ORIGINAL ARTICLES

CARE OF PATIENTS ON ANTI-RETROVIRAL THERAPY IN KUMASI METROPOLIS

S. OHENE AND E. FORSON[1]
World Health Organization Ghana Country Office, Accra, Ghana, [1]National AIDS/STI Control Programme, Ghana Health Service, Accra, Ghana

Corresponding Author: *Dr Sally-Ann Ohene* ***Email:*** *salohene@yahoo.com*

Conflict of interest: *None declared*

SUMMARY

Objective: To assess the characteristics of a cross-section of HIV infected persons receiving treatment from the Antiretroviral Therapy (ART) clinic in Komfo Anokye Teaching Hospital (KATH), Kumasi and highlight perspectives related to taking their treatment.

Design: Using a structured questionnaire, socio-demographic characteristics and information related to taking ART were elicited from a random sample of 227 persons living with HIV (PLHIV) accessing ART in Kumasi in 2007. Health workers at the ART clinic were also given self-administered questionnaires to obtain their perspectives on the clinic.

Results: Of those sampled, the majority (79.7%) were women and a third (34.8%) were unemployed. More than 95% of the study participants were on the recommended three drug antiretroviral therapy and most of the study participants, (80.6%) said they had never missed a dose of their drugs since starting treatment. About half of the respondents (51%) said the cost of the treatment was not affordable. Seven out of ten (73.6%) waited 3 hours at the clinic before being attended to. On an average clinic day, the number of patients the health workers attended to ranged from 30 to 100.

Conclusion: PLHIV accessing ART in Komfo Anokye Teaching Hospital were found to be managed as per national HIV treatment guidelines. Inability to afford the cost of treatment and service providers being overwhelmed by the large number of patients patronizing the clinic may have implications for patients taking ART as prescribed and the quality of care.

Keywords: HIV patients, ART, adherence to treatment, work load, Kumasi.

INTRODUCTION

Anti-retroviral Therapy (ART) for HIV infection was piloted in Ghana in June 2003.[1] Since then, there has been an increasing number of persons living with HIV (PLHIV) who have been put on Anti-retrovirals (ARV). ART is lifelong considering that the drugs control the progression of HIV to AIDS and do not cure HIV infection. The 2005 Guidelines for ART in Ghana stipulates that a patient is put on treatment when s/he has a CD4 count less than 250 cells/ml and or symptomatic with HIV infection in WHO stage III and IV.[2] Before initiating treatment, the patient has to attend at least two sessions of adherence counselling to ensure that the patient understands what is involved in taking ART in order to make an informed decision to start and also adhere to life-long treatment.[2]

As with the management of most chronic diseases that involve long term therapy, there are challenges related to taking ART such as adherence to the drug regimen, drug side effects and affordability of the cost of care.[3-5] The likelihood is that PLHIV on ART in Ghana face similar issues. With the exception of a brief record review reporting an improved outcome of the initial patients after a few months of therapy, there is little published data profiling patients taking ARV and describing issues that may have come up pertaining to taking these drugs.[6]

The National HIV/ AIDS/ STI Control Programme of the Ghana Health Service reports that by December 2007, about 13,429 PLHIV out of an estimated 70,000 who needed ART had been put on treatment.[7-8] As steps are taken to continue the roll out of treatment, an assessment of those already on treatment may inform the scale up process and also indicate areas for strengthening ART clinics at the facility level.

The objective of this cross-sectional study was to assess the characteristics of a cross-section of HIV infected persons receiving treatment from the ART clinic in Komfo Anokye Teaching Hospital (KATH) and highlight perspectives related to taking their treatment.

METHODS

Participants for this cross-sectional descriptive study were enrolled from the Komfo Anokye Teaching Hospital (KATH) ART clinic attendants during July and August 2007. Persons living with HIV who had been on ART for at least six months and were receiving treatment from KATH were eligible for the inclusion in the study. By means of simple random sampling, 227 patients meeting the eligibility criteria and consenting to participate in the study were recruited for the study. Patients' socio-demographic characteristics and information related to taking ART including adherence were obtained using a structured questionnaire. A convenient sample of health workers at the ART clinic was also asked to fill in self-administered questionnaires to provide their perspectives on the ART clinic. After recoding open-ended questions, the data collected were entered into Microsoft Excel and imported into SPSS for analysis. The frequencies and respective proportions of the socio-demographic and treatment related variables were then generated and presented as descriptive statistics.

