

# **NORTHERN UGANDA MALARIA, AIDS & TUBERCULOSIS PROGRAMME (NUMAT)**



## **REPORT OF THE STUDY ON UTILIZATION OF THE BASIC CARE PACKAGE KIT AMONG PEOPLE LIVING WITH HIV/AIDS**

**OCTOBER-NOVEMBER 2009**

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## List of Acronyms

ART	Anti-retroviral Therapy
ARV	Anti-retroviral
BCP	Basic Care Package
CPT	Cotrimoxazole Prevention Therapy
FGD	Focus Group Discussion
FP	Family Planning
HCT	HIV Counselling and Testing
HIV	Human Immunodeficiency Virus
NUMAT	Northern Uganda Malaria AIDS & TB
PEPFAR	Presidential Emergency Plan for AIDS Relief
PHAs	People living with HIV/AIDS
SWV	Safe Water Vessel
TB	Tuberculosis
USAID	United States Agency for International Development

## Background

HIV/AIDS is among the major causes of morbidity and mortality in Sub-Saharan Africa, where 22.4 million people are estimated to be infected with HIV. In Uganda, the HIV prevalence rate is 6.4% and 810,000 adults and 130,000 children (0-14 years old) were living with HIV at the end of 2007. In Northern Uganda, a region affected by a long-term insurgency and population displacement and where the HIV prevalence of 8.2% is higher than the national average, an estimated 120,000 individuals are HIV-infected.

Among HIV-related services, provision of anti-retroviral (ARV) treatment is central in reducing morbidity and mortality among HIV-infected individuals, increasing survival rates and improving their quality of life and indirectly the health status of their dependants. At the end of 2007, there were 115,000 people on antiretroviral treatment. However, with the current national policy setting a CD4 count of less than 250 cells per mm<sup>3</sup> for ARV enrolment eligibility and the limited access to most ARV sites for the majority of the population, ARV therapy actually benefits less than 15% of all HIV-infected individuals and covers about one third of all people in need of ARV in the country.

Complementary interventions are needed to offer support to the rest of the HIV-positive people not yet reached by ARV, among which HIV chronic care helps to prevent opportunistic infections' occurrence and progress of HIV infection. These interventions are also instrumental in retaining people under clinical observation, monitoring any immunological deterioration and detecting early any episode of clinical complications. In particular, the Basic Care Package (BCP) is a patient-managed, home-based care system that empowers HIV-positive people to avert opportunistic infections, delay the progression of HIV to AIDS and prevent transmission of HIV to others, ultimately living a healthier life. This is remarkably helpful for resource-constrained households. In Uganda, the BCP was launched in 2005 by the US Centre for Disease Control and Prevention in collaboration with Uganda Ministry of Health, the AIDS Support Organization (TASO) and Population Services International (PSI) Uganda.

The Northern Uganda Malaria AIDS and TB Programme (NUMAT) is a USAID/PEPFAR-funded programme designed to increase access to and utilization of quality HIV, TB and Malaria services in Northern Uganda. Among other interventions, NUMAT is supporting the establishment of an effective referral system and improving its performance to ensure that People living with HIV/AIDS (PHAs) and their families benefit from existing subsidiary services provided by partners, including Basic Care Package commodities. The BCP programme goal is to help reduce morbidity and mortality caused by opportunistic infections and HIV transmission.

The commodities include: a) two long lasting insecticide-treated mosquito nets, adult size; b) a safe water system containing a 20-liter safe water vessel (SWV), a filter cloth and four bottles of a water treatment product (Water Guard); c) 60 male condoms; d) educational materials on how to use each component; and e) an information brochure on the benefits and accessibility of cotrimoxazole prophylaxis and strategies to prevent transmission of HIV to sexual partners and unborn children.

The Program for Accessible health Communication & Education (PACE, formerly PSI) has been instrumental in the procurement and delivery of the kits to NUMAT, for the onward

training of and distribution to the beneficiaries. As of March 2009, NUMAT had distributed 6,000 BCP kits to PHAs out of an estimated number of 10,000 to be given in the 5 program years and has trained 6,000 PHAs on use of BCP commodities. Criteria for receiving the package were: presence of at least one HIV-infected individual in the household; registration into one of the established PHAs network groups; financial vulnerability; number of HIV+ members in the same household. Replenishment of consumables was planned to be facilitated by stocking commodities in health facilities.

