

Mark VanLandingham, Wassana Im-em, and Fumihiko Yokota

**Access to Treatment and Care Associated with HIV Infection
among Members of AIDS Support Groups in Thailand**

PSC Research Report

Report No. 04-550

PSC POPULATION STUDIES CENTER
AT THE INSTITUTE FOR SOCIAL RESEARCH

UNIVERSITY OF MICHIGAN

The Population Studies Center (PSC) at the University of Michigan is one of the oldest population centers in the United States. Established in 1961 with a grant from the Ford Foundation, the Center has a rich history as the main workplace for an interdisciplinary community of scholars in the field of population studies. Currently the Center is supported by a Population Research Infrastructure Program Grant (R24) from the National Institute of Child Health and Human Development, and by a Demography of Aging Center Grant (P30) from the National Institute on Aging, as well as by the University of Michigan, the Fogarty International Center, the William and Flora Hewlett Foundation, and the Andrew W. Mellon Foundation.

PSC Research Reports are prepublication working papers that report on current demographic research conducted by PSC-affiliated researchers. These papers are written for timely dissemination and are often later submitted for publication in scholarly journals. The PSC Research Report Series was begun in 1981. Copyrights for all Reports are held by the authors. Readers may quote from this work as long as they properly acknowledge the authors and the Series and do not alter the original work.

Access to Treatment and Care Associated with HIV Infection among Members of AIDS Support Groups in Thailand

Mark VanLandingham, Ph.D.
Tulane University

Wassana Im-em, Ph.D.
Mahidol University

Fumihiko Yokota, M.P.H.
Tulane University

Corresponding author:

Mark VanLandingham, Ph.D.
Associate Professor
Dept. of International Health and Development
School of Public Health and Tropical Medicine
Tulane University
New Orleans, LA 70112
Email: mvanlan@tulane.edu
Phone: 504 587-2113
Fax: 504 584-3653

Draft: January 31, 2004

Access to Treatment and Care Associated with HIV Infection among Members of AIDS Support Groups in Thailand

Abstract

To examine current treatments for persons living with HIV and AIDS (PHAs) in Thailand, we analyze data collected during 2000 from 425 members of PHA support organizations in Bangkok and three upcountry provinces. Nearly all of these respondents report symptoms related to their infection with HIV – about 12% report severe symptoms – and most (71%) report ever having received modern medical care for HIV-related symptoms. A smaller percentage (30%) report ever use of herbal treatments. Small proportions of those who had experienced severe symptoms report treatments with anti-retroviral medication; treatment for opportunistic infections; or treatment for pain. Treatment with ARV or for pain are reported by only 4% of those who had experienced severe symptoms. Only small proportions of the sample are spending substantial sums on HIV-related treatments; the government's health card system appears to play an important role in keeping treatment costs down for PHAs and their families. Being open about one's HIV status to one's community is positively associated with receiving modern treatment in multivariate analysis. Women respondents enjoy greater access to the government's health card system than the men, and are more likely to be open to their communities about their HIV-status. But multivariate models that include controls for illness severity and other potentially confounding factors indicate that women are less likely than men to receive modern treatments for HIV-related ailments. Implications of the findings are discussed.

Acknowledgements

This research is supported by grants by the United States National Institutes on Aging (Grants AG15983 and AG18648). The authors thank Somboon Suprasert and the Thai Red Cross for their assistance in the field; Jiraporn Kespichayawattana for help with fieldwork logistics and the interpretation of the results; and Chanpen Saengtienchai for help with the content and translation of the instrument. John Knodel provided valuable guidance and advice at all stages.

Introduction

Major changes are underway regarding treatments of persons with HIV and AIDS (PHAs) in developing countries, and these changes are likely to profoundly affect treatments for opportunistic infections (OIs), palliative care, and the more proximate consequences of HIV infection, i.e., the compromised immune system. In Thailand, for example, the World Bank reported in 2000 only 2100 individuals enrolled in clinical trials of ARV (plus a very small but unknown number purchasing the drugs privately) and a monthly cost of a standard regimen to be \$675 per month (World Bank 2000). Ruxrungtham et al. (2001) report plans to include another 2500 individuals in a phase III trial beginning August 2002. Currently, it is estimated that there are about 10,000 individuals in Thailand receiving ARVs, and the cost is down to about \$30 per month for one of the most common regimens (Cohen 2003). The Thai Ministry of Public Health hopes to increase the number receiving antiretrovirals to 50,000 by the end of 2004.

