Barriers and facilitators to utilization of community drug distribution points among adult HIV patients in Bushenyi district, south-western Uganda: A qualitative study

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Research Article

Keywords: community drugs distribution points, ART delivery models, south-western Uganda, qualitative study, People living with HIV

Posted Date: May 16th, 2022

DOI: https://doi.org/10.21203/rs.3.rs-1623250/v1

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Abstract

Background

People living with HIV still have challenges in accessing HIV services in low- and middle income countries. In Uganda, the community drug distribution points are interventions to improve access to anti-retroviral medications. However, there is still low enrollment on community drug distribution points among PLHIV in south western Uganda particularly in Bushenyi district. This study explored the barriers and facilitators to utilization of community drugs distribution points among adult HIV patients.

Methods

This was a descriptive study utilizing a qualitative approach. We purposively recruited 24 adult HIV patients and 6 health workers as key informants. We conducted in depth interviews with adult HIV patients and key informant interviews with health workers using interview guide. The data were transcribed from audios to Runyakore-Rukiga in word document then translated to English. Data were analyzed manually using thematic analysis.

Results

We found that the main facilitators to utilization of community drug distribution points were positive health workers’ attitude and reduced expenses especially in term of transport cost. The main barriers to utilization of community drug distribution points were lack of infrastructure and privacy.

Conclusion and recommendations

Patients’ utilization of community drug distribution points is greatly influenced by the health workers attitude. Stigma is still a limitation to utilization of HIV services. We recommend that interventions to eliminate stigma be put in place and infrastructure be put at the community drug distribution points.

Introduction

The Global HIV and AIDs statistics fact sheet [1] reported that HIV is still a public health concern with a global prevalence of 37.7millions people living with HIV of which 95.2% are adults. In sub Saharan Africa, by 2020 new HIV infections declined by 38%, but only 72% of PLHIV were on ART and only 65% have suppressed viral load [2]. Only seven countries in sub-Sahara Africa reached the 90-90-90 target, for example Namibia and Botswana. Delivery of HIV services is also an economic burden to many countries up to now especially low-income countries particularly Uganda since not all PLHIV access ART, where by 2020 the ART coverage was at 73% globally and 83% for Uganda. For Uganda, prevalence is at 6.2% among adults (aged 15 to 64years) which is approximately 1.2millions adults [3].
Changes in service delivery models can improve program quality and efficiency in HIV care [4] and the UNAIDS 90-90-90 targets are achievable even in resource constrained settings with HIV burden [5]. Models used to provide ART services to PLHIV includes differentiated service delivery model (DSDM), community ART group, community client led ART delivery (CCLAD), fast-track drug pick up and the community drug distribution points (CDDP) [6]. CDDP model was designed to take ART services closer to PLHIV and decongest health facilities offering ART services so as to increase ART adherence and increase ART coverage. It has been recommended that community based models of ART delivery be used to support ART expansion and retention in resource limited settings [7].

A study in East and Central Uganda found that more PLHIV enrolled on CDDP than on other differentiated service delivery model [8]. During the COVID-19 lock down, ART delivery was best done by community based ART delivery models due to patients’ demand [9]. ART coverage is still less than 90% currently and some facilities are overcrowded with PLHIV seeking ART services. This may be due to some challenges that the CDDP model may have where, for example, studies done in Uganda [10] and South Africa [11] found that stigma was a major a barrier to utilization of CDDP among PLHIV. Stigma has been overcome by forming ART groups as was done in South Africa and Ghana and providing counselling and education to the patients and the community could help overcome stigma [12]

Bushenyi district has HIV prevalence of 6.7% and 4.2% incidence rate (Bushenyi district local government, 2021) which is higher than the national prevalence of 6.2%. There is reduced enrollment of stable HIV positive clients into the CDDP models in South Western Uganda particularly Bushenyi District, for example, in Kyamgimbi HCV, out of the 387 HIV patients who were categorized as stable in their files, only 57 were enrolled on CDDP. This low enrolment to the CDDP in Bushenyi district in addition to overcrowding in the ART clinics still occurs and yet the model was introduced to take HIV services closer to the patients with ultimate goal to decongest the health facilities. There are possible factors that contribute to the low uptake of the CDDP, and so, this study set out to explore the barriers and facilitators to utilization of community drug distribution points among adult HIV patients in Bushenyi district south-western Uganda.