The objectives of this study were:

- to evaluate the appropriateness and the level of utilization of the various commodities distributed;
- to assess the perceived benefits from the PHA and their relatives;
- to estimate the utilization of other PHA-related interventions not directly provided by NUMAT but recommended and amenable for referral, such as cotrimoxazole prophylaxis therapy (CPT), HIV counseling and testing of the discordant partner and/or their children, TB screening and family planning (FP).

## Methods

**Study population:** The study included PHAs and their relatives residing in Central North Uganda who received a BCP box at least 6 months prior to the study and resided in those districts where NUMAT was the only agency delivering BCP (specifically Oyam, Apac, Amolatar and Dokolo districts). Three sub-counties fulfilled the above criteria, namely Ayer and Chegere sub-counties in Apac district and Otwal sub-county in Oyam district.

**Sample size:** All PHAs aged 18 years old and above who received BCP more than six months prior to the study and who resided in the three s/counties represented the study population. The distribution list of BCP beneficiaries – recording name, age, residence of recipients and date of delivery of the BCP – constituted the sampling frame. The following formula was adopted for calculating the sample size:  $[n = Z^2 (pq)/d^2]$ , where  $n$  = sample size;  $Z = 1.96$  (for 95% confidence interval);  $p$  = expected proportion with the characteristic of interest (response distribution, assumed to be 50%);  $q$  = expected proportion not having the characteristic (1- $p$ ); and  $d$  = half the desired width of the confidence interval ( $\pm d$ ) (margin of error, 10%). This gave a sample size of 96 that was rounded up to 100, allowing for unavailability of selected participants or refusal to participate in the study. Random sampling weighed for the different number of BCP kit recipients in the three sub-counties was carried out. When a sample participant was unavailable for the interview, the next in the sampling list was selected.

**Study design:** The study concept was introduced to PHAs networks' leaders in the region to guarantee the necessary collaboration from their members. The study questionnaire was designed based on suggestions from the field to capture all the relevant quantitative information about the commodity utilization and the perception of beneficiaries on the kit's usefulness and suitability. Subsequently, the questionnaire was pre-tested outside the study area to respondents with similar characteristics of the sampled PHAs. Questions were checked for their feasibility, relevance and any potentially sensitive issue they could raise and their sequence and wording was refined.

**Data collection:** A total of five interviewers (three female and two male) with previous experience in participation to household surveys and fluent in the local languages were

selected. The number five was calculated based on the assumption that each interview would require about an hour and that four questionnaires would be administered every day for five days by each interviewer. A short training was held to equip the interviewers with adequate interviewing techniques and make them familiar with the data collection tool. During the training, the interviewers were also made to facilitate a focus group discussion with PHAs from the Gulu municipality to assess and familiarize themselves with the main thematic areas.

In the execution of the survey, PHAs leaders were used as local guides to locate respondents' homes, introduce the interviewers and explain the reasons of the exercise. A verbal informed consent was obtained from all participants interviewed.

Logistic arrangements were prepared for interviewers to hire motorcycles as a means of transport to take them and the guides to the various homes of respondents. This was seen as a more viable way to reach hard-to-access places than the use of a vehicle.

Qualitative data were also be collected through focus group discussions (FGDs) held among BCP beneficiaries, PHAs network leaders and health workers to assess their perceptions on the appropriateness and usefulness of the kits distributed; on the benefits deriving from the use of kits' commodities; on the comprehension of the information provided; on the fairness of distribution strategies; and on the utilization pattern of BCP commodities. The FGDs were moderated by two interviewers, one leading the discussion and the other one recording its proceedings. The beneficiaries involved in the survey were excluded from the FGDs.

**Data analysis:** Data were entered using EPI-DATA v3.1 software, which has robust consistency and validity checks imbedded in the data entry screens. Data analysis was carried out using the Statistical Package for STATA v8.2. Outcomes were expressed as ratios and percentages. Means, medians, standard deviations and simple proportions were generated as appropriate to describe the data. Bi-variate analysis was done to determine significant associations between the dependent variables and the independent variables, adopting Chi-square test. The study analysis examined the following variables: demographic data; clinical data including last visit at the HIV chronic care unit, enrolment on ARV, use of CPT, and recent episodes of malaria or diarrhea; data on the utilization, benefits and challenges of BCP commodities; data on disclosure of own and partner's HIV status; and data on access to wrap-around services by PHAs and their family members like nutritional supplementation.