The situation is changing rapidly and will continue to do so, yet our knowledge of the treatments that most PHAs are receiving (or not receiving) is woefully inadequate. Clinical trials provide critical information about how specific regimes perform, but tell us little about the more typical courses of treatment the vast majority of PHAs are undertaking in the more general population. Part of the reason for this deficiency in the literature is the difficulty involved in gathering such information. Population-based studies of such treatments are hampered by the fact that PHAs not involved in drug trials are not an easy group to access. Many are not in contact with the formal health system until they reach very advanced stages of illness, and anecdotal evidence suggests much use of informal treatments that are prescribed and administered by family members (especially older parents) and the informal sector (Kespichayawattana and VanLandingham 2003; Singhanetra-Renard et al. 2001). Yet it is critical to understand as well as possible the range and frequencies of current treatment strategies for several reasons. First, we need to know how well the formal health infrastructure is delivering non-ARV care to PHAs in order to assess what steps need to be taken when an expansion of such treatments to include ARVs is implemented. Second, we need to know the range and frequency of use of nonstandard treatments, since some traditional drugs are likely to interact with ARVs and other modern medicines prescribed for OIs. We know that the use of such traditional and nonstandard treatments are popular in developed countries (de Visser and Grierson 2002; Ostrow et al. 1997; NIH website for Complementary and Alternative Medicine 2003), and they may be even more widespread in poorer countries such as Thailand where access to the expensive antiviral drugs is so much more limited. Third, it would be useful to have some idea of the amounts of money PHAs and their families are paying for current regimens in order to better estimate how much families might be willing and able to contribute to the costs of new and better treatments.

Methods

We address these questions using an assisted self-administered survey of 425 PHAs that was undertaken in three northern Thai provincial towns and Bangkok during 2000. The respondents are members of voluntary PHA groups. While such a sample provides much broader coverage of the PHA population and better information about conventional treatment practices than do existing studies, such a sample has several limitations. PHAs who join such groups are likely to be selective for several factors related to treatment practices, in particular their degree of openness about their HIV status. This is particularly true in Thailand and other middle to low income countries where there is not nearly as much incentive to be open about one's HIV status as in the west, since effective antiviral therapy was

essentially unavailable to the general PHA population at the time of the survey and is currently available to only a small minority.

Also, joiners of PHA groups are likely to have greater access to experimental or otherwise hard-to-obtain treatments by virtue of their accessibility and negotiating power. But given that a random sample of the population of interest is impractical because of the potential sensitivity of the issue and because so few Thais know their HIV status,¹ a PHA group member sample provides the best window into treatments currently undertaken by the general population of Thai PHAs. More details about the sample, the instrument, and the methods can be obtained from our longer research report on the survey, which is available online at the website noted in the bibliography (VanLandingham and Im-em 2001).

Findings

Univariate and bivariate results

Table 1 displays the characteristics of our PHA sample. Women PHAs are more likely to be in the sample than are men, in spite of the fact that women make up a minority of AIDS cases in Thailand.² Women PHAs were much more likely to have been widowed than the male PHA respondents, reflecting a common pattern of the husband becoming infected first (often before marriage) and his wife subsequently contracting the virus from him. Three quarters of the women had dependent children.³ Most of the PHA group members recruited from the support groups located in the provincial urban areas worked in unskilled occupations, had completed only six or fewer years of education, and came from rural backgrounds. In contrast but as expected, the Bangkok respondents were more likely to report urban backgrounds, higher educational attainment, and jobs requiring more skill and training. Bangkok respondents were much more likely to be single than the respondents from the provinces, consistent with national data on marital status differentials (Thailand National Statistical Office, 2000) and with the fact that Bangkok attracts many unmarried young adults from the provinces (Chamrathirong et al. 1995).