**Methods**

**Study design and setting**

We employed a descriptive qualitative design, a method we preferred because we could describe and explain phenomena under the study by using in-depth exploration of the issues of interest, that is, exploration of the barriers and facilitators to utilization of CDDPs.

We conducted the study in four health facilities in Bushenyi district namely; Bushenyi health centre IV, Ishaka Adventist Hospital, Bushenyi Medical Center, Kyabugumbi health centre IV. Bushenyi district is located western Uganda about 320km from Kampala, the capital city of Uganda

**Population and sample size**
The study was conducted among adult HIV clients accessing ART services from the CDDPs linked to the selected health centers, trained HIV care providers, and focal person at the selected facilities. Of the planned interview with at least 30 participants, we reached saturation after interviewing 24 participants when we were no longer getting any new information.

**Sampling criteria**

Study participants were purposively selected basing on their experiences in utilizing the CDDP model. The selection was based on being adult stable HIV client, enrolled on CDDP linked to the four selected health facilities (Bushenyi HCIV, Ishaka Adventist Hospital, Bushenyi Medical Center, and Kyabugimbi HCIV) and being on ART for at least 10 weeks. These four health facilities were purposively selected because they handle large numbers of clients. Health workers working with the selected facilities were also purposively selected and interviewed as key informants basing on their experience in implementing the CDDP model and being staff at the ART clinics of the respective facilities.

**Data collection procedure**

Data was collected using an in-depth interview guide and a key informant interview. The interview guide was developed following review of literature from related studies [13-15]. The interview guide was pretested among four (04) adults HIV patients at Mbarara Municipal HC IV. The results of the pretest were used to adjust the test items in the interview guide. The data collected included information on the following; knowledge on CDDP model, quality of HIV care with the CDDP, facilitators to utilization of CDDP, and barriers to utilization of CDDP.

Trained research assistants collected after obtaining written informed consent from the study participants. The data collection was conducted between Februray and March 2022, and was supervised by DO and VN. Data was collected, using digital audio recorders, in the local language (Runyakore-Rukiga) supported with field notes.

**Data management and analysis**

Data was transcribed from the recorded audios by the research assistant, and then translated from Runyakore-Rukiga to English by the research assistants who are native to the local language.

Data analysis was done manually by the five team members by using both inductive and deductive thematic analysis basing on emerging themes. We did it in three phases that was pre-analysis, material exploration, and result treatment. The pre-analysis was conducted in the Nursing conference room of Mbarara University of Science and Technology where all the team members attended and the mentor guided them on how to read and extract significance statements from the transcripts. We familiarized ourselves with the participants’ descriptions of concept by reading and reading the transcripts to acquire an understanding and feelings about CDDP delivery model. We then extracted significant statements that directly pertain to our study objectives and formulated meanings from the significant statements extracted. We later categorized the formal meanings into clusters of themes that are common to all
participants by giving them code and grouping similar themes together. We then referred to these clusters to the original transcriptions for validation and confirming consistency with the supervisor and emerging conclusions and participants’ original stories. The findings were integrated into exhausting description of the concept.

**Results**

**Sociodemographic characteristics of study participants**

In this study, we enrolled 24 participants and 6 key informants. The mean age of the study participants is 38.2 years and the age ranged from 18 to 83 years. The majority (57%) of the participants were female (Table 1)

**Table 1 Sociodemographic characteristics of the study participants**

<table>
<thead>
<tr>
<th>VARIABLES</th>
<th>Description</th>
<th>Number (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age</td>
<td>Range 18-83 (mean age = 38.2)</td>
<td></td>
</tr>
<tr>
<td>Female</td>
<td></td>
<td>17 (57)</td>
</tr>
<tr>
<td>Male</td>
<td></td>
<td>13 (43)</td>
</tr>
<tr>
<td>Education level</td>
<td>No formal education</td>
<td>12 (40)</td>
</tr>
<tr>
<td>Primary</td>
<td></td>
<td>7 (23)</td>
</tr>
<tr>
<td>Secondary</td>
<td></td>
<td>5 (17)</td>
</tr>
<tr>
<td>Tertiary</td>
<td></td>
<td>6 (20)</td>
</tr>
</tbody>
</table>