Qualitative data from the different FGDs were coded, categorized and analyzed so as to assess the most common pattern of response and those issues relevant to the study raised by participants during the discussion. Content analysis was used to analyze these qualitative data on the basis of emerging themes and sub-themes in line with the study objectives.

**Ethical approval:** Ethical approval was obtained from the Ugandan National Council for Science and Technology. Participation to either the survey or the FGD was voluntary and informed consent was obtained from all respondents. All questionnaires have been given a code number to uniquely categorize participants and no information allowing their identification was stored during data entry. Personal identifiers from the survey database and the proceedings of the focus group discussions were removed to ensure confidentiality.

## Results

The total number of respondents interviewed during the study was 101. Their demographic characteristics are summarized in Table 1. Their average age was 42 years (range 24-73 years) and the median of household members was 6 (range 1-13 members). The majority of women amongst the respondents reflect their proportion as recipients of the BCP kits.

Out of all respondents, 85% reported being members of the established sub/county networks for people living with HIV/AIDS. They had all received the kit between October 2007 and April 2008. In eight cases (8%), respondents reported to have received two kits for two different HIV-positive members of the same household. In a few cases, the kit did not contain all the items that were supposed to be included.

**Table 1: Demographic characteristics of participants**

Variable	Frequency (n=101)	%
<b>Sex</b>		
Male	21	21%
Female	80	79%
<b>Age</b>		
24-35	28	28%
36-47	45	44%
48-59	15	15%
60-73	13	13%
<b>Education</b>		
No education	20	20%
Primary	63	62%
Secondary and above	18	18%
<b>Marital Status</b>		
Single	7	7%
Married/cohabiting	58	57%
Separated	9	9%
Widowed	27	27%
<b>Residence</b>		
Ayer sub/county	16	16%
Chegere sub/county	35	35%
Otwal sub/county	50	50%
<b>Walking distance from health unit</b>		
< 90 minutes	47	47%
> 90 minutes	54	53%
<b>PHA membership</b>		
Yes	86	85%
No	15	15%

### Utilization of BCP commodities

The main information of the utilization of the BCP by respondents is summarized in Table 2.

**Insecticide-treated net (ITN):** The average and median number of ITN found in each household was 2 and 2.4 respectively. However, three households had no mosquito net completely. Ninety-one respondents (90%) reported to have slept under a net the night

prior to the survey; of the 58 participants who were married or cohabiting, 41 partners/spouses (71%) also utilized the mosquito net.

**Safe water system:** 56 respondents (55%) indicated a borehole or a public tap as their main water source, 22 said they were using a protected well and 23 an unprotected spring. Multiple containers were being used in the storage of drinking water in households. Most households (71 out of 101, 70%) stored it in clay pots, whereas the safe water vessel distributed through the BCP kit was mentioned by 61 respondents. However, this particular container was found in the house having water in 53 cases and only 43 respondents (43%) reported following all required steps to effectively treat drinking water<sup>1</sup>. Regardless of the type of water container in use, 65 respondents (64%) indicated that they were using the water treatment solution and 37 of those found its replenishment easy to obtain.

**Condoms:** Condoms were reported being used in the last month prior to the survey by 36 participants (36%). Of those who did not use, 39% claimed not to be sexually active and 10% found it not culturally acceptable. Obtaining more condoms was found to be easy by 25 of those respondents who were utilizing them. The use of the condoms was highest among the male clients with approximately 62% as compared to only 29% among the female clients ( $p=0.005$ ).

**Table 2: Respondents' utilization of BCP commodities**

Variable	Frequency	%
Slept under a net the night prior to the survey	91	90%
Reported use of safe water vessel for storage of drinking water	61	60%
Reported use of safe guard solution for treating drinking water	65	64%
Using both safe water vessel and water guard	42	42%
Using condoms in the last month	36	36%
Using condoms as a family planning method	12	12%
Recalled messages contained in the brochure	35	35%
Wanted the BCP kit changed	86	85%

**Brochure:** 35 respondents (35%) could recall some of the information contained in the educational brochure attached to the BCP kit. The majority of those who were able to do so, mentioned messages on positive living, on how to prevent others from getting infected from HIV and on how to protect themselves from malaria.

