Willingness to pay for treatment with highly active antiretroviral (HAART) drugs: a rural case study in Cameroon

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ABSTRACT

This paper reports on the willingness of HIV/AIDS patients to pay for the most affordable triple therapy combination of antiretrovirals in a local setting in Cameroon. Questionnaires were used to evaluate willingness to pay, and patients who could still afford their medication 6 months after the survey were also investigated, to give an indication of actual ability to pay. In addition, oral interviews were carried out for clarification. In all, 84 patients out of a total of 186 were involved in the study. Results indicated that more men (39%) were willing to pay than women (22%), although more women (56%) were afflicted than men. Willingness to pay was directly dependent on cost with 69%, 22% and 9% of respondents indicating willingness to pay $1, $2 and $3 a day respectively. After 6 months of treatment, 22% of patients were still on therapy. A majority of patients stopped taking the drugs after 6 months due to financial constraints. Apart from cost, stigma, disbelief and side-effects of medication were found to be the main factors militating against willingness to pay. Improved counselling and provision of information, reduced cost of drugs including laboratory tests, and destigmatisation programmes are recommended to improve patients' ability to pay for antiretrovirals.

Keywords: HIV/AIDS, treatment, access to antiretrovirals, drug costs, affordability.

RÉSUMÉ

Cette communication porte sur une bonne volonté des patients souffrants du VIH/SIDA à payer un prix assez abordable de la thérapie triple des anti-rétroviraux dans un milieu rural au Cameroun. Des questionnaires ont été utilisés afin d'évaluer cette bonne volonté à payer les médicaments. De plus, les patients qui avaient les moyens d'acheter leurs médicaments 6 mois après ces épreuves furent interviewés également. En plus de cela, les patients ont été interviewés avec le but d'obtenir des éclaircissements. Parmi les 186 patients, 84 participaient à l'étude. Les résultats de cette étude ont démontré que davantage d'hommes (39%) avaient la bonne volonté de payer des médicaments que des femmes (22%), tandis que les femmes sont plus souffrantes (56%) que les hommes. Cette volonté de payer était directement liée au coût des médicaments avec 69%, 22% et 9% des interviewés qui veulent bien payer une somme de $1, $2 et $3 par jour respectivement. Au bout d'une période de 6 mois de traitement, 22% de patients étaient encore en thérapie. Une majorité de patients ont arrêté le traitement au bout de 6 mois faute de manque d'argent. En dehors du coût, le stigmate, l'incrédulité et les effets secondaires des médicaments étaient les facteurs principaux qui étaient contre la volonté de payer. Il est conseillé d'améliorer les services de consultation, de fournir de l'information, de réduire le coût de médicaments ainsi que les essais en laboratoire et l'élaboration des programmes de déstigmatisation afin d'améliorer la capacité de patients à payer pour les anti-rétroviraux.

Mots clés: le VIH/SIDA, le traitement, l'accès aux anti-rétroviraux, le coût de médicaments, avoir des moyens d'acheter.

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Introduction

HIV/AIDS remains the most challenging health problem for policy makers in sub-Saharan Africa. With over three million deaths being recorded last year (UNAIDS, 2002) there is every reason to believe that if unabated, HIV/AIDS will be the most lethal epidemic recorded in history. However, a glimmer of hope currently exists, not only in the availability of drugs which can reduce mother- to-child transmission by at least two-thirds (Marseille, Khan, Mmiro, Gouy, Musoke, Glenn Fowler *et al.*, 1999; UNAIDS 1997), but also the fact that HIV/AIDS can be effectively treated. The United States has shown how stringent health policies can effectively reduce the HIV/AIDS death rate (Berwick, 2001; Martin, 1996). With proper care and active prevention strategies, millions of years of active life could be saved. This would not be possible without access to antiretroviral (ARV) drugs. The issue of access to drugs has recently received a great deal of international support. The recent withdrawal of the lawsuit by the Pharmaceutical Manufacturing Association against the South African government over proposals to allow importation and production of less expensive ARVs is a case in point.

