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Assessment of differentiated models of care for stable patients on antiretroviral therapy in a tertiary health facility in Southwestern Nigeria

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ABSTRACT

Objectives: Differentiated care is a patient-centered care designed to improve quality of antiretroviral therapy (ART) service delivery. However, documenting patient experiences on models of differentiated care are critical to understanding and improving the models. This study assessed the preferences of patients on ART for differentiated care models and also explored the experiences of patients with the models.

Materials and Methods: An in-depth interview was conducted on 30 patients on differentiated care models. Interviews were audio recorded, later transcribed, and combined with notes taken during the interview. Themes around preference for models, benefits, and challenges associated with models and subthemes were developed from the codes, verified, and analyzed using content analysis. Atlasti version 8 was used to code and develop themes from the data collected.

Results: Participants expressed preferences for fast track model which is a facility-based model. They also reported that models yielded key benefits including reduced waiting time and cost of accessing drugs. The major negative impact reported by participants in community-based model was increased status disclosure risk and instability of program in the community pharmacies.

Conclusion: Study participants living with human immunodeficiency virus and acquired immunodeficiency syndrome on differentiated care preferred facility-based models. Program instability and increased risk of status disclosure were major challenges associated with community-based model.

Keywords: Antiretroviral therapy, Human immunodeficiency virus/Acquired immunodeficiency syndrome, Differentiated care

INTRODUCTION

Human immunodeficiency virus (HIV) is one of the most pressing public health issues in Nigeria as it is for other Sub-Sahara African countries. Recent survey indicated that 1.9 million people are living with HIV in Nigeria with a prevalence of 1.5% among adult aged 15–49 years.[1]

Many strategies are needed to end acquired immunodeficiency syndrome (AIDS) as a public health threat. These include HIV treatment which is a unique tool in the AIDS response,

preventing illness and death, as well as preventing new infections. In 2014, the Joint United Nations Program on HIV/AIDS (UNAIDS) sets out a treatment target with the objective to help end the AIDS epidemic by 2030. This was supported by the UNAIDS '95–95–95' target which aimed to diagnose 95% of all people living with HIV, provide antiretroviral therapy (ART) for 95% of those diagnosed, and achieve viral suppression for 95% of those treated by 2030.[2] Hope of ending the AIDS epidemic depend in large measure on the world's ability to provide HIV treatment to all who need it, in a rights-based approach; therefore, final targets for universal treatment access become critical.

The number of people on ART for the long-term management of HIV is continuing to increase and this can be attributed to the recently updated World Health Organization (WHO) consolidated guidelines on the use of ART recommending to "treat all" which mark a paradigm shift in the delivery of HIV treatment: From who is eligible and when to start ART, to how to provide client-centered and high-quality care to all people living with HIV (PLHIV). As part of this shift, the new guidance includes service delivery recommendations based on a "differentiated care framework."[3,4] There is a broad agreement that a "one-size-fits-all" model of HIV services will not succeed in providing sustainable access to ART and support services for the 37 million PLHIV today. Instead, health systems will need to both accelerate ART initiation and support retention and viral suppression, which require adapting HIV services to specific client populations and contexts.[3]

Differentiated care is a client-centered approach that simplifies and adapts HIV services across the cascade, in ways that both serve the needs of PLHIV better. The models reflect the different needs and preferences of different groups of PLHIV and reduce unnecessary burdens on the health system. The core principle for differentiating care is to provide ART delivery in a way that acknowledges specific barriers identified by clients and empowers them to manage their disease with the support of the health system. The WHO highlights the need for client-centered care to improve the quality of HIV care services and with the population of PLHIV having increasingly diverse needs, health systems will have to adapt away from a "one-size-fits-all" approach.[5] Differentiated service delivery supports shifting resources to clients who are the most in need by supporting stable clients to have fewer and less intense interactions with the health system. The models aim to delink clinical visits from ART refills visits for stable patients by decreasing patient clinical visits to once every 6 months and pharmacy pick-up for medication visits (both ARVs and opportunistic infections prophylaxis) to once every 3 months.[6] Pharmacy visits will be spaced from 1 to 3 months, and clinical visits from 3 to 6 months for patients defined as stable.[6] Before implementation of differentiated care, most ART patients made the same number of visits and saw the same cadre of healthcare workers at health facilities regardless of their disease progression. Since a large proportion of ART patients are stable and healthy, providing streamlined models of differentiated care for these patients may offer opportunities to improve service delivery efficiency while also maintaining quality.[7,8]

With the recent implementation of differentiated care models in Nigeria, there is a need to evaluate with clear indicators, including quality and outcomes of care, client and healthcare workers' satisfaction, and costs to both the client and the health system. However, there are only a few studies on differentiated care in Nigerian environment as evident from sparse literature on the subject. This study aimed to contribute to addressing this research gap and provide baseline data for policy makers in developing appropriate evidence-based strategies to inform decision-making around model scale up and improvement. As the models are implemented and improved through analysis of program data, quality improvement mechanisms, and implementation research, stakeholders can work together to address the priority challenges that arise.