### **Perceptions of beneficiaries**

Virtually all participants acknowledged to have benefited from the BCP commodities and that the same did apply to other family members irrespective of their HIV status. They appreciated the usefulness of all items in improving their health status and helping them and their relatives to prevent occurrence of diseases. Although kits were in limited numbers and were rationed in their distribution, respondents and other key informants recognized that they were delivered equitably to the right people and that there were few instances of abuse and sale of items by recipients.

However, they also highlighted some challenges. Some interviewees noted that monitoring the distribution of kits was not adequate and that some households had received more than

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<sup>1</sup> To filter the water while pouring it into the safe water vessel, add the water guard solution, shake it and settle.



one kit. All respondents were in agreement that refills of consumables like condoms and water solution bottles were usually done at the health facilities. Some respondents however noted that it was quite difficult accessing them and where finances got involved their access even became more challenging. Inadequate supplies in the kits were also a common concern.

Group discussants expressed the need for better quality products, especially for the Safe Water Vessels. It was noted that the taps were not durable and some also expressed concern about the palatability of the water purifying solution. Female condoms were also mentioned as useful items to be added to the ordinary condoms for a more adequately tailored package. Additionally, stigma, negative cultural and religious beliefs and inability to read and comprehend instructions were indicated as other obstacles to a consistent use of condoms.

Respondents also identified some unmet needs ranging from items that they feel should be added to the BCP. Specifically, 86 (85%) expressed their wish for more commodities to be added to the existing kit and a larger quantity of those commodities already included. An increased quantity of consumables was suggested as a remedy for difficult refilling, whereas blankets, soap, bed-sheets and utensils were mentioned as some of the non-food items respondents wished to find in the kit. Also a variety of food items were included as proposed components of a revised BCP kit.

### Utilization of HIV-related services

The main clinical information of the respondents is summarized in Table 3.

**Table 3: Characteristics of respondents related to their clinical status**

Variable	Frequency	%
Attended a health facility in the last 3 months	89	88%
Taking cotrimoxazole for prophylaxis	90	89%
Taking anti-retrovirals	50	50%
Taking other medications	31	31%
Suffered from malaria in the last 3 months	56	55%
Suffered from diarrhea in the last 3 months	28	28%
Disclosed HIV status to partner/spouse	66	65%
Disclosed HIV status to children	49	49%
Visited by a health worker, CW in the last 3 months	41	41%
Received food supplementation	1	1%

**HIV chronic care:** The median walking distance from the nearest health facility offering HIV-related services was 96 minutes. All the interviewed participants were attending health facilities that offer HIV-related services. Eighty-nine (88%) reported having attended the clinic in the three months prior to the survey, while 12% did not. Half of those not attending regularly gave the reason of having received enough medications to cover a longer period. Of those who visited a health facility recently, 62 (70%) were screened for clinical signs and symptoms of TB.

All respondents had at one time been on co-trimoxazole prophylaxis therapy (CPT). Of them, 90 (89%) had taken it in the 24 hours prior to the interview and were able to show the remaining tablets; those who did not take it gave reasons that the medicine had been

out of stock at the facility or that they discontinued use due to adverse effects. About half of the respondent were on ART (50 out of 101) and 48 (96% of those on ART) took their tablets the same day of the survey. A large majority of those who were not on ART had not been given it because they were not yet clinically eligible for enrolment. Thirty-one respondents (31%) reported taking other medications to treat different diseases, including malaria (n=9), tuberculosis (n=5) and diarrhea (n=4). Only 29 participants (29%) reported using any family planning method. Condoms (n=12), permanent devices (n=8) and injectable hormones (n=6) were the most commonly reported methods. When asked whether they suffered of any episode of illness in the last three months, 56 (55%) and 28 (28%) reported having suffered from malaria and diarrhea respectively. No significant association was found between having suffered from malaria and having slept under a mosquito net the night prior to the survey (Fisher's exact test=1). No correlation was also found between having reported a recent episode of diarrhea and using the water guard solution ( $X^2 = 1.91$ ,  $p=0.17$ ).