Critics of the 'free drugs programmes' have pointed out that attitudes, cultural traditions and gender discrimination would still have an adverse effect on the fight against HIV/AIDS even if the drugs were free. Furthermore, infrastructure is not in place to distribute medication and manage effective treatment. Pronyk, Kim & Porter (2001) have called for activism in support of the reduction in the price of AIDS drugs to be tempered by an understanding of the complexity of the problem within countries that have few resources and many other health priorities apart from HIV. They further argue that successful international activism leading to cheaper AIDS drugs would undoubtedly increase stress on individuals working within already strained systems. However Berwick (2001) states that removing barriers of drug costs would empower policy makers with the zeal to tackle such issues, and that the high cost of ARVs is being used as an excuse for avoiding other related issues. Interestingly, an international response to the treatment of multiresistant tuberculosis that led to a dramatic decrease in the costs of antituberculosis drugs has reportedly recorded success rates of over 80% in patients in Haiti who were literally condemned to death 5 years ago (Farmer & Jy, 1998; Farmer, Leandre, Mukherjee, Claude, Nevil, Smith *et al.*, 2000). Berwick pointed out the fact that high costs meant that drugs were out of reach; thus it seemed futile for poor countries to try to build infrastructures capable of managing patients. When drugs became affordable, building a proper health care system would be a task worth tackling. However, health improvement is only one of many pressing development challenges (ranging from reducing illiteracy to providing infrastructure and expanding job opportunities) involved in raising people's living standards. As Prescott (1997) points out, analysing the financing options for ARVs leads straight into the affordability question that is of such importance in low and middle-income developing countries. Policymakers need to reject alternatives to government involvement that are not financially affordable, otherwise they will get locked into unsustainable policies that undermine the objectives of getting involved in the first place.

The Republic of Cameroon has officially reported a national HIV prevalence rate of 12% (UNAIDS, 2002). The national HIV/AIDS policy has placed great emphasis on awareness creation and prevention programmes through the National Aids Control Committee. Although widely publicised programmes on the use of nevirapine to prevent mother-to-child transmission are in place, effectiveness of these programmes is yet to be evaluated. In April 2001, the government negotiated for the provision of triple therapy for HIV/AIDS victims at a cost of $1 per day. This implies that the government provides the drugs at this cost and the patients pay for them alongside associated costs such as those for laboratory investigations, monitoring, treatment for side-effects and opportunistic diseases. Cameroon is among the highly indebted poor countries with over 70% of the population earning less than US$1 per day. Furthermore with a majority of the population being subsistent farmers, payment for ARVs by patients does not seem to be feasible theoretically. On the other hand per capita GDP provision of ARVs free of charge by the government is unsustainable because of non-availability of funds. Apart from the issue of the cost of drugs, the fact that over 70% of the population is in rural areas with very bad roads and rough terrain, the lack of trained personnel to manage HIV/AIDS patients, as well as the costs of laboratory/monitoring facilities all militate against a large-scale implementation of treatment programmes.

Moreover, despite its terrible human toll, HIV/AIDS is only one of many health problems facing developing countries, including Cameroon. This means focusing on the subset of ARV alternatives that are affordable from the point of view of those who have to finance the relevant costs — government and households. Consequently, partnerships with donor bodies and concerned households seem a feasible option. The Cameroon programme assumes this partnership for effective delivery, with household purchase being vital for success. Consequently information on how much patients are willing to pay is important to policy makers, as this will help determine priorities and cost settings. The following is a study on willingness to pay for these drugs in a rural hospital.

Method

The St Martin de Porres Hospital, Njinikom is located in the North West Province of Cameroon. With a capacity of 180 beds and a yearly patient enrollment of over 12 000, the hospital offers health care services to patients coming from distances of over 250 km. The HIV/AIDS pandemic is on the increase — the current prevalence of HIV/AIDS among pregnant women is 12.8%, and local prevalence is conservatively estimated at 16% (Muko & Bangsi, 2002). Thus the hospital, with the help of the British non-governmental organisation Intercare UK located in Leicester, instituted an HIV/AIDS programme geared towards:

- raising awareness and implementing prevention strategies
- reducing mother-to-child transmission using nevirapine
- providing free palliative drugs to HIV/AIDS patients
- providing material and moral support to victims and their families
- instituting life-skill training for youths
- developing a prevention programme with traditional herbalists.