Two focus group discussions (FGD) were conducted according to gender to elicit qualitative information related to taking ART. In addition to a recorder taking notes the FGD were recorded on a tape. The recordings were transcribed and reconciled with the notes that were taken. Content analyses of the focus group transcripts were performed to identify key themes and concepts. The researchers identified quotes and comments which exemplified the themes some of which are presented in the results in appropriate sections.

Ethical clearance for the study was given by the Committee on Human Research, Publications and Ethics (CHRPE), School of Medical Sciences, University of Science and Technology, Kumasi.

RESULTS

Socio-demographic Characteristics

The study population comprised 181 women (79.7%) and 46 men (20.3%). Almost a third (32%) were married and a little over a quarter (26%) were widows/widowers. They were aged between 19 and 70 years with more than half (56%) being less than 40 years and 85% being between 15 to 49 years. Number of children reported by participants was as follows: 1 or 2 children 28.6%, 3 or 4 children, 44 %, 5 or more children 14.2%. The remainder (13.2%) had no children. Seventeen percent of the study population had had no education. Another 17% had completed primary school. About half (52%) reported Junior Secondary School or Middle School as the highest level of educational attainment. Four percent had completed vocational or technical school, 8% ordinary/advanced level or senior secondary school and 2% tertiary education. Seventy-nine (34.8%) of the respondents were currently unemployed. The rest had the following occupations: traders 34%, farmers 11%, skilled labour (such as masonry and carpentry) 10%, unskilled labour (example; house helps) 6.2% and professionals such as teachers 4%. The monthly income of the respondents is shown in Table 1.

Disclosure of HIV Status

Almost all the participants (96.5%) had disclosed their HIV status to someone. Of those who had disclosed, more than half (55%) disclosed within a month of their diagnosis while about a third (36%) did so between one to twelve months. Six out of ten (63%) had disclosed to a member of the extended family while 29% had told someone in his or her nuclear family. For 55% of the patients the reason for disclosure was related to needing an adherence monitor as part of the conditions to be put on ART. Almost 40% of the patients had disclosed to someone because that person was their care giver.

Table 1 Monthly Income Level of Respondents

Amount per month	Number	(%)
<¢500,000	82	(36.1)
¢500,000-¢1,500,000	37	(16.3)
¢1,500,000-¢2,500,000	9	(4.0)
>¢2,500,000	6	(2.6)
Don't know	93	(41.0)
Total	**227**	**(100)**

The majority of those who had disclosed (68.7%) were receiving a variety of support (psychosocial, financial and nutritional) from those they had disclosed to. However in the FGD this is what one person said on disclosure:

"*My family will never know my status. They will shun my company and I'll die of boredom and hunger.... How can I tell such people about what is actually wrong with me? All they know is that I'm suffering from stomach ulcer and I need to eat to take my medicines.*"

Anti-retroviral Therapy

Adherence Counselling

Patients are usually taken through a number of adherence counseling sessions before being initiated on ART to prepare them for a lifetime of taking treatment. The number of adherence counselling sessions and the respective proportion of participants who had received them were as follows: one session 2%, two 8%, three 69% and more than three sessions 21%.

Number of Drugs and Side Effects
ART taken by each respondent was crosschecked from the containers of the drugs in their possession at the time of data collection as well as from their treatment sheets. Ten (4.41%) patients were receiving only two drug combinations as their therapy but the majority (95.59%) were on the recommended three-drug combination.
Four-fifths of the participants (81.9%) could recount some of the side effects of the drugs. Out of those sampled, 84 (37.0%) said they had encountered drug side effects before. Out of this number 65 (77.4%) reported to the clinic when they experienced the side effects. During the FGD a participant had this to say about side effects

"*I have been having body pains ever since I started the treatment 8 months ago. They say it will stop but it has not. I realized that the days that I missed the doses in the morning the whole day I was free...*"

Adherence to Drugs
One hundred and eighty-six (81.1%) said they never had to be reminded to take their drugs as compared to seven (3.1%) and thirty-four (15%) who had to be reminded all the time and sometimes respectively. Most of the study participants, (80.6%) said they had never missed a dose of their drugs since starting treatment.

A lady from the FGD stated:
"*I am a trader and I make sure I take my drug on time even if it is in a passenger car. Onlookers may think it is a kind of pain killer or even multivite*".