MATERIALS AND METHODS

Setting

The study was carried out in Ile-Ife in Osun State. The town is mainly urban in nature, having basic social amenities such as electricity, pipe-borne water, good roads, primary and secondary schools, as well as tertiary institutions. Obafemi Awolowo University Teaching Hospitals Complex where the research was conducted is a major tertiary health institution in the state and it provides services to the immediate environment, surrounding community, as well as referrals from the surrounding states and all over the nation. One of the major clinics in the hospital is Virology Research Clinic (ART clinic) which offers services exclusively to HIV infected patients. Services offered in the facility include voluntary counseling and testing, prevention of mother to child transmission, ART for adult and children, support group services, and treatment of opportunistic infections. The clinic operates on every working day of the week and there is an average of 2000 patients enrolled into HIV/AIDS care and treatment services of the facility. Drugs and laboratory services are provided free for all HIV patients attending the facility.

Study design

This study adopted a qualitative approach using content analysis. The interpretive method aimed at drawing a substantive inference from responses of respondents. It was a hospital-based cross-sectional study which sought to assess experiences of patient devolved to differentiated care models at ART clinic in Obafemi Awolowo University Teaching Hospital Complex, Ile-Ife.

Study population

All HIV-positive patients aged 18–65 years who had been devolved to any of the models of differentiated care existing in the facility were considered as source population.

Inclusion and exclusion criteria

Adult patients aged 18–65 years who had been devolved to any of the models of differentiated care existing in the facility and who was visiting for a regular bi-yearly scheduled ART appointment were included in the study. Patients who were yet to be devolved or who were critically ill during data collection period were excluded from the study.

Sampling procedure and selection of study participants

Convenient sampling technique was used in recruiting participants. Participants were selected among patients that attended clinic in the months of July and August 2019. The adult ART clinic runs on Mondays and Wednesdays with an average of 80 patients booked per clinic day. Nurses who worked at the unit were met and the study to be done was discussed with two of them that consented to helping out in the recruitment exercise. The study objectives, inclusion and exclusion criteria, as well as the sampling technique were clearly discussed with the nurses. The nurses recruited participants from each model among persons who visited for a regular scheduled ART appointment and their informed consent was obtained after giving them a brief introduction of the study. All willing and eligible patients were directed to a private room where they had face-to-face interview with two researchers. Interviewers asked questions about patients' knowledge of the models, perceived benefits, and satisfaction with the model and any challenges faced. Interview was conducted in either English or local languages and all interviews were documented through field notes and audio recording.

Data collection process and study instrument

Data were collected using an interview guide. Individuals who agreed to participate had a face-to-face interview with the principal investigator and one research assistant in a private room. Training on how to ask questions and record the information accurately was given to the research assistant and the content of the interview guide was discussed in detail. Data were collected on the adult clinic days between July and August 2019 and a total of 30 participants were interviewed, each interview took about 10–15 min. Before the commencement of the actual study, a pre-test was carried out on eight patients in the facility who were not part of the final study. The pre-test helped in making necessary adjustments to the instrument. The data gathering method was an in-depth interview that had various sections such as sociodemographic characteristics; factors determining choice of differentiated care models; benefits; and challenges associated with the models.

Data analysis

Method of analysis

The data gathered were analyzed using content analysis. Four basic steps were adhered to, these are; open coding which involved coding the bunch of text obtained from the field and creating themes as coding progressed, concepts were also formed while reading the texts line by line, and this process was repeated in the course of interacting with the texts. The process aided in fragmenting data into conceptual components. Sessions that took place in local language were translated into English and the transcripts were also systematically coded. The next step called theoretical coding involved more thematic classification, each concept was compared to see how they might relate to more inclusive and larger concepts called categories. The third step involved memoing and theorizing; memos are ideas that cross the minds of the data collectors on the field which formed the field notes, they are also the writings of the analysts as they became familiar with the data they were coding. The last step of the analysis was integrating, refining, and writing-up theories. Atlasti version 8 was used to code and develop themes from these data. The essence of coding is to move methodologically to a higher conceptual level. Furthermore, the data were retrieved through code summary report to document key findings; this assisted in organizing the data in a systematic way and, further, helped in generating themes for the study and formulating the concluding part of the study.