Table 2 focuses on the health and HIV-related symptoms of the PHAs, their arrangements for receiving care, and the extent to which they are open about their HIV status to the support group and to the greater community. Only a minority of respondents reported their current health to be excellent or good. Nine out of ten of our respondents had had HIV-related symptoms before, and of these, nearly all (95%) reported at least some current symptoms. About two-thirds of the sample had had HIV-related symptoms for a year or more. Men were significantly more likely than women to report ever having had symptoms. Fever, headache, weight-loss, skin and mouth rashes, and tiredness were the most commonly reported symptoms. Men were significantly more likely than women to report weight-loss, digestive problems, respiratory problems, to experience difficulty in moving about, and to be unable to work, dress oneself, or walk. Having at least one of the more severe symptoms, i.e., having difficulty moving about, being unable to leave the house alone, being unable to work, being unable to walk, or being unable to dress oneself, affected about 12% of the sample, and men more than women ($p = 0.005$; results not shown). Significant differentials in symptom reporting by place also occur but no clear pattern emerges (see Table 2).

¹ Such a random sample may also be unethical until treatments become more widely available.

² This is changing rapidly. About half of new infections in 2000 were expected to be female (World Bank 2000).

³ This proportion is higher than we found for the women PHAs in our other samples. For example, a sample based on reports of local key informants results in about half of all women PHAs having children. Women PHAs with children may be more likely to join support groups than are women who are childless.

As they are members of a PHA support group, nearly all of the respondents acknowledge being infected with HIV, but only four-fifths are open about this to their communities. Women are relatively more likely than are men to be open to their communities about their HIV-status, as are the respondents in the provincial urban centers relative to Bangkok ($p < 0.000$ for both comparisons).

When PHAs become ill, parents very often take on the role of primary care-giver (Kespichayawattana and VanLandingham 2003; Knodel et al. 2001). Although 90% of the sample of PHAs examined here have begun to experience symptoms, nearly all were well enough to at least occasionally attend PHA group meetings and all were well enough to participate in the survey upon which the current paper is based. Thus, care-giving demands are likely to be fairly moderate for most of these respondents. Oneself is the modal response for primary care-giver, followed by parents and spouses.⁴ Since one third of the Bangkok respondents are unmarried (see Table 1) and only 15% are living in their permanent home (VanLandingham and Im-em 2001), the low proportions of parents involved in care-giving for the Bangkok PHAs relative to those from provincial urban centers is not surprising. Indeed, in other work we find extensive return migration among PHAs who were living away from their parental home when they became ill (Knodel and VanLandingham 2003).

Table 3 presents the types of treatments received by this group of PHAs. 84% report receiving at least some treatment for their HIV-related symptoms. Men are significantly more likely to have received treatments than women in the aggregate, although this difference disappears when conditioned on ever having had severe symptoms.⁵ Indeed and as expected, having had severe symptoms; being in health that is only fair to poor; and having had symptoms for at least for a year or more all increase the likelihood of having received treatment at statistically significant levels in bivariate analysis. Also, being open to one's community has a positive and significant effect on receiving treatment in these bivariate calculations, even among these participants who must have been open to some degree by virtue of being in the sample (see Table 2). Similar differentials are found for modern treatment, including a difference that favors men, but again this sex difference is eliminated when the experience of serious symptoms is considered. More persons who described themselves as open to their communities received modern treatments than did persons who were not, but this difference is not significant for modern treatments.

Anti-retroviral treatments for HIV (ARVs) were not yet widespread in Thailand at the time these data were collected, and have yet to be implemented on any significant scale. In spite of the fact that members of our sample are surely among the most likely to have access to ARV treatment, only 7% reported receiving such treatment, and the only significant predictor factor was place of residence, with the provincial respondents more likely to receive ARVs than PHAs in Bangkok. Only 7% of the sample had received TB treatment or prophylaxis; only 9% had received treatment for other opportunistic infections, or had reported antibiotic treatment; and only 6% had reported any treatment for pain or other palliative care. Analysis by the factors in the table did not show any significant differentials in the use of ARV, TB, other OI, or palliative treatments. Among those reporting serious symptoms, only 4% of the sample had received ART therapy; only 12% TB treatment or prophylaxis; only 14% had received treatment for other opportunistic infections, or had reported antibiotic treatment; and only 4% had reported any treatment for pain or other palliative care (results not shown).