From the in-depth interviews, we generated two broad themes to utilization of community drug distribution points: facilitators, and barriers. From the two broad themes, we generated three subthemes which are facility related, policy related and patients related barriers or facilitators to utilization of community drug distribution points.

**Facilitators and barriers to utilization of CDDPs**

The patients reported what motivated them to get enrolled on the CDDP model and even the health workers expressed what made them enrol more patients to the CDDP. The major facilitator reported by most patients was reduced transport cost to access HIV services. Most patients reported that it was so challenging for them to go the facility to get HIV services but since the CDDP was closer their homes, they became motivated and enrolled to the nearest CDDP. The most reported barriers were lack of infrastructure, stigma, lack of comprehensive services, and few visits.
Patient related facilitators and barriers

The patient related facilitators includes; patient’s satisfaction, patient’s preference, convenience and peer influence. The major patient related facilitator was patient’s satisfaction. And the major patient related barrier was stigma.

Patients’ satisfaction

We found that patients’ satisfaction with the services at the CDDP sites made them to continue getting services from the CDDPs. Most participants reported that they get enough drugs for HIV and other care like counselling. The counselling gave them comfort and hope to live. Some of them also said that the time and attention given to them to express themselves and the responses they get from the health workers are satisfactory to them. Some patients also expressed that they are going to live longer because of the services they are getting from the CDDPs. Even the health workers also reported that the patients have trust in them and like their services. As one patient said

“If maybe you feel dizzy after taking the medicine you tell him and he gives you his time and attention to you. so you fell really happy but from the time I came here there is no health worker that has ever treated me badly because if I ask you something that I hadn’t understand and you explain it well for me, I appreciate” participant14

Patients’ preference

We also found that patients’ preference is a facilitator to utilization of community drug distribution points among adult HIV patients. Some of them reported that they prefer going to the CDDP to other places where they also offer HIV services because it is convenience for them. Some patients also reported refusing to be transferred from their CDDP to a facility or other CDDP and preferred to remain to their CDDP because the services are good. Some patients also said that there is no reason for leaving the CDDP or being transferred back to the facility since they are being treated well. Even the health workers reported that patients always refused to be referred to the facility. Health workers noted that patients had developed trust in them and do not want them to leave. Some patients were also reported to go for HIV services at CDDP even if they stay near to a facility offering the same service. One patient said

“I have accessed the same services in different other places but I have never been interested like I did for this place. No way, I will have to stick on services here forever as longer as this program is still here serving us.” participant04.

Peer influence

We also found numerous patients who expressed peer influence as what has motivated them to get enrolled to the CDDP. Some patient reported that they were convinced by their friends to go and enrol to the CDDP. Some also said it was their friends who encouraged them to get tested from a CDDP and after testing positive, they got enrolled on CDDP. The patients also expressed that they normally tell their
colleagues in the village to come for refill from the CDDP. Health workers also said that patients normally go and tell their friends in the community about the services at the CDDP and that is why they are many who they have enrolled on CDDP. Patients also expressed that their colleagues sometimes collect the drugs on their behalf. We also found that the patients were put into groups of ten which enabled peer counselling. One health worker reported

“It is actually our clients that are attracting more people to come after telling them about the good services and we also try to incorporate HIV testing so that we can also identify new patients.” Key informant03

**Stigma**

We found numerous patients who reported that stigma exist among some patient who do not want to disclose their status. Participants expressed that this stigma discouraged some patients from getting enrolled to the CDDP. Patients also expressed that whenever they are seen coming from the CDDP, they are associated to HIV positive people. Both health workers and the participants reported that there are some patients who do not want to disclose their sero-status and are always stigmatized when they come to the CDDP. Some patients said that the people in the community talk a lot about them when they see them coming from the CDDP.