***Disclosure and HIV testing:*** Out of the 101 respondents, 100 (99%) had disclosed their HIV status to their family members, relatives or health workers. In total, 66 (65%) had disclosed to their partner, but among those who were in a stable relationship at the time of the survey this proportion rises to 86%. Out of the 66 clients who had disclosed their HIV status to their partners/spouses, 52 (79%) of their spouses had also ever been tested for HIV and 42 of those who tested (81%) had a positive result. Among the 10 partners who had tested HIV-negative, 4 (40%) had taken the test less than 6 months prior to the day of the interview. Out of the 94 clients who had children in their households, 60 (64%) had at least one child tested for HIV. Approximately 51% of the children eligible for HIV testing living in the respondents' households had been tested.

***Additional HIV-related services:*** Only 41 (41%) of the 101 clients interviewed had been visited by a health worker, a community worker (CW) or a volunteer three months prior to the survey. While 7 had received medical care or a refilling of their medications, the rest were provided with counseling, spiritual care and other forms of psycho-social support. Of all respondents, only one reported having received any form of food support or supplementation in the previous three months.

## **Discussion**

The main objective of distributing BCP kits was to reduce HIV-related morbidity among PHA by providing them with effective preventive tools. Besides, this is also a means of linking PHA to other health services by increasing their awareness and trust in preventive interventions and connecting them to facilities for periodic clinical assessment, counseling and treatment of any occurring illness.

### **Utilization of BCP commodities**

Utilization of commodities included into the BCP by their recipients was high. On average, households had two mosquito nets – the same number that was given through the BCP kits – and its use was widespread including respondents and family members. This is consistent with findings from previous studies on nets utilization by PHAs<sup>2</sup>. On the contrary, the use of

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<sup>2</sup> Cohee L. et al. (2009) High retention and appropriate use of insecticide-treated nets distributed to HIV-affected households in Rakai, Uganda: results from interviews and home visits *Malaria Journal* 2009, 8:76  
doi:10.1186/1475-2875-8-76

the safe water system appeared to be less common and more erratic. It is noteworthy that nearly a quarter of the respondents reported collecting drinking water from an unsafe source. Reducing this behavior requires a regular use of the filter cloth, the water purifying solution for water treatment and of the water vessel to protect treated water from further in-house contamination. However, many factors seemed to impede people to adopt the standard steps for an effective use of the safe water system. First and foremost, a weak vessel or a leaking tap seemed to be frequent occurrences among recipients of the kit. Secondly, the chlorine taste from the water solution was disliked by many respondents. Finally, the vessel could not maintain drinking water cool as in the traditional clay pots, making people to prefer the latter. Another obstacle for respondents was the difficult replenishment of water guard solution bottles, reported by over 40% of those who were using it. PHAs were instructed to get refilling from the health facilities. However, there were no formal arrangements with all health facilities to have constant stocks to meet demands of PHAs. A detailed plan for procurement and distribution of consumables needs to be in place whenever replenishment is expected to be offered by the health sector. The number of PHAs consistently using the water guard solution is likely to drop substantially if they are asked to contribute financially for its purchase, making them to give up using it and increasing their susceptibility to HIV-enhanced water-borne diseases.

The inclusion of condoms in the kit was meant as a measure to protect discordant couples and prevent re-infection too. However, this was the commodity which was least utilized by respondents. The main reason could be that a significant number of interviewed recipients were widowed women not sexually active who did not find condoms useful. It has to be noted, however, that the packaging of the kit is uniform and that it would be unmanageable to tailor it to the recipient. Almost three quarters of the respondents who reported using condoms indicated that their replenishment had been easy. Compared with water guard solution bottles, condoms are more commonly widespread and available for refilling at both facilities and other outlets. Nevertheless, group discussants mentioned several hard-to-die negative beliefs about the use of condoms, including lack of sexual satisfaction, stigmatizing religious and cultural stereotypes that might eventually discourage PHAs from using them.

Few respondents could recall any of the information contained in the education brochure. A large number indicated they could not or had no interest to read it, despite the leaflet was printed in the local language and carried self-explanatory pictures. Using educational material for conveying information can be useful in many instances. It moves from the assumption that recipients are driven to read it by curiosity and concern to increase their knowledge. Nonetheless, some obvious barriers in utilizing these information and education material still exist, particularly in rural settings with low literacy levels. This study underscored that new strategies to communicate health-related messages other than using printed material should be tried.

