

# Investigating client perception and attitude to decentralization of HIV/AIDS treatment services to primary health centres in three Nigerian states

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## Abstract

**Background** The opinions of consumers in decentralization provide insights into possible levels of improvement in access and uptake of services.

**Objectives** The study examined clients' perception and attitude towards decentralization of antiretroviral treatment services from central hospitals to primary health centres (PHCs).

**Methodology** A cross-sectional survey was undertaken in three states in Nigeria. A total of 1265 exit interviews were conducted with HIV/AIDS clients in nine health facilities.

**Findings** About a third of all the respondents were not comfortable with receiving ART services in a PHC facility close to where they live. The reasons given by 385 respondents who would not want their treatment centres near were as follows: fear of disclosure, 299 (80.4%); fear of being discriminated against, 278 (74.3%); and satisfaction with care received at current facility, 278 (74.3%). However, more than 90% of respondents in all three states felt that decentralization of ART services to PHCs would be beneficial in controlling HIV/AIDS in Nigeria; the difference in respondents' perception across the three state was found to be statistically significant ( $P < 0.001$ ).

**Conclusion** The findings imply that scaling-up of treatment services to PHCs would be widely accepted, and probably result in increased uptake. However, this must be accompanied by targeted behaviour change interventions for clients who for the fear of disclosure and stigma would still not access care from proximate facilities.

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## Introduction

Nigeria has the third highest burden of HIV infection in the world and the second highest

numbers of HIV-infected people globally; instituted control measures have failed to achieve desired reductions in rates of new infections among children and young adults.<sup>1–5</sup> Limited

financial access and geographic access are some of the factors that constrain HIV/AIDS control efforts in Nigeria, as in other developing countries.<sup>6</sup> The recorded catastrophic cost of accessing and consuming antiretroviral treatment services imply that the citizenry cannot ordinarily procure and sustain the services required to reduce the prevalence and adverse effects of the infection on the country's economy in future.<sup>6,7</sup>

Among the key constraining factors to achieving universal coverage of antiretroviral treatment services is the centralization of services in secondary and tertiary hospitals, mostly located in urban settings. Efficient decentralization of HIV treatment services is recommended as a key strategy for improving access to care, and a shift towards this is being observed in many developing countries.<sup>8</sup> Efficiency in decentralization of ART services will involve fewer levels of bureaucracy at the local levels, and separation of functions; better matching of ART services to local preferences; improved access to care for hard-to-reach areas and vulnerable groups; and use of cost-effective approaches.<sup>9,10</sup>

In-country evaluations of decentralized ART services showed that it led to better community and individual acceptability of services and greater proximity to treatment centres for clients, which culminated in faster enrolment and better retention in treatment.<sup>3,6,8</sup> There were also reports of reduction in workload for nurses and counsellors leading to improved patient care, as well as reductions in waiting time and financial costs for clients who were able to access greater proximity of services.<sup>11</sup>

A decentralization pilot that was launched in two states in Nigeria in 2010 effectively moved HIV testing and counselling (HTC) and prevention of mother-to-child transmission (PMTCT) services from centrally located specialist hospitals to peripheral health centres. This was seen to increase access to care for the most affected and those in hard-to-reach areas, as well as improve community participation and ownership. The current focus of the national HIV control programme is to scale-up this decentralization reform, both in breadth (scale of services

covered) and in width (number of states implementing). Scaling-up of health services has been defined as deliberately increasing the impact of successfully tested innovations to benefit more people and foster development and sustainability of interventions.<sup>12,13</sup> It is grounded in the principles of respect for and promotion of human rights and should therefore pay attention to the needs and rights of vulnerable groups as well as emphasize provision of quality health services.<sup>12,13</sup>

This study provides new information on the perceptions and attitude of HIV-infected clients towards decentralization of HIV/AIDS treatment services to PHCs in Nigeria. Although decisions to decentralize are often driven by the supply side, the opinions of end-users in decentralization provide insights into the level of uptake of services and how efficient improvement in access will be. Hence, the study helps to provide greater insight on what consumers perceive about having to receive care at primary health facilities that are close to where they live and work, and what factors influence their views.