Another person added that:

"*For me my sister requested once to know what I need the time for because I keep asking for time from her to enable me take the drug on time. In order to avoid such curiosity now I have managed to get an alarm clock of my own and I take the drug in my room*".

Forty-four (19.4%) respondents said they had missed some doses of their treatment ever since they started ART. More than half this number, 25 people (56.8%) had missed their dose once, five (11.4%) had missed twice and nine (20.5%) had missed three doses. Table 2 shows the reasons given for missing doses of treatment.

In relation to missing doses several comments came up during the FGD:

"I *have been educated not to take the drugs 2 hours after the time I should have taken it*"
"*For me it is a matter of traveling and not being able to return as planned...*"
"*Sometimes I forget because I haven't told anyone and more so I live alone ...*"
"*Madam, the drugs need food and without food it could cause you to stop taking the drugs*".

Table 2 Reasons given by respondents for missing doses

Reasons for missing dose	**Number**	**(%)**
Forgot	12	(27.3)
Travelled	10	(22.7)
Poverty	6	(13.6)
Missed the Time	6	(13.6)
Sickness	4	(9.1)
Work	2	(4.5)
Run out of drugs	2	(4.5)
Side effects	1	(2.3)
Doctor's advice	1	(2.3)
Total	**44**	**(100)**

More than half, 56.8%, did not report to the clinician that they had missed doses when they came for follow-up.

Affordability of ART
About half of the respondents (51%) said the cost of the treatment was not affordable. One gentleman put it this way:

"*Money is a real problem. We need money to buy our drugs, food and transport to the clinic... In this case sometimes we ran out of drugs. At the moment I have only ¢4,000.00 in my pocket meanwhile the round trip from where I live to the clinic and back is ¢8,000.00*".

On the issue of money to purchase drugs a lady commented:

"*Please work is also a problem. We have no work to do so we have no money to buy our drugs. At the moment I owe a lot at the dispensary because now they say I can collect the drugs and pay later on so that I won't miss the doses again*".

ART Clinic
Most of the respondents (73.6%) waited for more than three hours at the clinic. More than a quarter (26.9 %) expressed concern about having to wait so long. According to them, these long hours delayed their going to work or school and wore them out. On the average the patients interacted with a nurse, counsellor, pharmacist and a doctor on a clinic day. The majority of the respondents (84.6%) described the relationship between themselves and the health care workers as cordial.

Service Providers

A total of sixteen health workers aged between 26 and 55 years filled in the self-administered questionnaire. These were made up of 68.75% (11) females and 31.25% (5) males. Majority (62%) of the respondents had worked in the clinic for more than 2 years.

On an average clinic day, the number of patients the health workers attended to ranged from 30 to 100. All but one said they were overworked. The large number of patients was said to be having some effects on service provision including limiting the amount of time spent with each patient cited by six providers and work fatigue reported by three. Another three stated that the patients were more than adherence counselors and two said there was no privacy with doctors being over crowded in the consulting rooms.

Table 3 Criteria for selecting patients to start treatment as per service providers

Combination of Inclusion Criteria Cited	**Number**	**(%)**
CD4<250, WHO stage 4, Normal liver function tests	6	(37.5)
WHO stage 4, patient understands disease and importance of ART	4	(25.0)
CD4<250, WHO stage 3/4 , Normal Hemoglobin levels, Sustainability of ART supply	4	(25.0)
CD4<250 and WHO stage 4	2	(12.5)
Total	**16**	**(100)**

Two were of the opinion that it was resulting in poor quality of work. When asked the criteria used for selecting patients to go on treatment, the service providers mentioned a combination of factors as shown in Table 3. All the health workers interviewed stated that adherence counseling was carried out at least 3 times for each client before initiation of treatment.

DISCUSSION

This study profiles persons living with HIV taking ART and highlights issues pertaining to taking these drugs. The results show that almost all the patients had disclosed their HIV status to someone and about two thirds were receiving a variety of support from the person they had disclosed to. A majority said they were adhering to the prescribed ART regimen and about three out of five had not encountered any side effects from the ARVs. Half of the respondents said ART was not affordable.