“Such people talk a lot when they see us but we do not care about them and it is not important. We our too exposed and there is no safety, confidentiality and privacy. We usually line outside in the open with too much sun and sometimes it rains on us, it is somehow discouraging and de motivating” participant01

**Facility related facilitators and barriers**

**Health workers’ attitude**

We found that the most facility related enabler to utilisation of CDDP reported by most patient was health workers’ attitude. They expressed that the health workers had positive attitude towards them and their work to serve the patients. Patients expressed that the health workers are good, friendly, kind and polite to them. Some patients reported that the health workers are like parents to them. Some said that the health workers do not use bad language on them. In addition, the health workers reported that even though the clients are many sometimes they always commit themselves to patients and are always determined to serve them.

“Health workers of the CDDP program are so good, friendly, faster and they really treat us very well despite the fact that some of us patients are not well behaved and we inconvenience health workers while doing their work.” participant02

**Quality HIV services**
We also found that the quality of services offered at CDDP sites facilitated patients to utilise the delivery model. Patients expressed that the services they get from the CDDP are of good quality, short waiting time, and always meet their expectations. Patients expressed that the way they are served, and serving process by the health workers are convenience. Patients reported that they are counselled, educated and guided on how to take their ARVs. The patients reported that they get a complete service from the CDDP and even the health workers reported that they always take the whole team to the CDDP. The team comprises of laboratory technicians, counsellors, medical doctors, and nurses. As one says

“HIV services that we access from here are very good and excellent, we get our HIV drugs every time that we come here and then we go back home without any problem.” participant01

Drug availability

Our findings also show that drug availability is a strong facilitator to utilisation of the CDDP because many participants reported they normally come and get drugs without fail when it is time for their visits. Patients noted/reported that HIV drugs are always available at CDDPs. Some said they have never missed drugs at any one visit. Patients also expressed that sometimes they have other illnesses and the drug are always given or if not available they are told to go and buy. Even the health workers said that if a patient has other illnesses, they are treated from the site if the drugs are available or they go and buy. One of patient reported like this

“HIV drugs are always available and enough, when we come, we cannot miss getting HIV drugs at any one point. Personally from the time I started with this program, I have never failed to access my HIV drugs.” Participant 02

Reduced transport expenses

We also found that another facilitators to utilization of the CDDPs that numerous patients reported was reduced transport expenses. Reduced transport expense was expressed by most patient as what has motivated them to use the CDDP because they are poor. Patients reported that the services is now near them and they do not have to spend on transport again or they spend very little on transport. The health workers also said patients used to miss visits at the facility due to distance of the facility from their homes. One patient reported like this

“People are poor meaning they could not afford the high transport costs that were involved, a lot of people in this community are poor and they even cannot afford to support themselves in terms of financial stability.” participant03.

Lack infrastructure

We found that lack of infrastructure was expressed as a major barrier facility related barrier and the overall major barrier by both the patient and the health workers. Due to lack of shelter, patients reported that they are exposed to some other people who are not patients, there is no privacy and bad weather
sometime interfere with service delivery at the CDDP sites. Health workers also reported that they usually operate from an open place in the community. Most patients suggested that they should be provided with a structure at the CDDP.

“I wish God would rewards us and gets us a place of our own with a better shelter, which would be very excellent. The biggest challenge here is that we do not have a shelter, we are so many and exposed to passer-by near the road, and we need some kind of privacy, safety and confidentiality.” Participant 04

Overcrowding and fear of stigma

We found that overcrowding was also reported by the patients and health worker as barrier to utilization of the model. Participants expressed that they are always many at the site and that means you are seen by very people whom you may not like to know your status. One patients reported that they could be over 200 per visit. The health workers expressed that they spend the whole day at some sites working on the patients. One health worker reported that they serve between 60 and 80 patients on average yet the policy recommends between 30 and 45 patients per community drug distribution points.