## Methods

### Study area

The study was conducted between June and December 2013 in 3 states of Nigeria, selected from the six geopolitical zones in the country. The study states were Abia state from south-east geopolitical zone, Cross River state from south-south geopolitical zone and Adamawa state from the north-east geopolitical zone. In selecting the study states, the status of ART decentralization was taken into consideration. As at the time of the study, decentralization was planned and about to start in Abia state, not yet started in Adamawa state and already started in Cross River state.

In each of the three states, two local government areas (LGAs) with high prevalence of HIV infection were purposively selected: one urban (the state capital) and a rural LGA. In Abia state, Umuahia north and Ukwu east were

studied as urban and rural LGAs, respectively. In Adamawa state, Yola north (Urban) and Numan (rural) were studied, while in Cross River state, Calabar Municipal (urban) and Akpabuyo (rural) were studied. Based on the geographic availability of facilities, two health facilities offering ART services were selected in each of the urban LGAs, while one health facility was selected in each of the rural LGAs.

### Study design and sampling

The study utilized a cross-sectional quantitative design. The study population consisted of adult clients who were enrolled and receiving antiretroviral treatment for HIV/AIDS in the study facilities. Sample size per state was determined using 95% confidence level, 50% proportion of clients willing to participate in decentralized ART service provision and 10% precision. This gave a minimum sample size of 200 per geographic site (i.e. 400 per state). The sample size was increased to 220 per site to make up for incomplete or non-response to the questionnaires, yielding 440 respondents per state and a total of 1380.

Consecutive sampling technique was applied in the selection of participants in each of the treatment facilities.

### Data collection and analysis

Data was collected for 6 weeks from October to December 2013. Clients were interviewed as they exited the treatment facilities, using a pre-tested interviewer-administered questionnaire. Once clients had completed their consultations and received treatment for the day, they were directed by a health worker to a private room to be interviewed by the data collectors. The interview rooms were located in the same building as the treatment centres but on the way out of the health facility.

A pre-tested interviewer-administered questionnaire was used to collect information on respondent's socio-demographic characteristics and their satisfaction with care received at their treatment facilities. The questionnaire was

specifically developed for this study by a team of experienced research fellows and assistants in client satisfaction surveys. It was reviewed by 2 senior researchers for content validity and pre-tested for construct validity on 10 HIV/AIDS clients receiving care from a facility in a different state. A final revision of the questions was done in a de-brief meeting to incorporate observations from the pre-test.

Data was collected by experienced research assistants who were also trained on how to administer the questionnaire. Information was collected on clients overall and graded level of satisfaction with health services received such as prevention of mother-to-child transmission (PMTCT), counselling and testing, treatment and social support services. Satisfaction levels were graded as very satisfied, satisfied, dissatisfied and very dissatisfied. Information was also collected on clients' perceptions of benefits of decentralizing ART services to PHCs; their willingness to receive ART services at a PHC facility close to where they live; and their views of community acceptability and support for decentralized ART to PHCs.

Data was double-entered in Microsoft access and transferred to SPSS version 17 (SPSS Inc. Released 2008. SPSS Statistics for Windows, Version 17.0. Chicago, USA: SPSS Inc.) for cleaning and analysis. State-specific and aggregate data analyses were performed. Frequencies and proportions were calculated for all categorical variables. Between-state comparisons were made for the levels of satisfaction with services and attitudes to decentralization to PHCs. Tests of statistical significance of observed associations were done at 95% confidence for the outcome measures, and socio-demographic correlates of willingness to receive care at a proximate PHC facility were determined for each state.

