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A rapid situation analysis of the access to care project in Northern Thailand

Ratana Panpanich

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Community Medicine Department,
Chiang Mai University

in collaboration with
Office of Disease Prevention and
Control Region 10 Chiang Mai
AIDS Section, Ministry of Public Health
Horizons Program

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Introduction

Since 2000 the Thai Ministry of Public Health (MOPH) has provided highly active antiretroviral therapy (HAART) to people living with HIV/AIDS through its Access to Care (ATC) Project. In 2001, 3,600 ATC clients received HAART, and by the following year the number had increased to 23,000 (Working Group for HIV/AIDS Care 2002). Because the Thai government has declared that its goal is to provide this treatment to all those who need it, the number of clients receiving HAART in Thailand is expected to expand.

In the upper north of Thailand, the ATC Project was launched in six provinces: Chiang Mai, Lamphoon, Lampang, Chiang Rai, Phayao, and Mae Hong Son. In 2001, the first cohort of 819 clients came from 54 hospitals. The criteria for selection were that the client had tested HIV-positive, was symptomatic, and/or had a CD4 count less than 200/cu.mm (CDC Region 10 2001). There were eight regimens of HAART available that were allocated to the hospitals by the Center of Disease Prevention and Control in the region (CDC Region 10 2001).

As antiretroviral (ARV) therapy becomes more widely available in Thailand, it is necessary to have a better understanding of operational issues related to expansion of existing programs. A Rapid Situation Analysis (RSA) study was therefore undertaken to understand the strengths and weaknesses of the ATC Project in northern Thailand. The ultimate aim of the study is to make recommendations for action that will improve the quality of ARV services that clients receive and to enhance their adherence to HAART.

Objectives

The objectives of the study were to assess:

- The ATC delivery system and its integration with other services provided to clients.
- The capacity of the logistics system to provide HAART at each site through an analysis of the levels of stock outs at each clinic.
- The technical capacity of the ATC service providers.
- The adequacy of the counseling provided to clients before and after they began therapy.
- The adequacy of the follow-up and monitoring system.
- Patterns of adherence of clients to their drug regimen.
- The role of community groups, such as support groups for HIV-positive people and NGOs, in the ATC Project.

Methods

The rapid Situation Analysis, conducted between May and July 2002, collected data from 15 ATC clinics operating in the provincial hospital (largest hospital in the province) and two district hospitals in each of five northern Thai provinces: Chiang Mai, Chiang Rai, Lampang, Lamphoon, and Phayao. A Situation Analysis gathers data on the functioning of health services through the use of observations and interviews.

At the time of the study, the number of clients using the various ATC clinics in northern Thailand ranged from five to 50, with the average being 17. At each study hospital, the RSA team asked between five and ten clients receiving HAART if they would be willing to participate in the study. They were informed that their responses would be kept confidential and that their decision to participate or not in the study would have no consequences on their access to services provided by the ATC project.

In total, 100 clients receiving HAART agreed to participate in the study. A third of these agreed to allow the researchers to contact a relative to be interviewed for the study. The researchers hoped to interview 45 former clients who had stopped taking HAART, yet only 20 agreed to participate in the study. It was difficult to enroll more than this because the hospitals had lost contact with some of the clients who had dropped out of the program, while others had died or were too sick to be interviewed. All the clients and relatives who were interviewed for this study signed a written consent form indicating their willingness to participate in the study.

A team consisting of medical doctors, a lecturer in public health, a nurse, and public health students collected the following data, summarized in Table 1:

- An inventory of ATC-related services available at each hospital.
- One observation of a HAART client during their interaction with service providers at each hospital.
- Three to nine exit interviews with HAART clients at each hospital.
- Interviews with at least one doctor, nurse, counselor and pharmacist involved in the ATC project at each hospital.
- An interview with a Provincial Health Officer.
- Interviews with 33 family caregivers.
- Interviews with any NGOs and support groups for HIV-positive people located within the district where each hospital is located.
- Interviews with 20 ATC dropouts from nine hospitals.

Table 1 Persons interviewed during the RSA

Persons interviewed	Number interviewed
Clients taking HAART	100
Dropouts	20
Relatives	33
Counselors	5
Doctors	9
Nurses	18
Pharmacists	10
Hospital directors	5
Provincial Health Officer	1
Representatives of NGOs	8
Representatives of support groups for HIV-positive people	15

The results of the RSA are not representative of the whole ATC system in northern Thailand, but do provide a guide to the strengths and weaknesses of the system. The 100 clients interviewed who were taking HAART are not representative of all clients who were enrolled in the ATC project, given that they are still successfully taking the ARV drugs. The dropouts are also not representative of all the dropouts given that they do not include people who were lost to follow-up or have died, who made up a significant proportion of ATC dropouts when compared to service statistics from the National ATC Project (Table 2).

Table 2 Reasons why clients dropped out of the National ATC Project and the RSA study facilities after one year

	National ATC Project		RSA study
	N = 819		N = 20
	%	n	n
Adverse drug reaction	47	222	13
Loss to follow-up	25	120	-
Dead	15	70	-
Opportunistic infections (OIs)	4	18	-
Clinical failure	-	-	2
Other	6	31	2*
Couldn't recall reason for dropping out	3	16	3

Note: * Two persons started receiving HAART even though their CD4 count was higher than 200. At the start of the program officials were unclear of the selection criteria. Once it became clear who should be included in the program, these two clients were told to stop taking HAART.