“Sometime we get over crowded, line of patient gets so long and even the health workers get tired. Participant 14”

Lack of comprehensive services

We also found out that lack of comprehensive services at the community drug distribution points was reported by both patients and health care workers as a barrier. Some patients reported they want other services like TB screening and treatment for other conditions to be brought at the community. Patients reported that they are always prescribed medicines to go buy whenever they have other symptoms and signs. Health workers also reported that they are unable to take a comprehensive service to the community because resources in term of staff, finances, and transport means are limited. Health workers expressed that all the cost of implementing the CDDP is on the facility which need big funding. As one said

“Yeah... there are costs in delivering the CDDP model like transport, then also is fuel and facilitation of staff. We cannot have other services at site because we lack enough staff so we advise them to come to the facility where different services are offered.” Key informant02

Policy related facilitators and barriers

Policies from central government, ministry of health, local government, facility level policies or even cultural and societal policies can affect delivery of health care positively or negatively. The most reported positive policies were long contact hour with health workers, follow up, and free HIV services.

Long contact hour with health worker
We found that patients had long contact hour with the health workers. This time a patient had with the health worker was used to take history from the patient, counselling and answer patient’s questions. The patient reported that the health workers give them opportunity to ask them and give them their time to listen to them. Health workers also expressed that they take their time to review patients’ files and listen to each and every patient because they are few per visits.

“But when you are with the client, this client comes in, you have to review the file and do everything and find that the time you take on one client is much key” informant 01

Free HIV and other medical services

We also found that the HIV services as well as other medical services were given free of charge to the patients which has enabled them to get enrolled to the CDDP. Most patient reported that the free services that get they from the CDDP has encouraged them to go there and get treated. Participants expressed that the health workers use their own money to buy fuel and bring them the drugs to their villages. Health workers expressed that they are given vehicles and incentives when they are going to a CDDP point. This is evidenced by

“\textit{I used to see health workers every month coming to this place without fail, giving drugs to patients free of charge, they did not have to spend any money or go through a lot of troubles, I also got motivated and decided to join, ever since I enrolled.” Participant03

Follow up

We found that follow up was a facilitator to utilization of community drugs distribution points among the patient in Bushenyi district. The health workers reported that they usually do follow up of lost to follow up patients or even patients who have missed to come for a visit by either making a phone call or driving to the patient’s home. Many patients reported that they have been visited at home or being called on phone by the health workers. Patients are groups in a group of ten with a leader who link them to the health workers. Follow up is also done through assistant counsellor who is also a patient living in that village. This is evidenced by one health worker reporting

“\textit{Health workers would therefore take the initiative to drive and locate such people wherever there are, give them the required services and come back.” Participant04.

Few visits

We found that there is only one visit per month at a given CDDP site. And some participants reported few visits as a barrier to utilisation of the model. The client might want to see the health workers but you find that the policy guidelines require the facility to go out for out reaches only ones or twice in a month to a particular CDDP site. One patient reported that they need more than one visit in a month. The health workers reported that they go either on the first or the last Friday of the month. This makes the clients to wait with their health challenges until the stipulated date of the out reaches.
“But if they can also increase on the number of visits the make every month from one to two or three, it will make it easier and more comfortable.” participant04

Discussion

The main facilitator to utilization of community drug distribution points was the positive health workers’ attitude. This is not similar to the study findings by [11, 16] where it was reported that health workers had negative attitude towards the patients. The different in the results could be because that study was conducted when the model was just introduced. Positive health workers’ attitude is due to motivation in term of incentives by the facility. This therefore implies that motivation of health workers is important in implementation of HIV care models.

Reduced expenses to get HIV services especially in term of reduced transport expenses also facilitates the utilization of community drug distribution points. This finding is consistent with findings of other similar studies in South Africa and Uganda [15, 17]. This is due to the fact that in all studies the same methods of data collection were used on the same target population in rural settings with low income level. In addition, researchers have reported the psycho-social satisfaction patients get from interacting with health workers on a regular basis within the community settings [18, 19]. Community drug distribution points have therefore relieved clients from spending money on transport and other cost they would meet on the way to the hospital. However, this may imply that the cost of transport has been shifted to health facilities, which may be a challenge for health facilities with limited resources. Hence it is not possible to implement the CDDP model of ART delivery.