### Ethical consideration

This research was reviewed and approved by the Institutional Review Board of Family Health International's, the Protection of Human Subject Committee, North Carolina,

USA, and the Health Research Ethics Committee of the University of Nigeria Teaching Hospital, Ituku-Ozalla, Enugu state, Nigeria. Informed consent was obtained from all participants. Respondents were assured of confidentiality of the information they provided; that their participation in the study or lack of it would not affect the services and treatment received for their illness.

### Findings

Of 1380 questionnaires distributed, 1300 (94%) were retrieved and 1265 (92%) were found to be adequately filled for analysis. This comprised of 404 (29%) from Abia state, 453 (33%) from

Adamawa state and 408 (30%) from Cross River state. Hence, all the states reached the minimum sample size. Table 1 shows that majority of the respondents in all three states were females, aged between 26 and 45 years and mostly married in monogamous relationships. The combined data shows that a greater proportion of the respondents (91.1%) had received some form of schooling.

A total of 1185 (93.7%) of the respondents stated that their health status had improved since starting antiretroviral treatment. Majority of the respondents (94.9%) were satisfied with the ART service delivery mechanism that they were currently receiving, and 94.3% were willing to continue receiving care with the current treat-

Variables	Abia state <i>N</i> = 404 <i>n</i> (%)	Adamawa state <i>N</i> = 453 <i>n</i> (%)	Cross River state <i>N</i> = 408 <i>n</i> (%)	Combined <i>N</i> = 1265 <i>n</i> (%)
<b>Gender</b>				
Male	124 (30.7)	110 (24.3)	120 (29.4)	354 (28.0)
Female	280 (69.3)	343 (75.7)	288 (70.6)	911 (72.0)
<b>Age categories</b>				
<25 years	30 (7.4)	58 (12.8)	86 (21.2)	173 (13.7)
26–35 years	135 (33.4)	210 (46.4)	168 (40.9)	511 (40.4)
36–45 years	136 (33.7)	121 (26.7)	85 (20.9)	345 (27.3)
46–55 years	75 (18.6)	52 (11.5)	43 (10.6)	170 (13.4)
>55 years	28 (6.9)	12 (2.6)	26 (6.4)	66 (5.3)
<b>Marital status</b>				
Married monogamous	237 (58.7)	217 (47.9)	203 (49.8)	657 (51.9)
Married polygamous	3 (0.7)	40 (8.8)	7 (1.7)	50 (4.0)
Single	81 (20.0)	86 (19.0)	122 (29.9)	289 (22.8)
Divorced	6 (1.5)	37 (8.2)	7 (1.7)	50 (4.0)
Separated	7 (1.7)	5 (1.1)	19 (4.7)	31 (2.5)
Widowed	70 (17.3)	68 (15.0)	50 (12.3)	188 (14.9)
Had some education	383 (94.8)	401 (88.5)	369 (90.4)	1153 (91.1)
<b>Highest level of education</b>				
Primary	91 (23.8)	96 (23.9)	135 (36.6)	323 (28.0)
JSS	36 (9.4)	46 (11.5)	43 (11.7)	125 (10.8)
SSCE	168 (43.6)	141 (35.2)	103 (27.9)	412 (35.7)
Tertiary	68 (17.8)	62 (15.4)	64 (17.3)	194 (16.8)
NCE/OND	19 (5.0)	26 (6.4)	24 (6.5)	68 (5.9)
Quaranic education	1 (0.3)	30 (7.5)	0 (0.0)	31 (2.7)
<b>Major occupation</b>				
Government worker	55 (13.6)	71 (15.7)	52 (12.7)	178 (14.1)
Private sector	41 (10.1)	22 (4.9)	21 (5.1)	84 (6.6)
Self-employed	207 (51.2)	88 (19.4)	139 (34.1)	434 (34.3)
Artisan/petty trading/farmer	28 (6.9)	104 (23.0)	93 (22.8)	224 (17.7)
Unemployed/housewife	50 (12.0)	67 (14.8)	51 (12.5)	168 (13.3)
Farmer	22 (5.4)	100 (22.1)	51 (12.5)	173 (13.7)

**Table 1** Socio-demographic characteristics of respondents disaggregated by states

ment mechanism. Of those who were not satisfied with the current service delivery mechanism, long waiting time appeared to be the most recurring reason for their dissatisfaction.