Ethical approval

Ethical approval for the study was obtained from the Ethics and Research Committee of Obafemi Awolowo University Teaching Hospitals Complex, Ile-Ife [IRB/IEC/0004553]. Permission to proceed with the study was obtained from the project coordinator of the clinic (Virology Research Clinic). Furthermore, the members of staff of the facility were properly informed before selection process was carried out in the unit. Voluntarily signed informed consents were obtained from participants after explaining the purpose of the study and reading out the subject information sheet to them.

RESULTS

The presentation of the research findings is divided into four sections which were done thematically in the light of the specific objectives the study was set to achieve. The first section displays the sociodemographic characteristics of the

participants; the second section presents information related to preferences of the patients for the models of differentiated care, this is followed by perceived benefits of the models while the last section portrays the challenges associated with models of differentiated care.

Sociodemographic characteristics of study respondents

The study enrolled 30 HIV-infected stable patients who have been devolved to different models of differentiated care. Seventeen respondents (56.7%) were on fast track refill model (FTR), 9 (30%) on community pharmacy ART refill model (CPART), and the remaining 13.3% started with CPART model but later changed to FTR. Twenty-one (70%) of the study participants were female and 9 (30%) were male. Majority of study participants were married (76.7%) while the remaining 23.3% were widowed. More than one-third of the respondents constituting 37% and 33% had secondary and tertiary education respectively. One-fifth of the total respondents representing 20% had primary education while very few of them (10%) had no formal education. More than three-quarters, 24 (80%) of the participants were Christians. With respect to the occupation of respondents, 40% were traders, 7 (23.3%) were artisans, and 20% were civil servant while those that were retiree, driver, and student were just minority. More than three-quarter of the respondents 23 (76.7%) were aged 30–45 years; respondents within the 46–55 and 56–70 years were 10% and 13.3% of the sample respectively.

Factors determining choice of differentiated care models

In assessing the factors determining choice of different models, the knowledge base of patients on the models of differentiated care was evaluated and a number of themes were generated in explaining various forms of knowledge the respondents were exposed to:

Health talk

The participants noted that they had been exposed to periodic health talk to increase and update awareness on the different aspects of their health during their usual clinic appointments before they were devolved to different models and they were able to give account of some of the knowledge gained. They were made to realize that consistency in keeping to appointment has a lot to do with their well-being or the quality of life.

> *We were told to be very careful, not to get involved in adultery act so that it will not be contacted by another person. We should not eat kolanut or drink beer, we should take the drug and eat good food so that the drug will work properly* (*Female participant).*

Another individual explained:

> *Those who are regular with their clinic appointment and take their drug and follow all instructions given are those that the infection will not affect their daily life (Female participants).*

Enlightenment on differentiated care models

It is noteworthy to state that the majority of the respondents were aware of the program and its core deliverables.

> *I was educated on the models and I was given a form to fill. I was told that only the people that are regular in clinic and have good adherence will be differentiated (Female participant).*
> *I was told only patients that have good CD4 and low viral load will be differentiated to the models (Male participant).*

Interviewees also offered important details about collection of their drugs and when to come back to the clinic for full clinical check-up which implied that they had good understanding of how the program is organized. In the words of some:

> *I will pick my drug every 2 months and come to clinic 6 months to see the doctor and do test (Male participant)*
> *You must come to the hospital to do your investigation when you are due (female participant)*
> *We were told that not every time we should queue to see doctor when we want to collect our medication but at interval of 6 months when it is necessary to do test we see doctor (Male participant).*

Choice of model

A good number of participants reported that they were allowed to make informed decision about choice of model and list of accredited community pharmacies was made available to those that chose CPART. A number of factors determined the choice made by the participants as depicted in Figure 1. One interviewee from fast track model explained:

> *I am popular and I do not want people to know me outside, so I feel safer collecting my drug from the hospital (Female participants, Fast Track).*

In the words of another:

> *I prefer the clinic because I will see others collecting the drugs and I feel encouraged by this… (Female participant, Fast Track)*
> *I am a food seller and very popular, I might come across someone I know if I choose to go to community pharmacy and this will affect my business (Female participants, Fast Track).*

Some participants expressed a clear preference for CPART model.