Findings

ATC Delivery System

The ATC delivery system varied depending on the size of the hospital as well as the hospital policy. One provincial hospital had integrated the ATC clinic into a day care center that had been established to provide medical services and other aspects of care during the day for HIV-positive clients in the area. In this hospital the care team consisted of a full-time doctor and nurse. There was also a pharmacist available on the days the clinic was open to provide “one stop service” for clients. The other provincial hospitals integrated the ATC clinic, known as the “HIV clinic,” into the internal medicine department. In the provincial hospitals the number of days the ATC clinics were open varied between one to four days per month. The care team consisted of a doctor, a nurse or nurses, a pharmacist, and a professional counselor. Most of the professional counselors were active only in selecting the clients and preparing them to receive the medications.

In four district hospitals, the ATC clinic was integrated into the internal medicine department. In the other six district hospitals, separate ATC clinics were established. In the district hospitals, nurses, supervised by doctors, ran the ATC clinics. The limited number of doctors in these hospitals and their heavy workload restricted their role in the ATC Project. In these hospitals the number of days the ATC clinics were open varied from one to eight days per month. A few district hospitals provided “one stop service” for clients. There were no professional counselors in the district hospitals; the nurses, who were trained in counseling, provided this service. A pharmacist worked closely with a nurse and played an important role in drug counseling.

Selection criteria

All hospitals announced the ATC Project to support groups and networks for HIV-positive people, NGOs, community leaders, and local health workers. The selection process followed the guidelines of the Center of Disease Control (CDC) Region 10. A selection committee was established in most hospitals, consisting of hospital personnel, a representative of a support organization for HIV-positive people, and an NGO representative, where such organizations existed.

The major criteria to enroll clients were that they were symptomatic and had a CD4 count of less than 200. Social factors were regarded as minor criteria within the guidelines of CDC Region 10, but practically they were rarely used. A lottery system was preferred when there were too many candidates. According to the 120 clients interviewed, 80 percent indicated that they were informed about the selection criteria. Half of all clients were satisfied with the selection process, 30 percent had no comment, and 20 percent were not satisfied. Those who were not satisfied wanted the CD4 count for eligibility to be increased and wanted HIV-positive leaders and volunteers to be given higher priority.

Reporting system

The recording system consisted of three forms: ATC 1, ATC 2, and ATC 3. ATC 1 was used to record the clinical conditions of clients and the services they received. ATC 2 was used to record the number of clients attending the clinic and of terminated cases in each month. ATC 3 was used to record medication stock. In most hospitals a nurse filled in the ATC 1 and ATC 2 forms, while a pharmacist filled in the ATC 3 form. In one provincial hospital, a doctor completed the clinical section of ATC 1. All reports were sent monthly to CDC Region 10. All five provincial hospitals also used a drug-counseling-monitor-report form, while only a few of the district hospitals used such a form.

Coordination

Three-quarters of the care providers interviewed indicated that they had both formal and informal meetings at least once a month to discuss service and care problems for clients. Eighty-eight percent of them felt that the hospital director and administrative team provided good support to the ATC Project.

The RSA team observed that in most district hospitals there was good coordination among the care providers, particularly between the nurses and the pharmacists. Nurses indicated that they always consulted the pharmacist whenever there was a problem related to drugs. In all but one of the provincial hospitals the ATC Project was integrated into their outpatient services. The exception was a one-stop-service, which was separate from the main hospital activities.

Coordination with the ATC system

There was good coordination between hospitals in the ATC Project. The provincial hospitals supported district hospitals in the same province in several ways, such as fulfilling laboratory requests, adjusting drug regimens, and consulting to help with management of adverse events.

All hospitals coordinated with support groups for people with HIV; two-thirds of the hospitals also did so with local health workers and village health volunteers, while seven hospitals worked with NGOs. However, it was not clear what role these groups had in the ATC Project, apart from finding former clients lost to follow-up. The nurse played the major role in coordinating with these groups.

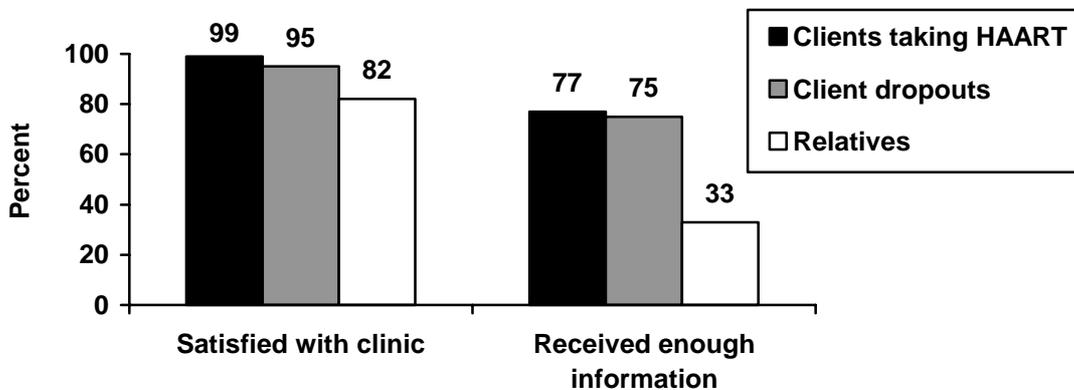
Clients' and relatives' satisfaction with the overall services of the ATC clinics

The majority of clients, both those who were still taking HAART and those who had dropped out, indicated that they were satisfied with the services at the ATC clinic (Figure 1). All but one client receiving HAART and all but one of those who had dropped out were satisfied with the ATC clinic. The majority of family members (27 of 33) were also satisfied.