Pre-tested interviewer-administered questionnaires were used for the study, which took place between January and August 2002. The questionnaire with structured and semi-structured, closed and open-ended questions was designed to elicit information with respect to occupation, income earning capacity, marital status, ability to pay for HAART and factors militating against willingness to pay. A discussion with general practitioners (who administered the questionnaire) took place to evaluate tested questionnaires for conformity of content. The desired information was obtained and in almost all cases oral interviews were also carried out. The bidding method was used to elicit the amount the respondents could pay. Patients were followed up for 6 months to determine the proportion of patients still on HAART. In all, 84 patients out of 186 deemed fit for treatment with HAART (based on clinical parameters) in the hospital were involved in the study. Exclusion criteria were children and patients without an independent source of income.

Patients who were sick, attending the hospital and tested HIV-positive were counselled with the intention of initiating HAART. Those deemed clinically qualified for ARV therapy were given information on HAART with respect to: availability, efficacy, administration, costs, adverse effects, side-effects of nevirapine, lamivudine and stavudine as a combination in a single tablet (Triomune). Patients were informed of the payment schedule, which was on a monthly basis. The purpose of the study was explained to patients and their consent obtained, after which the questionnaire was administered. The respondents were asked to bid the maximum amount of money they were prepared to pay for these drugs for a month. Each respondent had a maximum of four bids to make. In-depth interviews were also carried out to clarify patient responses. Income was ascertained indirectly through asking patients' monthly expenditure and determining the source of income for this. Permission for the study was obtained from the hospital administration.

Results

The age group 25 - 50 years featured most prominently in the study, as shown in Table 1. The number of female patients (52%) was slightly more than males (48%). There were more patients in the adult group of above 50 years than in the youth group of less than 25 years. Overall more males (53%) were observed in the age group 36 - 50 years than females (47%); while a greater proportion of females (65%) than males (35%) were found in the most vulnerable age group of less than 35 years. As shown in Table 2, a large proportion of patients had dependants. This included those who were not yet married. Males had a

TABLE 1. PATIENTS' AGE AND GENDER

Age (years)	Number	Females	Males
< 25	6 (7%)	4 (67%)	2 (33%)
25 - 35	37 (44%)	25 (65%)	12 (35%)
36 - 50	32 (38%)	15 (47%)	17 (53%)
> 50	9 (11%)	1 (11%)	8 (91%)

TABLE 2. FINANCIAL DEPENDANTS OF PATIENTS

Dependants	Number	Females	Males
Less than 3 persons	14 (16%)	6 (43%)	8 (57%)
Between 3 and 6	18 (21%)	8 (45%)	10 (55%)
7 and above	10 (12%)	4 (40%)	6 (60%)
Lost partners	23 (27%)	17 (73%)	6 (27%)
Single	13 (15%)	8 (2%)	5 (38%)

somewhat greater number of dependants than females. The proportion of females who had lost their partners was found to be greater than that of males.

Overall 50% of respondents reportedly had an income of less than $1 a day, with more women in this category than males, as shown in Table 3. The income earning capacity of males (60% earned above $1 a day) was observed to be higher than that of females (31%). Over 42% of the women involved in the study had no permanent source of income independent of their husbands. Most of them were housewives, while some were farmers and traders and a few were teachers. This contrasts drastically with the males, most of whom had a source of income. The principal occupations of the males were trading, teaching and working as government officials.

TABLE 3. INCOME EARNING CAPACITY

Income	Number	Male	Female
< $1/day	42 (50%)	16 (38%)	26 (65%)
$2 - $4/day	26 (30%)	15 (58%)	11 (42%)
$5 - $6/day	7 (8%)	5 (71%)	2 (3%)
> $7/day	5 (6%)	4 (80%)	1 (20%)

Table 4 shows the prices which people with HIV/AIDS stated they would be willing to pay for drugs for at least 1 year. Generally patients indicated more willingness to pay at reduced prices (69% at $1 compared with 22% at $2 a day and 9% at $3 a day). Table 5 indicates the actual willingness or ability to pay, determined from the patients involved in the study who were still consistently taking treatment 6 months later. Overall 22% of patients were still on treatment. A majority (55%) were males. This was higher than the ratio of males to females at the beginning of the survey. More males (55%) were observed in the age range of above 26 years than females (45%).