Table 2 shows the grading of clients' level of satisfaction for different ART services offered. Over 90% of respondents in all three states appeared to be at least satisfied with HTC services, laboratory services and provision of HIV/AIDS drugs. The level of satisfaction with other services was so uniform in all states. For instance, over three-quarters of respondents in Adamawa state were satisfied with PMTCT services, unlike in Abia and Cross River states

where 108 (26%) and 174 (42.6%) respondents, respectively, were satisfied. The difference in level of satisfaction across the three states was found to be statistically significant for all services ( $P < 0.001$ ).

Table 3 shows clients' perception of and attitude to decentralization of ART services to PHCs. About a third of all the respondents were not comfortable with receiving ART services in a PHC facility close to where they live, but in Abia state, the proportion was 59.2%. The difference in willingness to accept decentralization between the three states was found to be statistically significant ( $<0.05$ ). However,

**Table 2** Respondents' level of satisfaction with different ART services

Services	Level of satisfaction	Abia state	Adamawa state	Cross River state	$\chi^2$ (P-value)
HTC	Very satisfied	262 (64.9)	395 (87.2)	225 (55.1)	119.891 (<0.001)
	Satisfied	132 (32.7)	53 (11.7)	169 (41.4)	
	Dissatisfied	4 (1.0)	4 (0.9)	10 (2.5)	
	Very dissatisfied	5 (1.2)	–	1 (0.2)	
	Not applicable	1 (0.2)	1 (0.2)	3 (0.7)	
PMTCT	Very satisfied	60 (14.9)	259 (57.2)	76 (18.6)	294.103 (<0.001)
	Satisfied	48 (11.9)	89 (19.6)	98 (24.0)	
	Dissatisfied	4 (1.0)	2 (0.4)	9 (2.2)	
	Very dissatisfied	2 (0.5)	4 (0.9)	–	
	Not applicable	290 (71.8)	99 (21.9)	225 (55.1)	
Laboratory services	Very satisfied	153 (37.9)	290 (64.0)	136 (33.3)	130.970 (<0.001)
	Satisfied	185 (45.8)	118 (26.0)	218 (53.4)	
	Dissatisfied	39 (9.7)	19 (4.2)	36 (8.8)	
	Very dissatisfied	21 (5.2)	13 (2.9)	–	
	Not applicable	6 (1.5)	13 (2.9)	225 (55.1)	
HIV/AIDS drugs	Very satisfied	264 (65.3)	430 (94.9)	238 (58.3)	192.351 (<0.001)
	Satisfied	132 (32.7)	19 (4.2)	136 (33.3)	
	Dissatisfied	4 (1.0)	–	10 (2.5)	
	Very dissatisfied	1 (0.2)	–	1 (0.2)	
	Not applicable	3 (0.7)	3 (0.7)	22 (5.4)	
DOTS	Very satisfied	28 (7.0)	106 (23.5)	52 (12.7)	81.220 (<0.001)
	Satisfied	54 (13.4)	68 (15.0)	74 (18.1)	
	Dissatisfied	20 (5.0)	15 (3.3)	6 (1.5)	
	Very dissatisfied	14 (3.5)	4 (0.9)	–	
	Not applicable	288 (71.6)	257 (56.9)	276 (67.6)	
Social support	Very satisfied	32 (7.9)	180 (39.7)	58 (14.2)	661.290 (<0.001)
	Satisfied	75 (18.6)	152 (33.6)	184 (45.1)	
	Dissatisfied	83 (20.5)	42 (9.3)	25 (6.1)	
	Very dissatisfied	201 (49.8)	25 (5.5)	2 (0.5)	
	Not applicable	13 (3.2)	53 (11.7)	136 (33.3)	
Health education	Very satisfied	142 (35.1)	310 (68.4)	82 (20.1)	308.076 (<0.001)
	Satisfied	190 (47.0)	109 (24.1)	275 (67.4)	
	Dissatisfied	15 (3.7)	3 (0.7)	12 (2.9)	
	Very dissatisfied	38 (9.4)	2 (0.4)	2 (0.5)	
	Not applicable	14 (3.5)	29 (6.4)	37 (9.1)	