The majority of the study participants were female and this is a reflection of the situation in Ghana and other Sub-Saharan African countries where more women than men are infected with HIV and on and ART. [9-12] Similar to a group of patients on ART in Manya Krobo, where ART was first piloted in Ghana, four out of five respondents were between the ages of 15 to 49 years and mirrors the age group of Ghanaian PLHIV.[6]

The educational status of the respondents was relatively low with fewer persons attaining secondary education compared to what was found in other studies. [9-11] On the other hand, the level of unemployment, which was one-third of those studied, was comparable to patients on ART in Ethiopia.[11]

Disclosure of HIV status was found to be very high and may be a reflection of service providers adhering to Ghana's ART guidelines which recommend counsellors to encourage disclosure of HIV positive status and the use of adherence monitors to improve adherence to treatment.[2] In any case the level of disclosure was similar to what was found in an Ethiopian study in which 95% of the participants had disclosed.[13]

Similar to what is practiced in Korle Bu Teaching Hospital, almost all the respondents had been taken through a minimum of two adherence counselling sessions as stipulated in the ART Guidelines.[2, 14]

While it was reassuring to note that more than 95% were on the recommended three drug combination, it was worrying to note that, a small number of patients 4% were on two drugs. Due to the risk of HIV drug resistance developing on a sub-optimal regimen, this deviation from the guidelines should be investigated further and corrected as required. Even though over a third of the patients had experienced side effects from the ARVs, the majority of them had reported the problem at the clinic which was good. Drug side effects whether real or perceived may be a barrier to adherence, therefore patients should feel comfortable discussing side effects related issues with their service providers for reassurance or the necessary action to be taken.[15-16]

The self reported level of adherence was found to be high with 80% stating they had never missed any of their doses since starting treatment. Even among those who had missed doses, more than half claimed they had missed only one dose. This is comparable to findings in other reports of self declared adherence to treatment even though it must be pointed out that in these studies adherence was measured over a period of time preceding the survey as opposed to life time adherence in our study.[17-18] In Ghana the use of an adherence monitor to promote adherence to ART is very much emphasized and may be a contribution to patients taking their drugs as prescribed.

Nevertheless, further study correlating adherence with laboratory and clinical parameters would throw more light on the reliability of the self reported adherence noted.

Currently, persons on ART pay a monthly fee of GH¢ 5 (¢50,000.00) for the cost of care which caters for the cost of baseline laboratory investigations and one month's supply of ARVs and drugs for opportunistic infections.[19] Considering that affordability of ART was a problem for half of the patients in this study, the issue of cost may have implications for patients being able to take their treatment as prescribed. Zachariah et al found that payment for ART was associated with loss of follow of patients on ART in Kenya while Laniece and colleagues report that PLHIV in Senegal who made little or no contribution to the cost of treatment tended to adhere better to their medication.[3,20] In view of the relationship between affordability and adherence to treatment, there may be a need to assess the impact of the cost of treatment on adherence to ART in Ghana.

Regarding service at the clinic, some issues that came up included some of the health workers having to see up to a 100 patients a day and patients having to wait long periods at the clinic. The providers were also concerned about spending little time with patients and feeling overworked was a general sentiment that was expressed. These issues are not unexpected. It is recognized that in many African countries, HIV now viewed as a chronic disease, places a burden on health services already challenged by human resource limitations with consequent implications for quality of care.[21-23] With Ghana aiming for universal access to HIV care, there is no doubt that the demand for HIV services particularly ART will increase.[24] As the scale up of service to other facilities continue, anticipating and planning for the corresponding human resource, logistic and infrastructural challenges that accompany such an endeavor may contribute to the success of the programme.

CONCLUSION

The study shows that persons living with HIV accessing ART Anti-retroviral Therapy in Komfo Anokye Teaching Hospital were found to be managed as per national guidelines. Not being able to afford the cost of treatment and service providers being overwhelmed by the large number of patients patronizing the clinic were identified as issues that may affect patients taking ART as prescribed and the quality of care. As ART is scaled up in Ghana, it is recommended that policy makers address the issue of treatment cost particularly for those who cannot afford and come up with a human resource plan including training adequate numbers of staff to cater for patients accessing care.

ACKNOWLEDGEMENT

The authors wish to acknowledge with gratitude Dr Joseph Oduro, Professor Lawrence Osei, Dr Nii Akwei Addo and staff of the National AIDS/STI Control Programme and the patients and staff of the ART clinic, KATH for the diverse assistance and support towards the preparation of this paper.

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