TABLE 4. AMOUNT PATIENTS WERE WILLING TO PAY

Income	Percentages	Male	Female
< $1/day	57 (69%)	17 (29%)	40 (71%)
$2/day	19 (22%)	12 (67%)	7 (33%)
$3/day	8 (9%)	5 (63%)	3 (37%)

TABLE 5. ACTUAL WILLINGNESS TO PAY AFTER 6 MONTHS

Age (years)	Number	Females	Males
< 25	2	2 (100%)	0 (0%)
25 - 35	7	3 (43%)	4 (57%)
36 - 50	9	3 (33%)	6 (66%)

Table 6 points to some of the factors that militate against willingness to pay for HAART. Of the patients who could not afford to pay for drugs, more than 62% of women linked difficulty in getting money to stigma. This stigma was either perceived (66%), and attributed to the fact that friends and relatives who otherwise could have helped provide money did not want to associate with the victims; or experienced, where 62% of women responded that they felt too ashamed to discuss their status with people who could otherwise have helped them financially. These respondents had either experienced stigma-oriented traits or heard from or met friends who had experienced such traits which made them ashamed of testing positive for HIV, and thus also made disclosure difficult. Of the proportion of respondents who

TABLE 6. FACTORS MILITATING AGAINST WILLINGNESS TO PAY

Difficulty in getting money	43 (66%)
Perceived stigma	43 (66%)
Experienced stigma manifesting as patient ashamed of status	41 (62%)
Disbelief in efficacy of drugs	22 (33%)
Creditors feel patient will die	16 (25%)
Patients feel well	13 (20%)
Side-effects	1 (2%)

responded to the above factors, the male rate was significantly lower than the female ratio, i.e. 30% and 42% respectively, indicating that more women experienced stigma than men. Other factors observed to militate against willingness to pay included disbelief by patients and relatives about the efficacy of drugs, the fact that creditors who otherwise would have lent money to patients until they recovered and began work again, would not do so because they felt that the patient would die. Furthermore 20% of the patients taking the drugs felt better within 6 months and assumed that they were well.

Discussion

Due to increasing early sexual activity, it is believed that HIV/AIDS prevalence in the age group below 25 years was more than the proportion recorded. Since most of the victims were diagnosed when they were ill, it is likely that infection in the youthful age group could be quite recent and victims were not yet falling ill to HIV/AIDS-related diseases, and consequently did not yet know that they were ill. The fact that more women were found in the younger group is probably because of early sexual exposure with older men. Interestingly few of the victims admitted to being sex workers, although a significant proportion of the spouses of the patients (9%) were members of the forces, which along with sex workers constitute a high-infection group (Bentley, Spratt & Shepherd, 1998). Overall 18% of the victims had lost their jobs as a result of the illness. The fact that the males had more dependants than the females was probably a result of the external family structure, where the man is expected to take care of children of deceased relatives or family where he is an heir. A higher proportion of females had lost their partners. This could be a result of the fact that polygamy is rife in the area of study. In a related study in the area Muko and Bangsi (2002), found an increasing number of orphans, with caregivers having as many as seven orphans in a household. This implies greater expenditure and less money to spend on treatment.

A majority of respondents indicated a willingness to pay for HAART at reduced prices. This was possibly as a result of the fact that a large proportion of respondents were earning less than $1 a day. As expected more males than females indicated a willingness to pay for HAART at $1 a day, possibly because more men had paying jobs than women. Consequently more men were taking HAART after 6 months than women. This could be attributed to the fact that most women were housewives who could not take an independent decision, with the final decision having to be taken by their spouses who may have been expecting help from other sources which did not materialise. The ability to pay, as observed from patients still paying for their medication 6 months later, was at variance with the indicated willingness to pay. Patients were initially enthusiastic to begin treatment but unfortunately could not get enough money to sustain their therapy.

