the number of infected people unaware of their HIV status and decrease the percentage of late diagnosis, the US Centers for Disease Control recommends *routine HIV testing* with opt-out options (CDC, 2006). Yet, there is disagreement on the way it should be implemented with strong argumentation against the end of the exceptionalism of HIV testing with regards to the three C's, Counselling-Consent-Confidentiality approach (Bayer & Fairchild, 2006).

In our study, most respondents had received counselling prior to their test, 86% for the patients and 83% for the matched respondents (Table 5). However, according to the type of HIV testing, the frequency of pre-test counselling varied: it was nearly always provided in the general population in case of *client initiated testing*—(94%) but less often when testing was mandated for non-medical reasons among both patients and

⁵ Blood donation represents a small part of preventive testing (5%), more men than women (9.7% vs. 1.1%). It can be an indirect strategy for them to regularly check their HIV status, while acting positively towards the society.

matched respondents (60% and 75%, respectively). A previous study on HIV testing in Thailand indicates that counselling is less often provided in private settings than in the public hospitals (Kawichai et al., 2005).

HIV results were provided to all respondents who had client initiated testing but 12% of those tested for *diagnosis purposes* and 6% of those tested for *preventive purposes* – mostly blood donation—did not get their test result. In these cases, although no post-test counselling was provided, the respondents had considered that the result as negative.

Results of *preventive testing* were often provided in the presence of the partner (44% for patients and 64% for matched respondents). Whether this disclosure to the partner was part of couple VCT or was provided as “beneficial disclosure” to prevent transmission to the partner is not known. Interestingly, the percentage of patients and matched respondents in our study who knew the HIV status of their partner was relatively high, 80% and 65%, respectively.

Table 5: Counseling among patients and matched respondent and presence of the partner at results’ notification.

	HIV+ test among patients			Most recent HIV test among matched respondents			
	N	Pre-test counselling	Results given with the partner	N	Pre-test counselling	Received the result	Results given with the partner
Total	503	86.3	18.8	302*	82.9	95.0	42.5
Client initiated testing (1)	50	82.0	28.0	50	94.0	100.0	13.3
Diagnosis testing (2.a)	253	85.8	12.6	26	80.8	88.4	26.3
Preventive testing (2.b)	60	85.0	43.8	129	84.9	93.8	64.3
Non medical reasons (3)	18	61.1	13.0	97	75.0	95.9	29.6
Partner of HIV-infected person (4)	122	91.8	16.9				

* Matched respondents with an HIV test

Conclusion:

In this paper, we analysed the circumstances leading to HIV testing in two populations: HIV-infected patients and their matched controls in the general population. Our results indicate a very high uptake of VCT in the general population with nearly 70% tested at least once.

This uniquely high rate of HIV testing is due to the strong promotion of VCT within the national program, the availability of HIV testing in most health care facilities and the very high attendance of antenatal care. Interestingly, a large proportion of men underwent HIV testing during their spouse’s pregnancy indicating also the success of couple counselling and testing promotion. However, because of the low fertility rate

alternative strategies to reach people outside the maternity setting should be implemented. There is still a wide range of circumstances in which HIV testing is enforced, for example for non medical reasons --job or loan application, or to become a member of an association. It should be important to insure that, in all settings informed consent is requested, test results provided, and confidentiality protected.

Among HIV infected adults, the gender difference in the dynamic of the HIV epidemic and in family histories partly explain why HIV infected men present later to HIV diagnosis testing. Further quantitative and qualitative analyses will be performed to investigate the role of HIV/AIDS related stigma, individual medical history, perception and experiences with the health care system and risk perception, on gender barriers to HIV diagnosis.

Although HIV testing appears quite accessible in the general population, a large proportion of HIV infected patients, especially men, only get tested when they become ill. In order to reach key populations at higher risk, and diagnose HIV timely, there is a need to scaling up further HIV testing in Thailand. This will require a subtle balance between the economic constraints, the recommended frequency and circumstances of HIV testing to maximize the benefits of HIV diagnosis in terms of public health and individual care, while protecting human rights.

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