### **Perceptions of beneficiaries**

There was general consensus among survey participants and group discussants that the BCP kit has improved their lives and the ones of their family members. Appreciation of the benefits derived from the commodities contained in the kit is likely to make their utilization more consistent. Even those who reported having fallen sick with fever or diarrhea in the recent past recognized that the BCP kit to some extent has contributed to improving their health condition. Although the distribution pattern was described by most discussants as fair and equitable, they have highlighted some shortcomings and inefficiencies in the BCP

kits management. In particular, some respondents claimed not to have received a full package, with some items inexplicably missing. Additionally, findings from both the survey and the focus group discussions have shown that some households had received more than one kit, despite their limited number. One of the criteria for selecting the sites of the survey implementation was the absence of other programs distributing BCP kits to minimize problems in the interpretation of findings. However, the inefficient distribution of commodities and other handouts is likely to be increased by the co-existence of more agencies conducting similar activities for the same target population. It is therefore important to coordinate the distribution of such items and possibly to engage grass-root organizations of PHAs with better knowledge and records of previous recipients.

An issue that was raised by many of the beneficiaries was the quality of some of the items in the kit, in particular the safe water vessel whose tap was reportedly weak or broken by more than half respondents. The importance of having good quality accessories is vital for their durability. The water vessel is an item that cannot be easily and cheaply replaced and its sturdiness contributes to the promotion and maintenance of proper utilization by PHAs of the whole safe water system and ultimately to the protection from water-borne diseases. Similarly, the material of the distributed mosquito nets should be good enough to ensure that they can be used for their entire life-span, which ranges from three to five years for different brands of long-lasting insecticide-treated nets.

Finally, demands for a different package of the kit were many. Respondents mentioned a wide variety of items they wish could be added to the kit. Some – like blankets, bed-sheets and utensils – have commonly been part of handouts given to people in camps or for their resettling to the original villages. They can be seen as basic helping tools but do not have a direct effect on decreasing PHAs vulnerability to diseases like bed nets and safe water system do.

Many participants proposed food items to be components of the BCP kit. Its practicality is questionable for two main reasons. First, these items can be highly perishable; secondly, it would just be a one-off provision, with little room for their constant replenishment, thus providing just an ephemeral help to the beneficiaries. The pattern of the responses regarding how the kit should be put together with the reported absence of nutritional support to PHAs indicates that food supplementation is a very critical point for PHAs and more so for those who are taking medications. However, it seems it receives little attention and its provision is rationed and rarely sustained.

### **Utilization of HIV-related services**

The degree of utilization of HIV-related health services was fairly high. All respondents to some extent were linked to some health facility. A large proportion had visited an HIV clinic in the three months prior to the survey, and more importantly over 80% had visited it in the last one month. This is crucial for good adherence to medications that require being taken daily and constant refilling, like co-trimoxazole and ARV. Additionally, it is also helpful for receiving medical attention and procuring more quantity of those consumables contained in the BCP kit commonly available at the health units. It is remarkable that the high retention of respondents at the facilities was maintained despite the fact that many of them travel a long distance to reach the facilities.

Disclosure of own HIV status was almost universal among respondents. In our study, the proportion of PHAs who disclosed to their spouse or partner was 65%, similar to existing findings<sup>3</sup>. Disclosure assists PHAs to behave more responsibly and receive useful social support. Besides, it facilitates them and their family members to benefit from a wide range of preventive and curative services, including partner testing. Disclosure to the partner was found to be higher among those in a stable relationship (married or cohabiting respondents), which led to a larger proportion of partners tested. Among the ten HIV discordant couples<sup>4</sup> identified, eight partners had been tested within the last one year and four within the last six months, showing high degree of awareness among PHAs about this sensitive issue. Group discussants noted that testing spouse and children offers the family an easier entry into care, thus resulting in improved health, survival and ability to plan for the family's future. Additionally, they explicitly stated that this approach improves on HIV prevention at family level as PHAs endeavour to try to avoid risky behaviours and practices. A large majority of participants were regularly taking the CPT and half of them were on ART. Cotrimoxazole is recommended for prevention of opportunistic infections in symptomatic HIV patients and its effect on reducing mortality and hospitalization among PHAs in sub-Saharan Africa is well documented. Previous studies conducted in Uganda had already shown that most PHAs could be enrolled onto cotrimoxazole prophylaxis, and the drug was well tolerated<sup>5</sup>. Our study is in line with these findings. However, it may be that our respondents were better compliant and more vigilant about medications than the general PHA population because - as members of PHAs network groups - they were involved in peers' support and sensitization activities.