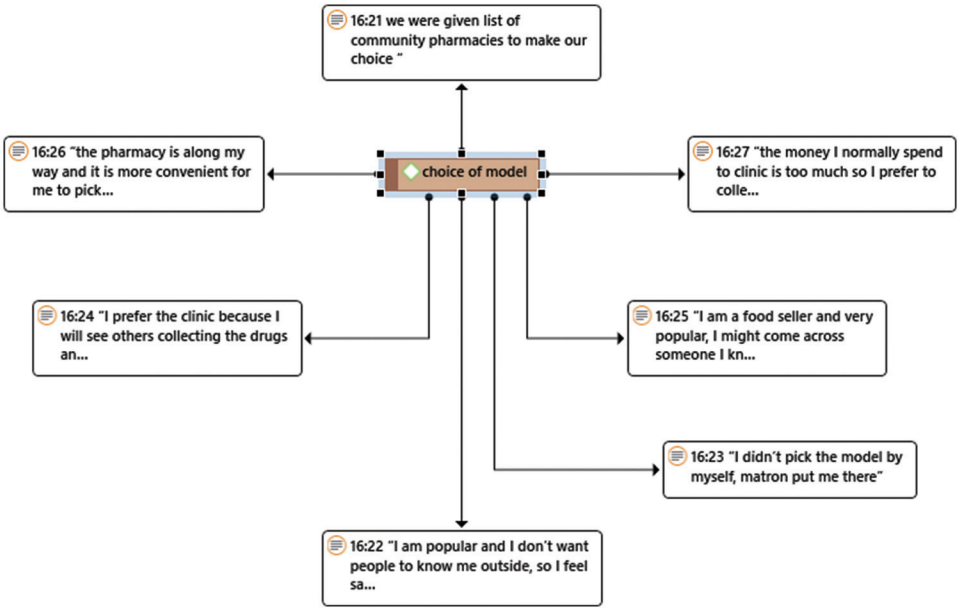

Figure 1: Semantic networks showing choice of model.

> *"We were given list of community pharmacies to make our choice, the pharmacy is along my way and it is more convenient for me to pick my drug there" (Male participant, CPART).*
>
> *"The money I normally spend to clinic is too much, at times; I miss my clinic appointment because I do not have transport money so I prefer to collect from a nearby pharmacy" (Female participant, CPART).*

However, some participants expressed doubt about their knowledge of some certain aspects of the program, some in fast track model claimed, they were not aware of the other models like CPART, while some reported that they were devolved without their informed decision. A female participant reported:

> *"I was not informed about the types of model available in the clinic, I was just told to join fast track because I come from a far place, I had no option than to join the one I was asked to join since I did not know about any other one"(Female participant, Fast Track).*

Another echoed:

> *"I was not told that we can collect our drugs outside the hospital" (Female participant, Fast Track).*

Perceived benefits of differentiated care models

Study participants pointed to some advantages while describing their experiences of differentiated care as shown in Figure 2. Advantages included orderliness in drug dispensing, quick response, and increased privacy. Another reported advantage was ARV pick-up at the community pharmacy at users' convenient time. The benefits are described in detail below.

Orderliness in drug dispensing

Majority of the respondents confirmed the program allowed for orderliness in drug dispensing procedure. This improved access and satisfaction of the beneficiary. As declared by one of the participants;

> *In fact, last session was so good because they were so orderly, once you sit down in the pharmacy; the drugs will be dispensed to you. Very beautiful service (Female participants, Fast Track).*

In expressing the form of orderliness derived from the program, another participant stated:

> *The new model is OK in the sense that we do not have to join a long queue to see the doctor like the old system, those that came for drug pick-up are separated to just see the matron who will write the drug for them (Male participant, Fast track).*

Interviewees offered important details about how differentiated model has helped in combating stress as far as access to drug is concerned. Stress control will greatly facilitate willingness to keep appointment hence, improved quality of life would be attained.