Treatment using herbal approaches were reported by 30% of the sample (Table 3), a substantial minority but much less than those reporting modern treatments above. The similar proportions of males and females reporting the use of herbal approaches is consistent with the fact that duration of symptoms is not a relevant factor in their use, i.e., neither sex nor duration of symptoms have significant effects on the

⁴ Only 11 cases (2.5%) reported a health care provider as their main care provider.

⁵ Men are on average more ill than are women in this sample.

use of herbal approaches; both of these findings are in sharp contrast to the use of modern treatments reported above. However, those with serious symptoms and whose health is only fair or poor are significantly more likely to report the use of herbal remedies than those without serious symptoms or those who report their health to be good or excellent; both of these relations were also found in the use of modern treatments. In contrast to the use of modern approaches, respondents who are open to their communities about their HIV status; who live in provincial cities; and who have low or medium educational attainment are significantly more likely to report the use of herbal approaches for their HIV-related symptoms than are those who are not open to their communities; who live in Bangkok;⁶ and who have achieved high educational attainment. The most common herbal remedy reported by these respondents is bitter cucumber or green chiretta (*marakhi nok*), reported by 21% of the sample (results not shown). This herb was significantly more likely to be used by respondents in the provincial towns than in Bangkok; and by those who were open to their communities compared with those who were not ($p < 0.01$ for both comparisons; results not shown). Meditation as an approach to treating HIV was reported by 13% of the sample. None of the factors in Table 3 resulted in significant differentials in the use of meditation (results not shown). We were surprised that the type of primary caregiver, i.e., whether the primary care-giver was the PHA herself; her spouse; her parents; or some other type of caregiver, had no effect on receiving any of the types of treatments that we examined in this table. Also, having a government health card had no effect on receiving any type of treatment examined.

Table 4 presents results based upon questions about the amounts spent on treatment by these PHAs and their families. Of course, these figures reflect a truncated illness experience, but it is also important to keep in mind that many of our respondents have yet to experience the most severe symptoms associated with HIV-infection. Thus, their major expenditures will occur in the future. Even so, examining such expenditures as reported by different classes of PHAs themselves is instructive.⁷ Nearly two-thirds of the sample had spent a total of B5000 (about \$120) or less on their illness, but 13% had spent B20,000 (approximately \$480) or more. No significant differences were found in the amounts spent by sex, education level (our proxy measure for socioeconomic status), or symptom severity, but Bangkok respondents did spend more than did provincial respondents (see Table 4).⁸

Sixty-two percent of our respondents had a government health card, which entitles the bearer to unlimited access to the government health care system at minimal cost. Women, persons with low or medium levels of educational attainment, and provincial respondents were all significantly more likely to possess such a health card than their respective comparison groups (see Table 4). Having the health card makes it significantly more likely that a respondent spent B5000 or less on her health care (as opposed to more than B5000) with respect to those who did not have the card ($p < 0.01$); being open to the community regarding one's HIV status has no effect on amounts spent (results not shown).

Principal sources of payment for expenses are shown in the lower portion of Table 4. In sharp contrast to the situation in most developed countries, health insurance offered by the workplace (in either the private or public sectors) and government social welfare programs were cited by only a trivial percentage of our Thai PHA respondents as a primary source of payment. Oneself and the government

⁶ Because differentials in treatment varied mostly between Bangkok and the provinces, we collapsed the three provincial locations into one column for this table and subsequent tables.

⁷ For more information on treatment expenditures, see a related report that includes expenditure payments as reported by parents of PHAs who have died (Knodel and Im-em in press).