Clients’ and relatives’ satisfaction with information received

Around three-quarters of clients were satisfied with the amount of information that they had received about the program. That was the case for 77 of 100 clients taking the medicine and 15 of 20 of those who had dropped out (Figure 1). However, only 11 of 33 family relatives were satisfied with the amount of information that they had received; they wanted more information on ARV medications, support systems, and how to support their relatives suffering from side effects.

Figure 1 Percent of clients and relatives expressing satisfaction with the clinic and with the amount of information they received



Note: N for clients taking HAART was 100, N for client dropouts was 20, and N for relatives was 33.

Capacity of Logistics System

Each hospital had appointed a pharmacist to be in charge of the drug logistics system. The overall impression was that the system was working well. Nevertheless, based on observations, the researchers found one provincial hospital that had an inappropriate drug storage system: staff placed newly received drugs at the front of the storage and older drugs at the back. Furthermore, two hospitals had expired drugs, and seven hospitals had experienced drug shortages in the last year. These seven hospitals had been able to borrow needed drugs from other hospitals.

Capacity of Health Providers

The RSA analyzed the capacity of health providers by looking at the roles that they undertook, their technical competence, their confidence to undertake such activities, their experience, and their attitudes about working in the ATC program. This was done in three different phases: the preparation phase (before clients started receiving HAART), the first month of taking HAART, and after the first month.

Role of service providers

During the preparation phase, nearly all the nurses and counselors reported providing physical and psychosocial support to the clients who were about to start receiving HAART. At the same time, most pharmacists were involved in determining the dosage and providing information about this to clients who were about to receive HAART. The pharmacists tended to be more active in this activity than the doctors.

During the first month, most doctors and pharmacists played a major role in managing side effects. At the same time, three-quarters of nurses were also involved in this activity. Only a few counselors participated in resolving clients' side effects. The majority of the care providers claimed that they motivated clients to continue taking their medication.

After the first month, the majority of all care providers provided drug counseling and motivated clients to continue taking their medication. In addition to doctors, nurses and pharmacists claimed to have taken an active role in evaluating the success of the treatment and interpreting laboratory results.

The RSA showed that during the three phases, nurses and pharmacists played a crucial role in ensuring the success of the ATC Project. This was particularly the case in the district hospitals, where there were no professional counselors and where the doctors had very little time to devote to ATC clients.

Technical competence

The care providers' self-reports indicated that they had difficulties during each phase. During the preparation phase about one-third of care providers faced some difficulties, with doctors and pharmacists reporting that they had problems understanding the regimens and dosages that they had to give to the ATC clients. Meanwhile, nurses and counselors reported concerns about how to prepare clients before they start medication.

Nearly three-fourths of care providers indicated that they had difficulties in providing counseling on drug side effects. Three out of seven doctors admitted that they had some difficulties in diagnosing and managing side effects and drug interactions (Table 3). These difficulties occurred in the first month, when more than half of the clients had adverse drug reactions.

After the first month, the service providers had fewer difficulties, since most clients were in better condition and had fewer side effects. However, one-third of care providers indicated that they had difficulties interpreting laboratory results (Table 3). Nurses and pharmacists seemed to have more difficulties doing this than doctors, and this may have led to a lack of confidence while counseling. Three out of 14 care providers admitted that they had difficulties treating opportunistic infections (OIs).

Nurses and professional counselors reported difficulties in managing the increasing dropout rate, ensuring that clients came to their appointments on time, and motivating them to continue their medication.

Table 3 Number of care providers who had difficulties in providing ATC services

Item	Doctors n/N	Nurses n/N	Pharmacists n/N	Counselors n/N	Total n/N (%)
Diagnosis and management of side effects	3/7	4/11	3/8		10/26 (38)
Management of drug interaction	3/7	1/7	2/7		6/21 (28)
Counseling on drug side effects	5/6	14/18	6/10	3/4	28/38 (74)
Interpreting laboratory results	1/7	5/13	2/4		8/24 (33)
Management of OIs	2/8	1/6			3/14 (20)

Note: N = number of care providers who responded to the question, n = number of those who had difficulties.

Care providers' confidence

Of the nurses, counselors, and pharmacists who were involved in counseling, nearly two-thirds (21/33) felt confident about providing general health counseling, and half (17/33) expressed confidence about providing safer sex counseling. A greater proportion of nurses and counselors felt confident about providing this type of counseling than did the pharmacists. But when asked about counseling on ARVs, less than half of the nurses and professional counselors felt confident about providing drug counseling, and only a third of the nurses and none of the professional counselors were confident in their ability to counsel clients about side effects. Counseling confidence on these two topics was much higher among pharmacists. However, only about half of the pharmacists and doctors and about a fourth of the nurses felt confident about managing side effects (Table 4).