> *It has reduced the stress of waking up early in the morning only to still join a long queue at different points like record unit, counseling, and consultation with the doctor before collecting drug from the pharmacy. All I have to do now is to walk in, see the matron for prescription and pick my drug from the pharmacy (Male participants, Fast Track).*

Time saving

Participants also placed a high value on the amount of time they saved by belonging to a differentiated care model, they

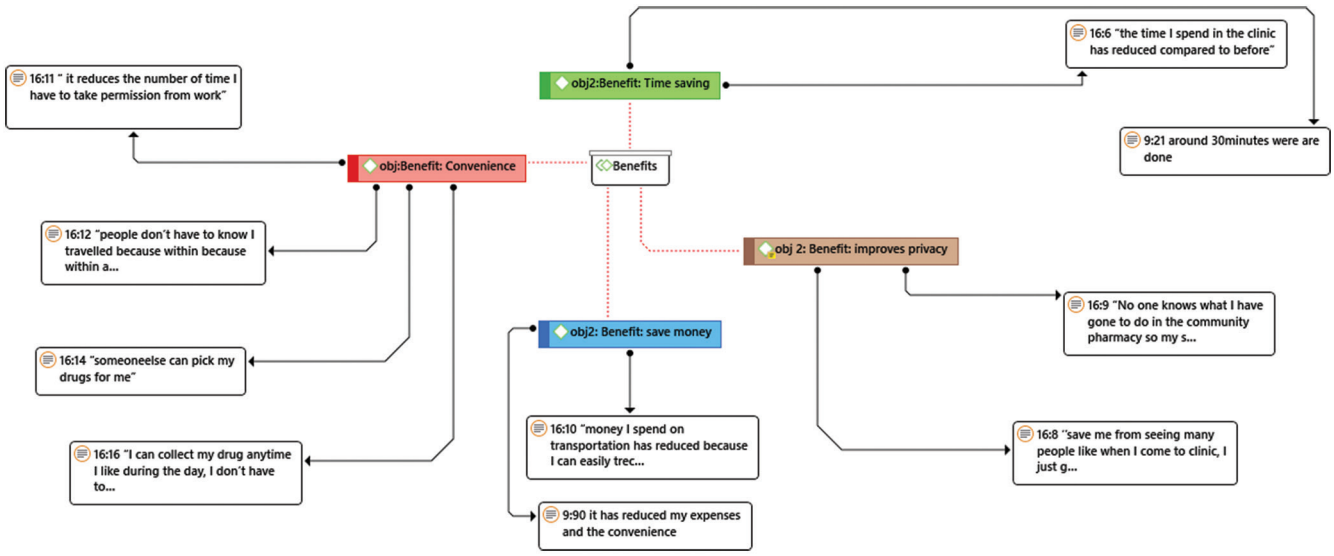

Figure 2: Semantic network showing the relationship among the subthemes identified for perceived benefits.

perceived a quick response rate as one of the factors that could help in retention of patient in care. For instance, answering the question; how long does it take you to be attended to?, majority of the respondents gave answers reflecting, overall, a quick response rate.

> *I think at most an hour (Female participant, Fast Track).*
> *It is not time demanding at all (Patient participants, individual interview, female).*
> *Around 30 min, we are done (Male participant, CPART).*
> *It is so fast no protocol (Male participant, Fast Track).*
> *The time I spend in the clinic has reduced compared to before (Female Participant, FT).*
> *It does not take me much time to get my drug…I do not have to join a long queue again (Female participant, FT).*

Like so many patients interviewed, a male participant explained that he would have to wake up at 5 a.m. to get early to his clinic at the facility. Poor roads, traffic gridlock, and delays at car parks made for long and unpleasant journeys. With FTR, he could now leave home later and return in time to attend to other things.

> *I do not have to wake up early in the morning to meet clinic appointment which usually takes a long time to be completed, sometimes we stay from morning till 3pm, but with this new model, I'm being attended to promptly (Male participant, Fast Track).*

Convenient and money saving

For many, the time investment required to visit the facility translated into time away from important domestic and paid work activities. Time away had negative economic repercussions and raised suspicion in local communities. It was often difficult for patients to explain long and regular absences to those who depended on their labor, both within and outside the home. Workers resorted to giving excuses or lying to bosses and coworkers to explain away their extended absence. Those formally employed feared having to repeatedly request permission for time away because they felt it put them at risk of losing their jobs. One interviewee in CPART model explained:

> *When I was still under the old system, I have to take permission from work for a whole day to attend clinic but now I do not have to miss work, I can pick my drug after working hours since the community pharmacy will still be opened (Female participant, CPART).*

Another echoed this experience.