**Table 3** Clients' perception of and attitude to decentralization of ART services to PHCs

Variables	Abia state	Adamawa state	Cross River state	Combined	$\chi^2$ (P-value)
Would like treatment centre to be brought closer to home	239 (59.2)	360 (79.5)	281 (68.9)	880 (69.6)	41.75 (<0.001)
Reason for saying no					
Don't want people to know status	122 (79.7)	73 (78.5)	104 (82.5)	299 (80.4)	0.62 (0.73)
Not discriminated against	116 (74.8)	63 (67.7)	99 (78.6)	278 (74.3)	3.33 (0.19)
Happy with current facility	102 (65.8)	73 (78.5)	103 (81.7)	278 (74.3)	10.37 (0.01)
Others	16 (15.8)	11 (11.8)	7 (5.6)	34 (10.6)	6.45 (0.04)
Decentralization of ART services to PHCs is beneficial to HIV/AIDS control	364 (90.1)	440 (97.1)	386 (94.6)	1190 (94.1)	19.24 (<0.001)
Reason for saying no					
PHCs don't have enough staff	13 (48.1)	7 (50.0)	11 (57.9)	31 (51.7)	0.45 (0.80)
PHC staff not qualified	15 (53.6)	7 (50.0)	7 (38.9)	29 (48.3)	0.97 (0.62)
PHC staff not always available	12 (46.2)	9 (64.3)	9 (50.0)	30 (51.7)	1.23 (0.54)
No equipments in PHCs	10 (38.5)	8 (57.1)	9 (50.0)	27 (46.6)	1.40 (0.50)
No space in PHCs	6 (24.0)	9 (64.3)	10 (55.6)	25 (43.9)	7.38 (0.03)
Don't want to be discriminated against	19 (73.5)	3 (0.7)	9 (50.0)	31 (51.7)	11.69 (0.003)
Others	3 (10.5)	0 (0.0)	0 (0.0)	3 (0.3)	–
Community will support decentralization to PHCs	321 (79.5)	425 (93.8)	385 (94.4)	1131 (89.4)	62.14 (<0.001)
Reason for non-support by community					
PHCs don't have enough staff	27 (39.7)	22 (73.9)	9 (39.5)	58 (47.9)	10.31 (<0.01)
PHC staff not qualified	31 (46.3)	23 (74.2)	11 (47.8)	65 (53.7)	7.04 (0.03)
PHC staff not always available	26 (38.8)	23 (74.2)	7 (30.4)	56 (46.3)	13.54 (0.001)
No equipments in PHCs	26 (38.8)	22 (71.0)	13 (56.5)	61 (50.4)	9.19 (0.01)
No enough space	11 (14.9)	25 (80.6)	6 (26.1)	41 (33.9)	41.63 (<0.001)
Lack of involving community members	18 (26.9)	23 (74.2)	4 (17.4)	45 (37.5)	25.09 (<0.001)
Don't want stigma	26 (38.8)	2 (0.4)	6 (26.1)	28 (23.2)	22.60 (<0.001)
Favoritism	3 (8.3)	0 (0.0)	3 (13.0)	6 (7.1)	2.16 (0.34)

over 90% of respondents in all three states felt decentralization of ART services to PHCs would be beneficial in controlling HIV/AIDS in Nigeria; the difference in respondents' perception across the three state was found to be statistically significant ( $P < 0.001$ ). Of the 385 respondents who would not want their treatment centres close by, their main reasons were fear of disclosure, 299 (80.4%); fear of being discriminated against, 278 (74.3%); and satisfaction with care received at current facility, 278 (74.3%).