Table 4 Number of care providers who felt confident about providing services

Service	Doctor	Nurse	Pharmacist	Counselor	Total
	n/N	n/N	n/N	n/N	n/N (%)
Treating and managing side effects	5/9	4/17	4/10		13/36 (36)
Drug counseling		7/18	9/10	2/5	18/33 (55)
Side effects counseling		6/18	7/10	0/5	13/33 (39)
General health counseling		11/18	5/10	5/5	21/33 (63)
Safe sex counseling		12/18	1/10	4/5	17/33 (52)

Note: N = number of care providers who responded to the question, n = number of those who felt confident.

Experience

The MOPH provided a two-day training session for care providers before the ATC Project started (Ministry of Public Health 2001). At this meeting doctors and pharmacists received guidelines on the medications that they were to use with patients. Nurses and professional counselors received guidelines on how to prepare clients for taking HAART. After implementing the ATC Project for six months, a second meeting of care providers was held. At this meeting a counseling manual was distributed.

The RSA found that 84 percent of care providers in the study had received HAART medication training, lasting 17 hours on average. Nevertheless, the same proportion of care providers requested that they receive extra training to increase their capacity to provide services to HAART clients.

Attitudes about working in the ATC Project

In general, almost all of the health providers (95 percent) had positive attitudes about the ATC Project because it had brought benefits to the lives of clients who were successfully receiving HAART and had increased access to care for people living with HIV and AIDS.

Nevertheless, three-fourths of care providers felt that their workload had increased after joining the ATC Project and four out of 42 care providers had thought of quitting because of their workload. However, the majority of the care providers felt that they could solve this problem by adjusting their working conditions. Only a few commented on the need to change the service-delivery system. The majority of care providers also had positive attitudes about providing ARV services to clients, but five felt uncomfortable doing so at times. This included two doctors, one nurse, one counselor, and a pharmacist.

Counseling Services

A problem in determining the effectiveness of the ATC counseling service was defining what counseling is. Some service providers felt that if they were talking to the clients it was counseling, though it was more likely to be providing information about a topic.

As previously noted, only the provincial hospitals had professional counselors, but all nurses in the ATC Project had been trained to provide counseling. There were three distinct phases of counseling: during the preparation phase, during the first month on HAART, and after the first month.

Counseling during the preparation phase

Based on reports from 12 hospitals, nine indicated that they provided counseling/education two weeks before clients started HAART. The other three hospitals indicated that they provided counseling/education on the day that clients started HAART.

All hospitals provided individual counseling/education. All counselors, most nurses, most pharmacists, and a third of the doctors were involved in this process. Individual counseling was relatively long during this phase. According to providers, individual counseling lasted on average about 26 minutes (Figure 2).

Five hospitals complemented individual counseling with group counseling, which was moderated by professional counselors or nurses. In three hospitals, representatives from support groups for people living with HIV and AIDS and from NGOs moderated the group counseling. Reports from providers indicate that group counseling during the preparation phase lasted more than 40 minutes (Figure 2).

More than three-quarters of the health providers reported that relatives were involved in the counseling undertaken during the preparation phase.

Counseling during the first month

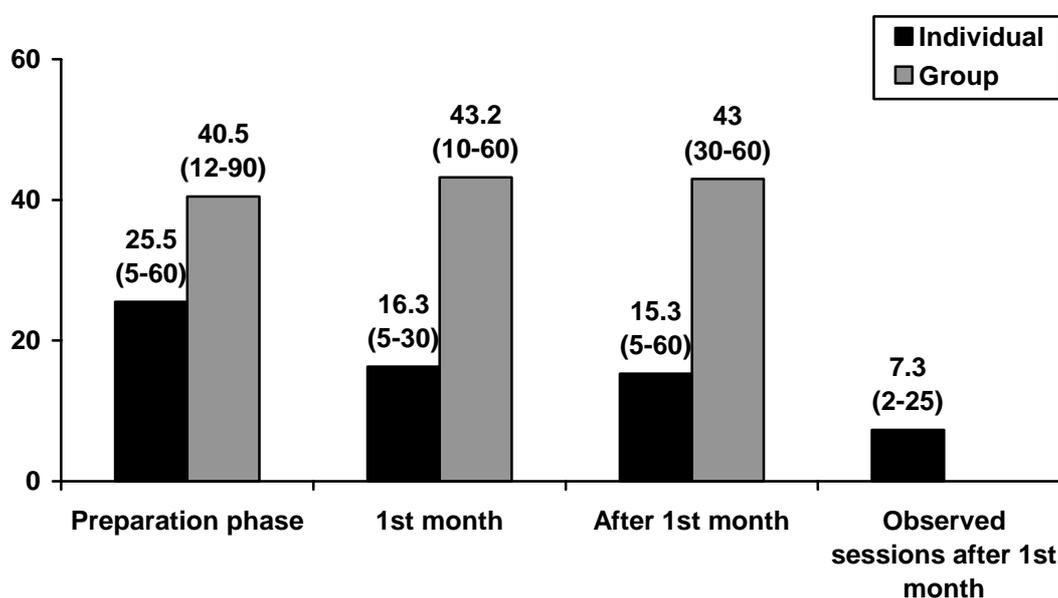
The role of the counselors in this phase was less than in the preparation phase, with the nurses and the pharmacists providing most of the counseling. According to providers, the average time clients received for individual counseling during this phase was only 16 minutes, which was approximately ten minutes less than during the preparation phase. Four of the five hospitals that had group counseling in the preparation phase continued this during the first month. The length of group counseling did not change markedly from the preparation phase.