> *"I can collect my drug at the community pharmacy any time convenient for me, my work is not affected. I can easily contact the pharmacy to fix an appointment for my drug collection (Male participant, CPART).*

The differentiated care models seem to be more economical relative to the previous system as emphasized by many of the participants in CPART model. In the words of one:

> *The money I spend on transportation has reduced because I can easily trek to the pharmacy shop unlike the clinic that I have to take transport (Female participant).*

Some of the participants in FTR also reported that differentiated care model afforded them ample amount of financial economy and convenience. Some stated that they sometimes enjoy the opportunity of someone else picking drugs on their behalf if they are unable to come to clinic as reported by the following participants:

> *My husband and I have same appointment date, both of us do not have to come all the time, he can easily pick my drugs for me and this has reduced the money we have to spend on transportation and I also have more time to attend to some other things at home (Female participant, Fast Track).*

I am a shoe maker and I normally travel down from neighboring town to attend clinic, with fast track model, people do not have to know I traveled because within a short time I am back to work (Male participant, Fast Track).

Privacy

The respondents in CPART expressed their desire for privacy which was afforded by the program. There is a belief that if a patient is seen by so many people in the clinic, there is potential for discrimination and stigmatization. A woman noted that:

The new model has saved me from seeing many people unlike when I come to clinic, I just get to the pharmacy, pick my drugs and leave, no one knows what I have gone to do in the community pharmacy so my secret is covered (Female participant).

Challenges associated with differentiated care models

Challenges associated with models of differentiated care cited by participants were peculiar to CPART which is a community-based model and they were centered on reduced opportunities for interaction with medical doctors; poor awareness about all the models of care available, absence of pharmacist which made program unsustainable in some community pharmacies, and, for some, increased risk of disclosure of HIV infection status [Figure 3].

Reduced contact with medical doctors

Following the health talk, clinic visits at the facility unfolded in a series of steps that brought patients into contact with a variety of health-care professionals, including a physician. Patients had ample opportunity to discuss their health concerns with physicians and to raise questions related and unrelated to HIV. With implementation of differentiated care, these opportunities were often sharply reduced; there is a less comprehensive service. One interviewee described her differentiated care experience this way:

At times, I have questions to ask the doctor, for instant, I have pains in my throat, I would have loved to confirm some things from my doctor and ask for the drug to take for the pain (Female participant, Fast Track).

Another talked about his concerns:

I am satisfied with the model but I have concerns about what to do in case I fall ill and I need to see the doctor (Male participants, CPART).

Program continuity

Some of the participants especially those devolved to a particular community pharmacy expressed their disappointment, they reported that they enjoyed the new model for a short period because the pharmacist in charge resigned and they had to be referred back to the hospital for their drug pick-up.

I have been asked to come back to the clinic because the pharmacist in charge of the pharmacy is no longer available (Female participants, CPART).

I visited the pharmacy shop 3 times without getting my refill then I was directed back to the hospital (Male participants, CPART).

Poor process of differentiation

Some of the study participants reported that they were not properly informed about different types of models available, some even claimed that they were just devolved to a model without their consent and as a result was put in places that were not convenient for them as reported by the following participants:

I would have preferred another model that will allow me not to come to the clinic at all, may be my drugs are just sent to me but I was not informed that such model exist in the hospital (Male participant, Fast Track).

I was not properly educated about the different types of model available in the clinic. I was just told to join fast track, I had no option than to join since I do not know about the other (Female participant, Fast Track).

Another recounted his experience:

I'm not happy with the way l was treated because l was initially collecting my drugs from a community pharmacy which is much more convenient for me, only to be returned to the facility with the false allegation that l missed my pick up appointment at the community pharmacy. I feel the staff in charge of things like this in the facility should always check their records properly before making decisions (Male participant, Fast Track).

Increased disclosure risk

Another challenge of differentiated care cited by patient participants especially those in CPART was feeling an increased risk of disclosure of HIV status. One participant provided a particularly vivid account of an experience she had when she went to a community pharmacy for her ARV pick-up. She recounted:

When CPART model was introduced to us, we were told that only the pharmacist at the community pharmacy will be opportune to know our status since he/she will be the only one to attend to us, we were given a card carrying only our ID number without names to present to the pharmacist, all we have to do is to enter like any other customer and ask for the pharmacist who will then attend to us in privacy. This arrangement gave me