⁸ Splitting the amount spent into a dichotomy (less than \$120 versus \$120 or more) resulted in only one significant difference: those reporting serious symptoms were significantly more likely to have spent more ($p < 0.05$, results not shown).

health card system were the most common principal sources of payment for HIV treatment-related expenses. Also, there was much diversity in these sources of payment by the categories examined in the table, i.e., there were significant differentials in the distribution of sources of payment by sex, education level, and location. For example, regarding the government's health card system, women were almost twice as likely as men; persons of medium educational attainment were more than twice as likely as those attaining high levels; and provincial respondents were more than 13 times as likely as Bangkok respondents to cite it as a primary source of payment for HIV treatment-related expenses (see Table 4). Bangkok residents were much more likely to report oneself as a primary caregiver relative to provincial respondents, reflecting in part the fact that many young adults who have migrated to Bangkok are single and reside there without families (Chamratrithong et al. 1995).

Multivariate results

Table 5 presents our multivariate results. Our first multivariate model attempts to distinguish between those respondents who spent less than B5000 (a natural break point in our categorical expenditure data, equal to approximately \$120) on their HIV-related treatment to date from those who spent equal to or more than this amount. We include as explanatory factors sex, educational attainment (a proxy measure for socioeconomic status⁹), region (Bangkok versus provincial urban location); whether the respondent was open to her community or not; and whether the respondent had a government health card or not. We also include whether the respondent had experienced serious symptoms or not (as a measure of severity of illness to date; see Table 3 notes for definitions) as a control variable. When all of the above explanatory factors are considered simultaneously, the only factors having significant effects on the amount spent are the serious symptoms and health card variables. Having experienced serious symptoms increases the odds of spending the higher amount of money by a factor of 2.3 ($p = 0.01$). Having a government health card decreases the odds of spending the higher amount of money by a factor of 0.53 ($p = 0.03$). The improvement of this model over a null model is statistically significant.

Our second multivariate model attempts to distinguish between respondents who have received modern treatment for HIV-related conditions from those who have not. We include as explanatory and control variables the same factors described above, except for the health card variable, since it appears to have little effect in the bivariate tables. Being male and being open about one's HIV status both more than double the odds of receiving modern treatment at a statistically significant level, even in the presence of the control factor for severity of illness (which is of borderline significance).¹⁰ The improvement of this model over a null model is of borderline statistical significance ($p = 0.06$).

Finally, we explore the effect of the above factors on ever receiving herbal remedies in the far right column of Table 5. Having had severe symptoms increases the odds of having received herbal treatments by a factor of 2.6 ($p = 0.002$), and living in Bangkok decreases the odds by a factor of 0.36 ($p = 0.004$). The improvement of this model over a null model is of borderline statistical significance ($p = 0.06$).

⁹ We collapse this variable into two categories: low to medium versus the high category. This is because it is the high category that appears to be the outlier in the bivariate tables.

¹⁰ When possession of the government's health card is also included as an independent variable, no factors remain significant. However, the parameter estimates remain in the same direction and at approximately the same magnitude.

Conclusions

Middle-income countries facing HIV/AIDS epidemics are on the cusp of initiating profound changes in their responses to these epidemics. As these changes get underway, it is imperative to establish baseline information on the prevalence and types of treatments currently undertaken by PHAs, the cofactors associated with these treatments, and the amounts of money spent upon them. Nearly all of the PHAs in this study are already experiencing HIV-associated symptoms, many of them quite severe symptoms. Most report receiving at least some type of modern treatment for these symptoms, and a significant minority report the use of herbal treatments. But only very small percentages of the sample, or even among those with serious symptoms, were receiving important treatments such as ARV, treatment and prophylaxis for TB and other OIs, or even pain relief. This is especially worrisome since PHAs who are not in PHA-support groups may be receiving even less care than the respondents in this sample. More positively, only small proportions of these PHAs and their families are spending huge sums on treatments related to their HIV infection, and this fact appears due in substantial measure to the Thai government's national health card system.

Some inequities are apparent. Women are more likely to benefit from the health card system than are men, and are more likely to be open about their HIV status than are men.¹¹ Men are more likely than women to receive modern treatments for their HIV-related conditions, a finding that is maintained in models that take into account severity of illness and other potential confounding factors. But more encouragingly, being open about one's HIV status, even among these participants who must have been open to some degree by virtue of being in the sample, increases the odds of receiving modern treatment.