A smaller proportion of health providers (62 percent) reported that relatives were involved in the counseling during the first month compared to the preparation phase.

Counseling after the first month

The health providers indicated that far fewer clients needed counseling during this phase because they had far fewer side effects from HAART. The professional counselors played no role at all during this phase. Nurses and pharmacists undertook most of the counseling, particularly in the district hospitals, since the doctors had limited time. Observations of client counseling sessions conducted after the first month lasted on average 7 minutes (Figure 2).

Figure 2 Mean number of minutes of individual and group counseling/education as reported by health providers or from observations



Note: Range of counseling times are provided in the brackets.

Counseling topics

The results of the RSA showed that the majority of care providers provided counseling/education on a range of topics during the preparation phase and the first month. This included general information about ARV treatment in the preparation phase, while drug administration, the importance of continuing taking medication, adherence strategies, and side effects were emphasized during the first two phases. In addition, most care providers started talking about treatment results and adherence motivation during the first month. As shown in Table 5, the extent of counseling decreased. For example, the number of care providers who discussed adherence strategies, motivated clients to take HAART, and highlighted treatment results fell after the first month. Greater discussion about these three topics after the first month might result in increased long-term adherence.

Table 5 Counseling topics undertaken by health providers by phase

Counseling topics	Preparation phase (N = 27)	First month (N = 20)	After first month (N = 22)
ARV treatment	26/27	-	-
Drug administration	22/27	18/20	13/22
Importance of continuing ARV medication	26/27	19/20	19/22
Adherence strategies	23/27	18/20	15/22
Side effects	26/27	19/20	16/22
Treatment results	-	17/20	15/22
Motivation to take HAART	-	19/20	17/22

According to the care providers, the first month was the most difficult period for providing counseling. Fourteen of the 20 providers involved in counseling during the first month reported having problems, particularly with counseling about side effects and with clients forgetting their medication. In contrast, less than a third of providers said they had counseling problems during the preparation phase and after the first month.

Quality of Counseling

The researchers observed 12 clients after the first month as they interacted with different service providers, including six doctors, 12 nurses, and 11 pharmacists. In two-thirds of the observations, service providers started the conversation by asking clients whether there were any problems to discuss. The interaction with each service provider tended to be very short, only seven minutes on average (range 2 to 25 minutes). Problems raised by clients were not discussed in detail. There was little initiative from those providing the counseling to seek out the problems faced by clients or to provide information to them. Questions posed by the care providers tended to demand yes/no answers, and if the clients were not forthcoming, the discussion quickly ended. There was very little emphasis during the counseling on motivating clients to continue to adhere to their medication. Data from the observations of client-provider interactions that occurred after the first month contrasted with that reported by providers. As shown in Figure 2, providers reported that they lasted twice as long on average as compared to the data obtained from observations.

The RSA team observed a group counseling session in one provincial hospital that was organized and moderated by an NGO worker. A nurse, a health worker, and a pharmacist participated in the discussion whenever the topic discussed was related to their expertise. A moderator pointed out the practical problems clients face when taking ARVs. Clients looked comfortable expressing their feelings to the group, and their problems were discussed in detail. The group discussion lasted approximately two hours. The researchers evaluated this counseling as being of high quality.

Satisfaction of Clients with Counseling Services

Of the 120 clients interviewed, 94 percent had a least one family member who knew that they were HIV-positive and were receiving HAART. Nearly two-thirds (64 percent) claimed that they had very good support from their family members. Mothers and/or partners were their primary caregivers.

In general, clients were satisfied with the counseling services that they received (Table 6). Among clients taking HAART, about half indicated that they had a problem that they wanted to talk about. Nearly all of the clients felt that they had an opportunity to talk about their problems, and were satisfied that their problems were solved. Among dropouts the level of satisfaction was very similar, yet only a fourth felt that they had problems that they wanted to talk about. A greater proportion of relatives had problems that they wanted to discuss compared to client drop outs, but a smaller proportion were satisfied that their problems had been solved and that the length of discussion was appropriate.

Table 6 Satisfaction with counseling services by clients and relatives

	HAART clients	Dropouts	Relatives
Had a problem they wanted to talk about	47/100	5/20	18/33
Opportunity to talk about problems	98/100	20/20	-
Satisfied that problems were solved	95/100	19/20	21/33
Length of discussion was appropriate	93/100	18/20	23/33

Follow-up and Monitoring System

All the ATC clinics were open during the day. Clients could also use the general services of the hospitals when they had urgent needs. At a few hospitals, the nurse gave the client a telephone number to contact during out-of-service hours.

Forty-four percent of clients currently receiving HAART and those who dropped out of the program indicated that they had been reminded by the hospital that they should attend the clinic as scheduled, either through a letter or a telephone call. A third of the relatives indicated that their relatives had been reminded.

Home visits

Although the 15 study hospitals indicated that they had a general policy to visit all clients after they are discharged, they did not have a clear policy to visit HAART clients. The RSA team did not observe any home visits, since none took place when the RSA team visited the hospitals, and thus is unable to determine what happened at those visits, how long the visits lasted, and what was discussed.