Table 4 shows the results of bivariate analyses of clients' socio-demographic variables against their willingness to have the ART service centres brought closer to where they live. There was a statistically significant association between having any form of schooling and willingness to have ART centre close by, with those who have no schooling being more willing than those who

do ( $P < 0.05$ ). Statistically significant association was also found between occupation and willingness to have ART centre close by, with the farmers, artisans and petty traders being the most willing ( $P < 0.001$ ). No statistically significant association was found for other variables assessed ( $P > 0.05$ ).

## Discussion

HIV/AIDS clients appear to be generally satisfied with the ART services offered to them at their care facilities, and their level of satisfaction for key services, such as counselling and testing, antiretroviral drugs and PMTCT, was mostly very good. However, long waiting time was seen to be a major contributor to clients' dissatisfaction with the current delivery mechanism. This aligns with the findings by Ogunfowokan and Mora,<sup>14</sup> that there is a

**Table 4** Socio-demographic factors associated with clients' attitude to decentralization of ART services to PHCs

Socio-demographic variables	Proportion of clients who would like their treatment centres close to home							
	Abia state	$\chi^2$ (P-value)	Adamawa state	$\chi^2$ (P-value)	Cross River state	$\chi^2$ (P-value)	Combined	$\chi^2$ (P-value)
<b>Gender</b>								
Male	79 (63.7)	1.54 (0.22)	88 (80.0)	0.03 (0.87)	88 (73.3)	1.58 (0.21)	255 (72.0)	1.42 (0.25)
Female	160 (57.1)		272 (79.3)		193 (67.0)		625 (68.6)	
<b>Age group</b>								
<25	23 (76.7)	5.95 (0.42)	46 (79.3)	8.04 (0.22)	69 (80.2)	NA	138 (79.8)	12.72 (0.05)
26–35	77 (57.0)		156 (74.3)		108 (64.3)		340 (66.5)	
36–45	79 (58.1)		104 (86.0)		54 (63.5)		238 (69.0)	
46–55	45 (60.0)		43 (82.7)		28 (65.1)		116 (68.2)	
>56–65	12 (57.1)		9 (90.0)		22 (84.6)		43 (75.4)	
66–75	3 (50.0)		1 (100)		–		4 (57.1)	
>75	0 (0.0)		1 (100)		–		1 (50.0)	
<b>Marital status</b>								
Married monogamous	134 (56.5)	4.36 (0.50)	173 (79.7)	2.80 (0.73)	143 (70.4)	6.37 (0.27)	450 (68.5)	6.35 (0.27)
Married polygamous	2 (66.7)		35 (87.5)		4 (57.1)		41 (82.0)	
Single	53 (65.4)		65 (75.6)		78 (63.9)		196 (67.8)	
Divorced	4 (66.7)		28 (75.7)		3 (42.9)		35 (70.0)	
Separated	6 (85.7)		4 (80.0)		15 (78.9)		25 (80.6)	
Widowed	40 (57.1)		55 (80.9)		38 (76.0)		133 (70.7)	
<b>Any schooling</b>								
Yes	224 (58.5)	1.38 (0.24)	318 (80.8)	0.06 (0.81)	250 (67.8)	2.27 (0.13)	792 (68.7)	4.71 (0.03)
No	15 (71.4)		42 (79.3)		31 (79.5)		88 (78.6)	
<b>Major occupation</b>								
Government worker	33 (60.0)	10.81 (0.16)	59 (83.1)	NA	34 (65.4)	NA	126 (70.8)	38.39 (<0.001)
Private sector	24 (58.5)		17 (77.3)		15 (71.4)		56 (66.7)	
Self-employed	111 (53.6)		63 (71.6)		91 (65.5)		265 (61.1)	
Artisan/petty	20 (74.1)		85 (81.7)		70 (75.3)		175 (78.1)	
Unemployed	34 (70.8)		39 (72.2)		30 (58.8)		103 (67.3)	
Farmer	15 (68.2)		84 (84.0)		40 (78.4)		140 (80.5)	
Housewife	1 (100)		–		–		2 (100)	
Pastor	1 (100)		1 (100)		1 (100)		13 (86.7)	
Refuses	0 (0.0)		12 (92.3)		–		0 (0.0)	