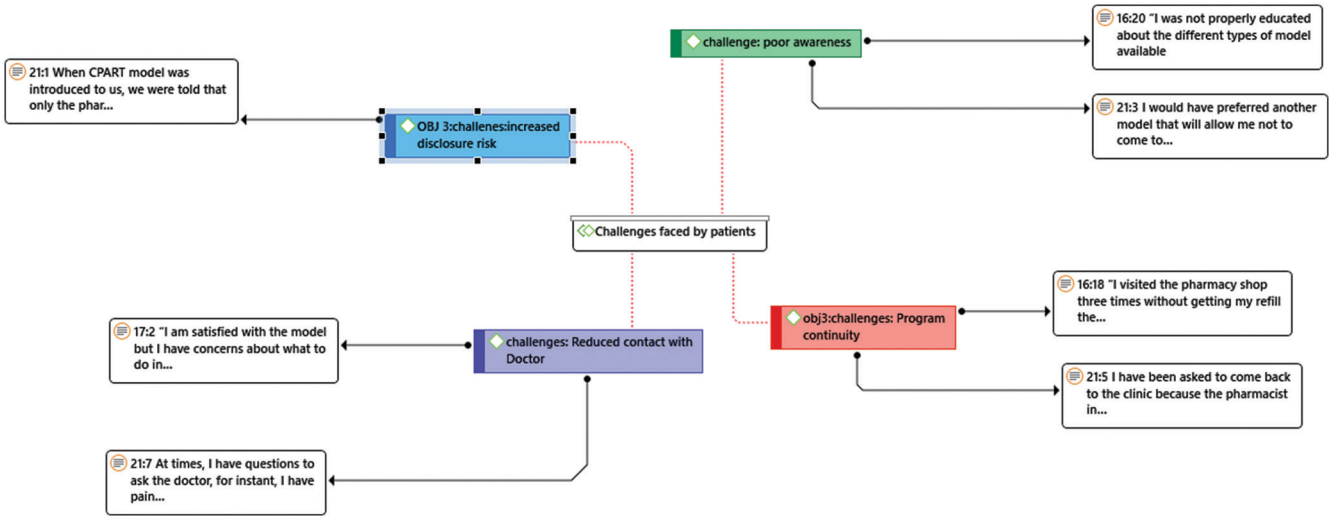

Figure 3: Semantic network showing various challenges faced by the patients on differentiated care models.

the confidence that my status will be kept secret from other member of staff in the pharmacy shop. I was surprised and embarrassed to find out during one of my visit that the sales girl on duty who happened to be my neighbor knew my status because she directed me to the clinic to pick my drug since the pharmacist was not around and it was my 3rd time of checking on him. I kept wondering how she knew what I came to do (Female participant).

DISCUSSION

The WHO consolidated guidelines on the use of ART recommended "treat all" and this has accelerated the call for differentiated ART delivery, a method of care that increases access to HIV treatment and addresses the treatment needs of PLHIV on lifelong ART. There was a strong recommendation that a stable individual on ART receives less frequent ART refills (3–6 monthly rather than current standard of monthly refills) and less frequent clinic visits.[4] There are clear benefits of differentiated care at the individual and health-care facility levels. To understand how the delivery of differentiated ART care is responding to the needs and priorities of patients, this research captured a set of advantages and disadvantages that represent patients' key experiences with differentiated care models.

Factors determining choice of differentiated care models

The respondents were generally aware of differentiated care models in operation in the study facility: Majority of the respondents had good understanding of eligibility criteria and also demonstrated knowledge of scheduled clinic appointments; however, a few of the respondents claimed lack of awareness of the differentiated care models. One of the aims of differentiated HIV care models is ensuring that clients have improved access to therapy while also decongesting health facilities. In contrast, this study showed that almost three-quarters of the respondents were currently in FTR model which is an indication that patients have an overall preference for collecting ART at the health facility instead of the community pharmacy. The preference of patients for FTR in this study is comparable to a study carried out in Zambia which reported overall preference for reduced clinic visit frequency.[9] Moreover, the study showed that there was a strong preference for getting treatment at a facility among urban participants while rural patients showed, on average, a mild preference for community ART collection. The heterogeneity of preference for differentiated care models was also identified in another cohort in South Africa.[10]

There were various factors that determined the choice of model among the participants; many preferred to receive their care at the hospital facility because of the confidence they have in facility staff, while fear of stigmatization and discrimination in the community form the major reason a good number of the respondents would not opt for the community pharmacy-based model. Preference for facility-based models in this study is in agreement with studies done in South Africa and Ghana where it was reported that patients still showed preference for FTR despite government paying for the cost of bringing care into the community.[11,12] Another Ghanaian study reported that most participants had the construct that comprehensive assessment of their health can be carried out at each visit before they collect their medications.[13] Patients' preference for models of differentiated care highlights the fact that in settings where community-based treatment is being considered by health authorities. Patients should also be given the option of being treated in the facility.[13]