The high proportion of participants on ART is likely to reflect their advanced stage of the HIV infection and enhanced access to ARV at the accredited health facilities. The major reason for not being on ARV was lack of clinical eligibility. Group discussants recognized the importance of ARV and pointed out prolonged survival, prevention of mother to child transmissions and improved health and well-being of PHAs as some of the benefits of regularly taking prescribed medications. Drug adverse effects, cited by a few respondents, did not outweigh the value of taking ARV.

Family planning services seemed to be poorly utilized by respondents. It has to be noted that some of them reported having no partner or not being sexually active. Coverage of family planning is generally low in Uganda and particularly in the Northern Region<sup>6</sup>. Group discussants mentioned several barriers in accessing family planning methods by PHAs including lack of information among them about FP services, low male involvement, limited choice due to restriction in options available and associated side effects and pill burden for those who already take other drugs. Additionally, the gains in their health status provided by better care and ART may induce them to consider having a family or generating more children.

Although no significant correlation was found between using the BCP and no illnesses reported, participants have widely acknowledged that their health status had benefited

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<sup>3</sup> King R. et al. (2008) Processes and Outcomes of HIV Serostatus Disclosure to Sexual Partners among People Living with HIV in Uganda, *AIDS Behav* 12:232–243 DOI 10.1007/s10461-007-9307-7

<sup>4</sup> Couples in which only one partner is HIV-positive.

<sup>5</sup> Watera C. et al. (2006) Feasibility and Effectiveness of Cotrimoxazole Prophylaxis for HIV-1 Infected Adults Attending an HIV/AIDS Clinic in Uganda, *J Acquir Immune Defic Syndr* 2006;42:373Y378

<sup>6</sup> Uganda Bureau of Statistics (UBOS) and Macro International Inc. 2007. *Uganda Demographic and Health Survey 2006*. Calverton, Maryland, USA: UBOS and Macro International Inc.

from the BCP commodities by reducing the magnitude and severity of HIV-related diseases. It is particularly remarkable that more than a third of the respondents reported having not suffered from malaria or diarrhea in the three months prior to the survey.

## **Limitations of the study**

Since most respondents were members of the existing PHAs networks, we may expect them to perform better than the average population of PHAs in general service uptake. This membership usually combines with higher degree of information and sensitization on HIV-related issues, with more openness from their members about their HIV status, and with a more favorable attitude of “living positively”. Therefore the findings of this study may not be fully representative of the general PHAs population.

The restriction of the study site to those areas where no other organization had distributed BCP kits was meant to minimize confounding factors to the evaluation of this program activity. However, the exclusion of a substantial geographic part of the Northern Region might have hidden findings and peculiarities in utilization pattern belonging to that area. As it commonly happens during surveys, the “deference effect” could have made respondents to answer what they perceive is more gratifying to the interviewer. To reduce this potential bias, some items such as the set up of the mosquito nets, availability of ARV and cotrimoxazole tablets and of the water storage containers was verified through direct observation by the interviewers during their home visits. Recall bias could have been a problem for some questions because of the time elapsed from the distribution of the BCP kits to the respondents.

## **Conclusions and recommendations**

This study has shown that packaging commodities for basic prevention in a standard kit and distributing them to PHAs is a useful intervention and is also well received and appreciated by its recipients. Such a simple and relatively inexpensive undertaking positively affects the quality of life of PHAs and their family members and it helps to link them to various health services, indirectly contributing to improve their health status. Its main strength consisted in the high degree of commodities’ utilization and the widespread awareness on the importance of preventing diseases among the receiving PHAs. The relevance of this initiative to the beneficiaries recommends it for a broad scale up among PHAs.

Program managers and policy makers should also take into account the challenges met and suggestions given by participants to this study in as far as the BCP kit could be enriched. Particular attention should be placed on securing products of better quality and durability, upgrading the procurement and distribution network for a smooth replenishment of consumables and thinking about more items to be added to the kit to fulfill some of the legitimate demands of their beneficiaries. Ultimately, the concern about how to sustain such an initiative that is commonly implemented with donor funds is legitimate. Its effectiveness and acceptability together with the relatively cheap items contained in the kit may make this intervention fairly affordable. However, financing it will always represent a challenge for poorly funded health systems and may compete for the same scarce resources with more highly demanded health interventions like HIV care and treatment services.