Among the clients receiving HAART, 20 percent indicated that a health care provider visited them in the first month of starting HAART (Table 7), while 11 percent indicated that a

volunteer from a support organization for HIV-positive people had visited them. These figures declined substantially after the first month. However, the number of dropouts who received home visits from care providers and HIV-positive volunteers largely stayed the same, possibly reflecting greater problems the dropouts were facing.

Table 7 Home visits to clients from care providers and HIV-positive volunteers

Status	N	First month	After first month
		N (%)	N (%)
Clients receiving home visits from care providers			
Clients taking HAART	100	20 (20)	5 (5)
Dropouts	20	6	5
Total	120	26 (22)	10 (9)
Clients receiving home visits from HIV-positive volunteers			
Clients taking HAART	100	11 (11)	5 (5)
Dropouts	20	1	1
Total	120	12 (10)	6 (5)

Role of health workers in following up clients in the ATC Project

Two-thirds of the hospitals indicated that they coordinated with health workers and village health volunteers to help find clients not attending the clinic as scheduled. Apart from this, the role of local health workers in the ATC Project was not clear.

Practical guidelines for dropouts

According to the guidelines of the CDC Region 10, “loss to follow up” is defined as when the client does not contact the hospital after one month from his or her scheduled appointment. These persons are then terminated from the program (2001).

Eighteen of the 116 clients who responded to the question indicated that they missed an appointment at the hospital, including 15 who were currently taking HAART. Of these 18, seven were contacted directly by the hospital; four received a letter, two received a telephone call, and one received a visit from ATC hospital staff. Volunteers from support organizations for HIV-positive people had visited five people who had missed their appointments, some of whom had been contacted directly by the hospital (Table 8).

Table 8 Follow-up method for the 18 clients who did not attend the clinic as scheduled

Follow-up method	N
Letter	4
Telephone	2
Visit from hospital personnel	1
Visit from other health worker	1
HIV-positive volunteer visited at home	5
NGO	1

Adherence Patterns

The clients adhering to the HAART regimen reported marked improvements in their health (Table 9). All but three respondents reported that their health had improved since starting HAART. Further, 90 and 96 percent reported that their mental health and their general outlook on life, respectively, had improved. Finally, 78 percent claimed that their ability to work had also improved.

Table 9 Reported impact of HAART on selected aspects of clients' lives

	Improved (%)	No change (%)	Worse (%)
Physical health	97	3	-
Mental health	90	8	1
General outlook on life	96	3	1
Ability to work	78	22	-

Note: N = 100.

Drug side effects

Among clients receiving HAART, 15 and 43 percent had severe or moderate side effects, respectively, in the first month (Table 10). More than three-fourths of dropouts reported having any side effects in the first month, and these were more likely to be severe. After the first month the side effects among HAART clients declined, with no one reporting severe side effects and 30 percent reporting moderate side effects.

Table 10 Self-reported drug side effects over time by clients and dropouts

Client status	N	Severe	Moderate	Mild	None
Side effects in first month; N (%)					
HAART clients	100	15 (15)	43 (43)	28 (28)	14 (14)
Dropouts	20	8	4	3	5
Total	120	23 (19)	47 (39)	31 (26)	19 (16)
Side effects after first month; N (%)					
HAART clients	100	0 (0)	30 (30)	62 (62)	30 (30)
Dropouts	14	4	6	1	3
Total	114	4 (4)	14 (12)	31 (27)	65 (57)

Nonadherence

The 100 clients receiving HAART had the following adherence patterns:

- 13 percent missed at least one tablet in the last four days.
- 30 percent missed at least one tablet in the last month.
- 44 percent missed at least one tablet in the last three months.
- 40 percent had difficulty reading the prescription.
- 28 percent were not taking medicine on time.
- 25 percent were not following instructions.
- 15 percent missed an appointment to visit the hospital.

Reasons for Nonadherence

There were a number of factors contributing to client nonadherence to HAART. “Busy with other things” and “Away from home” were the major reasons given by ATC clients forgetting to take medication (45 and 37 percent, respectively). About one-fifth of clients missed doses because they had difficulty following the medication schedule. Nine and 12 percent, respectively, of clients were not taking ARV medication because they wanted to avoid side effects or were too sick to take them. It should be noted that the vast majority of ATC clients did not regard the number of pills as a burden (Table 11).

Table 11 Reasons for nonadherence among clients currently receiving HAART

Reasons	Percent	N
Were busy with other things	45	83
Were away from home	37	83
Had problem taking pills at specific times	17	80
Wanted to avoid side effects	12	81
Felt too sick or ill to take medication	9	80
Had too many pills to take	8	82

Note: N refers to the number of clients who reported any form of nonadherence.