Positive impacts of differentiated ART service delivery

The majority of published evidence of differentiated care has been limited to ART delivery for stable adults in high prevalence settings in Sub-Saharan Africa. Some innovative service delivery models have emerged in response to context-specific client needs and health systems challenges met in different countries.[14] This study revealed that two models of differentiated care (FTR and CPART) have been successfully implemented in the facility and patients reported that these models are yielding key benefits. Similarly, facility-based individual models commonly referred to as fast track or multi-month prescription/scripting has been piloted or implemented in at least six other countries (Malawi, Ethiopia, Rwanda, South Africa, Swaziland, and Uganda).[15-17]

Furthermore, differentiated care models implemented in other settings include: Client-managed groups (known as community adherence groups or CAGs) in Mozambique, Uganda, Zimbabwe, Kenya, and Swaziland.[18-20] CPART which is an example of out-of-facility individual models which reduce client costs of transport to clinics and fees for clinic visits implemented in the facility is similar to community drug distributions points seen in Uganda[21,22] and the Central Chronic Medicine Dispensing and Distribution program in South Africa.

The feedback received on the FTR and CPART models in this study was generally positive, participants confidently testified on benefits of the models. The most commonly discussed advantages of the FTR model were related to reduced time spent and burden of joining a long queue at appointments, this is consistent with other studies done in Malawi and South African which revealed that stable clients enrolled in "fast track" pick-up lanes saved time by collecting prepackaged ART.[23,24] In addition, it was indicated that automated pharmacy dispensing units in South Africa allowed clients to avoid queues for ART refills; hence, there were improvements in patient waiting time, increased time for counseling, and adherence.[11,25] Other benefits highlighted by the participants included; orderliness in drug dispensing and collection by proxy which saves them the cost of transportation to the clinic. This is comparable to a research from Plateau State, Nigeria, where participants reported time saving, reduction in money spent on travel to clinic visits and avoiding exposure to dangers on the road as the major advantages of differentiated care model.[26]

The advantages of CPART model were also explored; major benefits reported are convenience of the model. Respondent reported that they no longer have to pass through the stress of trying to meet scheduled clinic appointments; absenteeism from work has also been reduced. Another important positive impact of the model revealed by the study is reduction in cost associated with transportation because of the proximity of the community pharmacies to their homes. Similar findings have been reported in the literature; a study conducted in Northern Nigeria reported that in addition to reduction in transport fares, payment for one or more meals while away from home and, in some cases, the additional cost of overnight accommodations associated with clinic visit has been eliminated.[26] Another study reported reduction in the cost of traveling and convenience of accessing medications at the comfort of their own home.[27]

Patients' perceptions of disadvantages of differentiated care

All the participants in fast track model in this study stated that they were satisfied with the model and none mentioned any specific disadvantage posed by the model. This study finding contradicts what was reported in a study carried out in South Africa where increased patient loads, reduced patient attention, and decreased quality of care were the drawbacks identified with fast-track model.[28] Furthermore, a research carried out in Ghana revealed that respondents in FTR model saw cost implications and effects of honoring clinic appointments as challenges.[27]

In this study, while some of the patients in CPART reported positive perceptions and experiences with the model, yet, the model was not a good fit for every patient. For example, some participants talked about some challenges such as termination of program and risk of breach of confidentiality they experienced. Some other studies also indicated that stigma and discrimination about HIV status influence access to treatment.[12,29] In other words, due to the fear of stigmatization, patients would rather travel long distances at relatively significant expense than have care brought to them at/or close to home. The result of this study indicated that further studies on stigmatization are still important to identify areas for targeted interventions as was done in the United States where culturally appropriate scales for measuring stigma among African-Americans living with HIV were looked into and such a scale was found useful.[30]

Limitations

The data were based on self-report. Furthermore, due to sensitive nature and confidentiality of the subject matter, it is possible that some participants kept certain information which could be relevant to the study.

CONCLUSION

This study reveals that only two models of differentiated care have been implemented in the facility and patients still showed an overall preference for collecting ART at the health facility (FTR) instead of in the community pharmacy (CPART). Preference for FTR model was attributed to

confidence in facility staff and most importantly perceived fear of breach of confidentiality in community pharmacy.

Reduced waiting time and cost of accessing as well as convenience in accessing drugs are important benefits highlighted by patients differentiated care models in the facility. However, despite these important trade-offs, experiences of patients in CPART model revealed the key challenges associated with instability of HIV care and treatment in the community pharmacy outlets and also increased risk of status disclosure which may lead to stigma and discrimination.

Declaration of patient consent

The authors certify that they have obtained all appropriate patient consent.

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Conflicts of interest

There are no conflicts of interest.

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