Thailand appears well-positioned for the coming expansion of modern treatments for HIV-related conditions. The vast majority of PHAs in this study are already plugged in to Thailand's extensive health care system, and many appear willing to participate in innovative and nonconventional treatments. The fact that openness about one's HIV status makes it more likely to be receiving modern treatment implies that voluntary counseling and testing (VCT) efforts to foster disclosure have excellent potential to facilitate participation in effective treatments. Efforts should also be made to ensure that women and men have equal access to the coming expansion of both conventional and experimental treatments for HIV and its associated symptoms.

¹¹ This is likely due in part to women in this sample having much better experience with community reaction than the men had. Also, since many of our female respondents have been widowed by HIV, it may seem pointless to them to try to conceal their own infection. See VanLandingham et al. (2002) for more information.

Bibliography

- Chamrathirong, Aphichat, Kritaya Archavanitikul, Kerry Richter, Philip Guest, Varachai Thongthai, Wathinee Boonchalaksi, Nittaya Piriyathamwong and Panee Vong-Ek. 1995. *The National Migration Survey of Thailand*. Institute for Population and Social Research Publication No. 188. Bangkok: Mahidol University.
- Cohen Jon. 2003. Two Hard-Hit Countries Offer Rare Success Stories: Thailand & Cambodia. *Science* Volume 301, Number 5640, Issue of 19 Sep 2003, pp. 1658-1662.
- Kespichayawattana Jiraporn and Mark VanLandingham. 2003. Health impacts of co-residence with and care giving to persons with HIV/AIDS (PHAs) on older parents in Thailand. *Journal of Nursing Scholarship* 35(3): 217-224
- Knodel John, and Wassana Im-em. In press. The Economic Consequences for Parents of Losing an Adult Child to AIDS: Evidence from Thailand. *Social Science & Medicine*.
- Knodel John, Mark VanLandingham, Chanpen Saengtienchai, and Wassana Im-em. 2001. Older People and AIDS: Quantitative Evidence of the Impact in Thailand. *Social Science & Medicine* 52 (9): 1313-1327.
- Knodel John and Mark VanLandingham. 2003. Return Migration in the Context of Parental Assistance in the AIDS Epidemic: The Thai Experience." *Social Science & Medicine* 57(2):327-342.
- NIH Website for Complementary and Alternative Medicine. 2003. <http://nccam.nih.gov/> (accessed October 28, 2003).
- Ostrow MJ, Cornelisse PG, Heath KV, Craib KJ, Schechter MT, O'Shaughnessy M, Montaner JS, and RS Hogg. 1997. Determinants of complementary therapy use in HIV-infected individuals receiving antiretroviral or anti-opportunistic agents. *Journal of Acquired Immune Deficiency Syndrome Human Retrovirology* 15(2): 115-20.
- Ruxrungtham K, and P. Phanuphak. 2001. Update on HIV/AIDS in Thailand. *J Med Assoc Thai* 84 (Suppl 1): S1-17.
- Singhanetra-renard Anchalee, Chilaluck Chongsatitnum, and Peter Aggleton. 2001. Care and support for people living with HIV/AIDS in northern Thailand: findings from an indepth qualitative study. *Culture, Health, and Sexuality* 3(2): 167±182.
- Thailand National Statistical Office. 2000. *Preliminary Report, The 2000 Population and Housing Census 2000*. Bangkok: National Statistical Office.
- VanLandingham Mark, Wassana Im-em, and Chanpen Saengtienchai. 2002. Community Reaction to Persons with HIV/AIDS and their Parents in Thailand. University of Michigan Population Studies Center Research Report No. 02-530. Available on-line at <http://aidseld.psc.isr.umich.edu/>.
- VanLandingham Mark and Wassana Im-em. 2001. Living with HIV/AIDS in Thailand: Results from a Self-administered Survey. PSC Research Report No. 01-488. Available on-line at <http://aidseld.psc.isr.umich.edu/>.
- de Visser, R, and J Grierson. 2002. Use of alternative therapies by people living with HIV/AIDS in Australia. *AIDS Care* 14(5): 599-606.
- WorldBank 2000. *Thailand's response to AIDS: building on success, confronting the future*. Washington, D.C.: The World Bank.