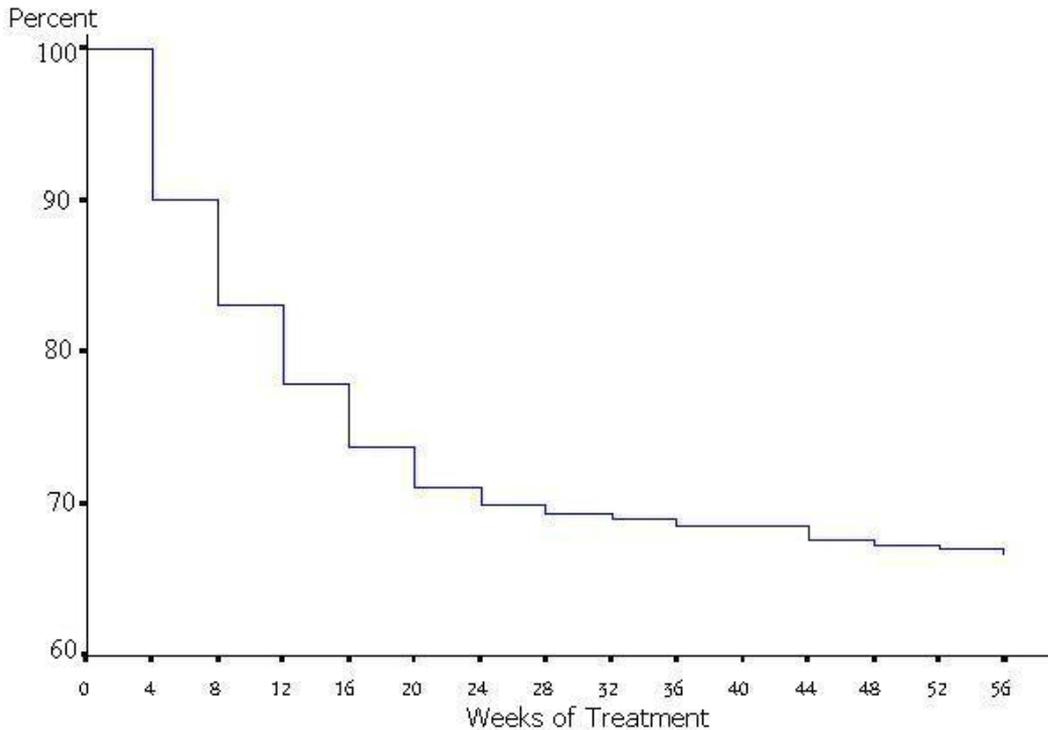
Dropout Rate

According to the ATC records of all the hospitals in northern Thailand, 30 percent of the 819 PLHA who enrolled had dropped out after six months. For 16 percent, the major cause was adverse side effects. This was followed by 6 percent who had died, 2 percent lost because of clinical failure,¹ 5 percent lost to follow-up, and 4 percent for other reasons. The dropout rate was highest during the first two months of HAART therapy; after the fourth month the dropout rate declined steadily and the proportion of clients remaining in the ATC program was 64 percent (527 out of 819) after 56 weeks (Leuseree 2003; see Figure 4).

Of the 20 dropouts interviewed in this study, 15 had reported drug side effects to the health providers. Of these 15, ten claimed that a health provider told them that they should stop taking HAART because the adverse drug reactions were having a harmful effect on their health. Five decided themselves to drop out because they could no longer stand the side effects, and two stated that family caregivers decided that they should stop.

¹ Clinical failure is defined as when clients have progressive neurodevelopmental deterioration. Such cases are confirmed by laboratory evidence indicating a rapid drop in CD4 counts.

Figure 4 Percentage of 819 clients remaining in the ATC program at different periods during 56 weeks of follow-up



Source: Leuseree 2003.

Role of the Community and Support Groups for HIV-positive People and NGOs

Community support for clients

Of the 120 clients interviewed, 89 percent claimed that their neighbors knew their HIV status, and 80 percent said their neighbors knew that they were taking HAART. Thirty-seven and 20 percent had received support from a support group for HIV-positive people or from a NGO representative, respectively.

Client involvement in the ATC Project

All hospitals in the study had a support group for people living with HIV and AIDS. These groups were involved in a number of activities. Ten of the 15 hospitals included representatives from these groups in establishing the selection criteria for clients to receive HAART. At eight hospitals, these groups helped follow up cases. At four hospitals, representatives of these groups participated in meetings during supervisory visits by CDC Region 10 staff. Eight

hospitals had invited client representatives to give a talk on their experiences of taking HAART to those starting the therapy.

It should be noted that these support groups were engaged in the ATC Project during the enrollment of clients and undertook home visits, as requested, on some occasions. However, this tended to be informally arranged. The ATC Project had not created any formal mechanism to ensure involvement of these groups in the clinic setting or that they undertook regular home visits.

The majority of representatives from these groups interviewed for the RSA (12/15) were regularly undertaking home visits to clients, whether or not they were receiving HAART. They provided physical and emotional support, information on ARV medication, motivated the clients to take their medicine, and made referrals whenever needed. Moreover, half of the representatives reported that they had received ARV medication training from the NGOs MSF, ACCESS, and CARE.

The majority of health providers interviewed believed that representatives of support groups for HIV-positive people could have an important role in monitoring clients' medication adherence at home. They also believed that representatives of these groups should play an active role in moderating group counseling sessions because they are skilled at providing psychological support and have experiences that should be shared with newcomers starting HAART.

Representatives of support groups for HIV-positive people provided the following suggestions to improve the ATC Project:

- Initiate a follow-up system to monitor and support HAART clients.
- Provide more home visits.
- Give support groups for HIV-positive people a more active role in monitoring and following-up clients.
- Increase accessibility to ARV medication by HIV-positive people.
- Give more training to representatives of support groups for HIV-positive people to improve their capacity for providing education and counseling on ARV medication.
- Give representatives of these groups more technical assistance to improve their capacity for undertaking home visits.
- Improve the efficiency of the monitoring and evaluation system.