Furthermore a related study in the area (Muko, Ngwa, Chingang & Meiburg, 2002) showed that, in addition to drug costs, other important costs associated with providing therapy included: HIV tests to establish whether someone is HIV+ and hence eligible for therapy; pre- and post-test counselling; regular outpatient visits to monitor patients for side-effects and to issue supplies of drugs; laboratory tests such as CD4 counts, complete blood counts, viral loads and chemistry panels to monitor patient health status; and outpatient visits/hospitalisations associated with adverse drug effects. These costs in reality may be more than the cost of the HAART drugs. In the health facility used for the study, the costs for laboratory tests done by the patients for full monitoring may be as much as $80, excluding transportation to laboratory site, accommodation and food estimated at $20 for each visit. For periodic monitoring after every 6 months, as expected for a sick patient, this translates into a minimum of $200 a year. The costs of the non-drug components are likely to vary substantially. This problem is aggravated by the fact that approaches to case management are inconsistent in Cameroon. For example, although there are protocols regarding the frequency and type of laboratory tests which would be appropriate, and how often monitoring visits would be required, physicians often do not follow these protocols. This makes costing difficult, since the required resource inputs cannot be clearly identified.

Stigma, both perceived and experienced, was observed to be a prime factor militating against willingness to pay. A comparative analysis of treatment paying schemes (Chingang, 2002) showed that in the area of study, relatives often come to patients' aid in offsetting their costs of treatment. Interestingly even though treatment for some diseases, for example tuberculosis, diabetes and hypertension, was identified as being as expensive as the triple therapy, there were higher rates of payment by patients for these than for HAART. This was thought to be because relatives were ashamed to be associated with people with HIV/AIDS, as it is viewed as a moral disease and in certain quarters as a punishment from God. Consequently some victims were perceived as paying for their sins. It is noteworthy that the area in which the study took place is predominantly Christian. Furthermore the fact that victims were not able to share their status with people who otherwise might have helped them, as a result of stigma, further reduced their ability to pay.

Perception of efficacy of therapy is a key issue, as observed from the fact that family members felt that their relatives might not get well. In an area were health insurance schemes are not a priority, not only because of financial implications, but also because an illness is viewed as a misfortune and getting an insurance policy is perceived as wishing for sickness, victims could raise money only from moneylenders and financial institutions. Disbelief in the efficacy of HAART suggested a risky venture on the part of the moneylender, thus making it very difficult for the victim to get treated and regain the energy to work.

As previously mentioned stigma was more strongly experienced by women than men. This could be attributed to the fact that HIV/AIDS is still believed to be associated with prostitutes (women), and in some neighbouring regions of the area of the study it is called 'women's disease'. This is further exacerbated by the fact that it is more socially acceptable for a man to have concubines than for a married woman to have many male sexual partners. Thus it is easier for men not to feel ashamed of their status than for women.

Patients not paying for continued treatment because they were feeling better was perhaps a result of improper counselling and inadequate provision of information. A programme officer for the HIV/AIDS programme Intercare/Njinikom Project Hope reported that the influence of traditional herbalists in this regard could not be overlooked. Promises of effective treatment from herbalists and association with traditional rites as causative factors may be militating against willingness to pay.

Conclusion

Apart from the actual potential to pay for HAART by people with HIV/AIDS, which could be determined easily by their income earning capacity, the above survey shows that other socio-cultural factors are involved. Stigma seems to be a very strong factor in this regard. This is important considering the extended family system in sub-Saharan countries, where it is an obligation for family members to take care of others when in need. Therefore, there is a need for destigmatisation programmes to be put in place with emphasis on educating people on the efficacy of HAART. Misdirected HIV/AIDS prevention messages like 'AIDS has no cure' have to be reoriented, since communities interpret this to mean that treatment cannot really help.

Furthermore, gender roles need to be addressed. Ability to pay has a lot to do with decision making, which can only take place were there is strong female empowerment. With huge benefits shown to be associated with the use of HAART (Alcorn, 1995), both in reduction of transmission and economic benefits, there is a need to address properly the factors militating against its effective implementation in general and willingness to pay for it by patients in particular. Moreover, a portion — perhaps even a majority — of patients will not be able to tolerate the drugs and will suffer adverse effects (Hay, Osmond & Jacobson, 1998), or will refuse to take them at all. This means that the average annual cost of ARV therapy per HIV-infected person may be either more or less than the average annual cost for a patient who tolerates the therapy without any problems. It will be more if the costs of patients suffering adverse effects in a given year exceed the costs of those patients continuing with therapy for that year; and it will be less if the cost of adverse effects is less than the costs which would be incurred were those patients suffering from adverse effects to continue therapy. All avenues for provision of information on awareness creation should be targeted, with special emphasis on traditional herbalists, on whom a majority of the population rely, and who are also highly respected in society.

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