Table 1: Background characteristics of PWAs

	Total	Sex		Province			
		Male	Female	CM	CR	BK	LP
Sample size (n)	424	139	285	100	100	100	124
(%)	100	33	67	24	24	24	29
Median age (years)	31	32	30	33	30	29	32
Occupation (%):							
-agriculture; unskilled; service	75	63	80	82	87	38	88
-clerical; factory; skilled; sales	16	25	12	15	9	35	8
-professional; student; entrepreneur	4	5	3	1	2	13	0
-unemployed; unknown	5	6	5	2	2	14	4
Total	100	100	100	100	100	100	100
Rural background (%)	76	68	80	80	90	43	87
Current rural residence (%)	65	56	69	78	87	6	85
Education level (%)							
-6 yr elem (P6) or less	73	64	78	74	88	51	78
Marital status (%)							
-single	13	34	2	9	6	33	5
-married	29	40	24	32	25	22	36
-divorced	4	8	3	3	6	7	2
-separated	8	9	8	4	9	19	3
-widowed	45	10	62	52	54	19	53
Has children (% yes)	63	38	75	75	58	43	74
For ever married respondents (n)	369	91	278	91	94	66	118
-spouse infected (% yes)	89	85	91	90	93	77	92

Notes:

CM = Chiang Mai

CR = Chiang Rai

BK = Bangkok

LP = Lampang

Table 2: Health, HIV-related symptoms, openness, and care giving arrangements of PWAs

	Total	Sex		Province			
		Male	Female	CM	CR	BKK	LP
Current health status (% excellent or good)	28	24	29	25	32	32	23
Ever had HIV related symptoms (% yes)	90	96*	87	93	86	95	87
Currently have HIV related health problems /ever any symptoms (% yes)	95	95	95	95	91	97	96
Duration of symptoms (% in each category) /ever any symptoms							
- < 6 mo	14	17	13	10*	21	21	7
- >= 6 mo < 1 yr	18	17	18	17	18	19	16
- >= 1 yr < 3 yr	37	38	37	37	41	27	44
- >= 3 yr	31	28	33	37	20	33	33
Ever had HIV related fever /ever any symptoms	65	71	63	63**	67	79	54
-Headache	60	58	60	53	64	66	57
-Weight loss	54	66***	48	47**	55	70	45
-Digestive problems	35	50***	27**	37	42	43	20
-Respiratory problems	39	47*	34	27**	54	40	36
-Skin and mouth rashes	51	55	49	56	56	53	43
-Tiredness and/or exhaustion	53	60	50	48***	50	80	37
-Difficulty moving about	11	16*	8	7	15	16	8
-Unable to work	16	27***	10	8***	28	18	13
-Unable to leave house alone	5	8	4	3	9	3	7
-Unable to dress myself	2	4*	1	0	4	3	1
-Unable to walk	3	7*	1	2	6	4	1
-Other symptoms	10	11	9	8	11	11	11
Acknowledge HIV+ (%)	98	99	98	100	100	98	95
Community knows about HIV status of R (%yes).							
-yes	80	71***	85	91***	93	42	92
Current major caregiver (among those who have had symptoms)							
-self	40	44	38	54	34	51	24
-spouse	16	22	12	11	21	6	24
-mother and/or father	23	18	25	21	36	7	27
-health care professional	3	4	3	2	1	8	1
-others	19	12	22	12	8	29	24
Total	100	100	100	100	100	100	100

Notes:

CM = Chiang Mai

CR = Chiang Rai

BK = Bangkok

LP = Lampang

* p <= 0.05

** p <= 0.01

*** p <= 0.001

Table 3: Types of treatments PWAs report receiving

<i>Types of treatments</i>	Total	Sex		Education Level			Location		Openness		Duration		Current health			Severe symptoms	
		M	F	Low	Med	High	Prov	Bkk	Yes	No	<1 yr	>= 1 yr	Excel/good	Fair	Poor	No	Yes
<i>Sample size (n)</i>	424	139	285	156	154	114	324	100	83	341	121	258	117	226	81	372	52
Ever received treatment for HIV/AIDS and/or symptoms(%)	84	91**	80	83	82	86	84	81	86*	75	81**	93	63***	89	96	82**	98
Ever received modern treatment (%)	71	82**	66	72	68	75	70	75	73	65	68**	81	51***	75	90	69**	87
Ever received herbal treatment (%)	30	29	31	31*	36	22	35***	15	33**	18	28	35	20**	34	37	28***	50

Notes:

Low education = less than 6 yrs; medium = 6 yrs; high = more than 6 yrs.

Severe symptoms = difficulty moving about, unable to leave house alone, unable to work, unable to walk, or unable to dress oneself.

* p <= 0.05

** p <= 0.01

*** p <= 0.001

Table 4: Costs and sources of payments for treatments for PWAs

<i>Costs and sources of payments</i>	Total	Sex		Education Level			Location		Severe symptoms	
		Male	Female	Low	Med	High	Prov	Bkk	No	Yes
Total amount spent on treatment (mode) /any										
< 1000 baht	34	30	35	32	38	31	38*	19	35	24
1000 – 4999 baht	30	32	29	33	30	28	28	38	31	26
5000 – 9999 baht	12	10	13	9	15	12	11	15	11	16
10,000 – 19,999 baht	8	7	8	10	5	8	8	8	8	8
20,000 – 49,000 baht	8	11	7	9	6	11	7	14	7	16
>= 50,000 baht	5	8	4	5	5	7	5	5	5	10
DK	3	1	4	4	2	3	4	1	4	0
Percent having a gov't hlth card/ever rec treatment	62	46***	71	66***	74	43	77***	14	63	61
<i>Primary source of medical payment /any (percent):</i>										
Yourself	34	31**	35	37**	28	37	30***	48	35	29
Your spouse	6	11	4	7	5	8	7	4	5	13
Other family	5	9	3	9	1	7	3	15	5	10
Your mother	8	9	7	2	9	12	8	7	9	0
Your father	2	4	1	2	2	3	2	3	2	4
Friends	0	0	0	0	1	0	0.4	0	0.4	0
Government health card insurance system	32	20	38	32	42	18	40	3	32	31
Government health care system for civil servants	0	0	0	0	1	0	0.4	0.3	0.4	0
Government social security system	7	8	6	6	9	7	8	3	7	8
Government social welfare	1	2	0	2	0	0	0.4	3	1	2
Health insurance offered by workplace	1	0	1	1	0	0	0.8	0	1	0
Other	4	5	3	2	3	8	0.4	15	4	2

Notes: Low education = less than 6 yrs; medium = 6 yrs; high = more than 6 yrs.

Some totals may not equal 100% due to rounding.

* p <= 0.05

** p <= 0.01

*** p <= 0.001

Table 5: Multivariate models

	Outcome variables		
	Spent more than B5000 on care	Ever received modern treatment	Ever received herbal treatment
Explanatory variables and coding schemes	exp(beta) or Odds ratio	exp(beta) or Odds ratio	exp(beta) or Odds ratio
Has experienced severe symptoms - no (reference) - yes	2.26*	2.28~	2.63**
Education level - 6 years or less (reference) - more than 6 years	1.29	1.33	0.74
Sex - female (reference) - male	0.89	2.28**	0.97
Current residence - provincial (reference) - Bangkok	1.08	1.57	0.36**
Open to the community about HIV-status - no (reference) - yes	1.08	2.29*	1.10
Has a health card - no (reference) - yes	0.53*		
Constant	0.61	0.80	0.47*
n	339	424	424
Improvement over the null model (chisquare/df)	422/6*	483/5 ~	493/5 ~
Percent correctly classified	66	72	70

Notes:

Severe symptoms = difficulty moving about, unable to leave house alone, unable to work, unable to walk, or unable to dress oneself.

~ p = 0.06

* p <= 0.05

** p <= 0.01

*** p <= 0.001