NGO involvement in the ATC Project

Five of the eight NGO representatives interviewed were involved in the ATC Project during the initial enrollment phase. Four NGOs undertook home visits as requested by the hospital care providers. Two NGOs indicated that they participated in meetings during CDC Region 10 supervisory visits.

The NGO representatives that were interviewed had a wealth of experience related to HIV/AIDS, including conducting HIV/AIDS community education, disseminating information to people living with HIV and AIDS, working on income-generation schemes, and conducting home visits. During home visits, NGO outreach workers provided physical and mental support,

provided health care education, made referrals, and accompanied clients who were unable to attend health facilities by themselves. Further, they sometimes provided education and counseling on taking ARV medications, although they felt less confident about covering this particular topic compared to other health issues.

Some of the NGOs were involved in strengthening the capacity of the HIV-positive volunteers to undertake outreach activities and to be educators. NGOs also provided technical assistance to newly established support groups for HIV-positive people and raised funds to support the activities of these groups.

NGO representatives recommended the following:

- Reach all HIV-positive people during promotional campaigns to enroll new ATC clients. Some HIV-positive people who would have been entitled to join the program did not know of its existence.
- Disseminate information about the progress of the ATC Project to support groups for HIV-positive people and NGOs.
- Put more community representatives on the ATC committee.
- Expand the roles of support groups for HIV-positive people and NGOs in the ATC Project so that they can actively follow up clients receiving HAART. There should be clear mechanisms to undertake this activity.

Conclusion and Recommendations

The RSA has shown high levels of support for the ATC Project from health providers, HAART clients, their relatives and even those who had dropped out of the program. Strengths of the program include:

- Clear guidelines on how the program should be run.
- The successful involvement of the ATC committees that were established to select clients into the program, which allowed for community participation.
- Good coordination between CDC Region 10, the Provincial Health Office, and hospitals.
- Having a person in charge of the logistics system at each hospital.
- Improved health among clients receiving HAART.

However, the RSA has also shown that there has been a high dropout rate and that a substantial number of the clients receiving HAART have had difficulties maintaining adherence. Improvements need to be made to the system to reduce dropouts and increase adherence among new clients.

The following recommendations emerged from the study:

ATC delivery system

- In district hospitals, the burden for running the program fell on nurses and pharmacists because there were no professional counselors in these hospitals and the doctors' workloads restricted the time they could provide to the program. Therefore, the capacity of the nurses and pharmacists needs to be strengthened in district hospitals if they are to run the program, or more resources are needed for these hospitals to allow professional counselors and doctors to have greater involvement.
- The role of professional counselors was limited after the preparation phase. Their role needs to be enhanced once clients start receiving HAART.
- The ATC committees were involved only in enrolling clients into the program. Their role could be expanded to help monitor and provide technical assistance to improve the implementation of services.
- Local health facilities such as district hospitals and sub-district health centers need to be properly integrated into the ATC Project.
- Coordination between community organizations and the hospitals needs to be further developed.

Capacity of care providers

- The majority of care providers need extra training to improve technical competency. Doctors, pharmacists, and nurses should participate in comprehensive clinical training, while all service providers should gain more counseling skills.

- Ongoing capacity building for nurses and pharmacists on managing HAART clients should be established through case conferences within hospitals and with consultations between hospitals.

ARV counseling

- ARV counseling manuals are needed for all those providing counseling.
- The manual should emphasize content and strategies for each phase of treatment: preparation phase, the first month, and after the first month.

Client barriers to adherence

- Intervention strategies need to take into account client barriers to adherence. During counseling sessions, clients should be asked to explore barriers and help overcome these problems. Reminder strategies appropriate for Thai clients should be developed.

Follow-up activities

- Ensuring support to HAART clients during the first month is important to the success of the program. Home visits are one strategy for supporting HAART clients as they pass through this critical period. The best way to undertake home visits needs to be researched and developed.
- Integrating local health centers and community participation is recommended to strengthen follow-up activities.

Family involvement

- Family members need to receive more information about the ATC Project. Strategies involving family members in counseling sessions and in supporting and monitoring adherence at home should be developed.

Community involvement

- Activities of support groups for HIV-positive people and local NGOs should be more systematically integrated into the ATC Project, particularly to enhance follow-up activities, since they have expertise and are willing to participate in the program.
- Technical assistance and supervision are needed to ensure quality of services offered by volunteers from support groups. This can be done through care providers or NGOs.

Reporting system and program monitoring

- Monitoring for adherence should be established and integrated into a routine program monitoring system.
- Provincial health offices should have their roles enhanced to provide technical assistance, coordination, and program monitoring.

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Horizons

Horizons is a global operations research program designed to:

- Identify and test potential strategies to improve HIV/AIDS prevention, care, and support programs and service delivery.
- Disseminate best practices and utilize findings with a view toward scaling up successful interventions.



Horizons is implemented by the Population Council in collaboration with

- International Center for Research on Women (ICRW)
- International HIV/AIDS Alliance
- Program for Appropriate Technology in Health (PATH)
- Tulane University
- Family Health International (FHI)
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