Lack of infrastructure at the CDDP sites was a major limitation to utilization of the CDDP by both key informants and participants. This was related to difficulties to use the model due to stigma related issues because some patients fear being seen at such places. Bad weather conditions such as rain, strong winds and sun shine also limited the utilisation of CDDP since the sites are in open places. This finding was not reported in a similar study in south Africa, Uganda and Zimbabwe [16, 20]. This could be due to availability of shelters at CDDP sites where that study was done or differences in the data tool used. This signifies that many people are unable to enrol on CDDP due to stigma related issue or bad weather in the open spaces. This is a preventable challenge to HIV service delivery which impairs the quality of HIV care being provided.

Stigma is still a limitation in Bushenyi that hindered utilisation of CDDP among PLHIV. There was internalized stigma among some patients who do not want to disclose their sero-status. Stigma was also at community level where the patients come from given the community perception about HIV. People who were seen coming from the community drug distribution points were associated to be HIV positive by the community members since the CDDPs are in open places. This finding is consistent with findings of studies done in South Africa and Uganda [15, 17]. This means stigma is still limiting some PLHIV from accessing HIV services and hence the low ART coverage in sub Saharan Africa. Stigma at individual level
make it difficult to implement care to the patients by the health workers making the need to put measure that eliminate stigma urgent.

**Limitations**

The fact that data was collected from the CDDP points could have affected the nature of responses the study participants. This was overcome by adequately explaining the purpose of the study to the participants.

**Conclusions And Recommendations**

Patients’ utilization of the CDDP as a strategy for HIV service delivery is influenced by attitude of health workers, reduced transport expenses and good quality of HIV services available at the CDDP site. Barriers such as lack of facility infrastructure, overcrowding and stigma limits some PLHIV to access HIV services from CDDPs. We recommend that infrastructures be put at the CDDP sites so that privacy and confidentially of the patients who come for HIV services at the CDDP site are protected. Focus on interventions to eliminate stigma at community drug distribution points is also urgently needed.

**Declarations**

**Ethical approval and consent to participate**

The protocol to conduct the study was approved by Mbarara University of Science and Technology Research Ethic Committee (MUST -2021-279), and additional clearance to conduct the study was obtained from Uganda National Council for Science and Technology (UNCST). Administrative clearance was obtained from the district health officer (DHO) of Bushenyi district and the in-charges at the selected health facilities. A written informed consent was obtained from each participant prior to the start of the interview. The study was conducted in accordance with UNCST guidelines and the declaration of Heinski.

**Consent to publish:** Not applicable

**Data Availability**

The datasets generated and analyzed during the study are available from the corresponding author on request.

**Conflicts of Interest**

The authors declare that there is no conflict of interest regarding the publication of this article.

**Acknowledgments**
Research reported in this publication was supported by the Fogarty International Center (U.S. Department of State’s Office of the U.S. Global AIDS Coordinator and Health Diplomacy (S/GAC) and the President’s Emergency Plan for AIDS Relief (PEPFAR)) of the National Institutes of Health under Award Number R25TW011210. We thank the participants who participated in this study, the District Health Officer Bushenyi District and the administration of Ishaka Adventist Hospital, Bushenyi Health Center IV, Busheyi medical Center and Kyabugimbi Health Center IV who contributed towards the success of this study. We also acknowledge the contribution of Gabriel Nuwagaba, our research assistant, who helped to collect the data.

Funding

This study was funded by a grant from the Fogarty International Center (U.S. Department of State’s Office of the U.S. Global AIDS Coordinator and Health Diplomacy (S/GAC) and the President’s Emergency Plan for AIDS Relief (PEPFAR)) of the National Institutes of Health under Award Number R25TW011210

Authors’ contribution

All authors participated in the conceptualization, design of the study, data collection and data analysis. OD and VN drafted the manuscript. All authors reviewed and revised the manuscript for substantial intellectual content, read and approved the final version of the manuscript.

References