NA, not applicable.

significant relationship between clients' satisfaction with ART services and the amount of time they spend in the doctor's domain. Because HIV/AIDS treatment centres are few and widely spread-out, service providers have to deal with a client load that exceeds their capacity to cope, in terms of manpower and infrastructure.<sup>9,15</sup> Where client flow is high and manpower is inadequate to meet up, long waiting times are inevitable.<sup>16</sup> De-concentration of ART services by activating more peripheral sites

will most likely reduce patient flow and workload at the centre.

Clients' levels of satisfaction with the different HIV services offered at their treatment centres were found to differ significantly across the three states. This can be explained by a number of factors, such as the presence of multiple partners and funders in the states who provide financial and technical assistance to the state HIV programmes as well as materials to support service provision at the health facilities; waiting times due to number

and availability of health workers in the facility; and coverage of services. A study that was conducted in Northern Nigeria reported that the presence and significant contributions of donors and implementing partners in the study state were associated with improved quality of services offered and consequently client satisfaction.<sup>17</sup>

In the light of the foregoing, clients perceive decentralization of ART services to PHCs as beneficial to HIV/AIDS control. Thus, implying that scaling-up access to antiretroviral treatment is desirable not only for individual clients with HIV and AIDS but also for consolidating the successes of prevention and control programmes in developing countries. This may result from a number of factors, including reduced health-care workers' workload, improved quality of patient care, as well as reduced time and cost of services.<sup>18–20</sup> Consequently, expanding access to treatment has the potential to assist countries in achieving the 6th Millennium Development Goal and make significant progress towards achieving universal health coverage.<sup>21</sup>

Although decentralization of HIV treatment services is viewed to be beneficial by clients, fear of stigma and discrimination still signals negative influences towards accepting decentralization. If left unattended, it will continue to undermine prevention, treatment and care of people living with HIV/AIDS.<sup>22</sup> Efforts at reducing stigma and discrimination associated with HIV/AIDS have yielded significant results even in culture-driven societies, like Nigeria.<sup>10</sup> However, these HIV demystification interventions have concentrated in urban areas, leaving out the rural majority; this could explain why people residing in rural areas prefer to receive care from the centre.<sup>11</sup>

Stigma and discrimination related to HIV and AIDS often generates from the health-care facilities.<sup>23–25</sup> An example of stigmatizing attitude of health-care workers is the breach in client confidentiality by sharing test results with relatives,<sup>24</sup> and evidence shows that this has contributed to the limited uptake of HIV services especially in resource-poor settings.<sup>23–26</sup> In order for decentralization of ART services to PHCs (mostly located in rural areas in Nigeria) to yield

increased uptake and coverage of services, particular attention to stigma and discrimination needs to be given by training health workers as well as educating the community.

The limitation to the generalization of the study is the use of hospital respondents. These groups of people have in some ways been able to overcome the barriers to accessing care. Therefore, they do not adequately represent the views of others who still experience problems in accessing care, which are not included in this study.

Over all, HIV clients perceive decentralization as beneficial in HIV control, although more work needs to be performed in addressing stigma. In order to achieve universal access to ART services, we suggest that similar concerted and sustained efforts accorded to decentralization in scaling-up counselling and testing services should be extended to the provision of ART services at the PHC facilities. Successful implementation of decentralization in Nigeria requires skills and competence in priority setting processes. This is particularly important as the provision of ART services using best practices may be a challenge in resource-poor setting of most developing countries like Nigeria where decision-makers often struggle with determining how limited resources should be used to provide high-quality patient care services in a sustainable way. Although there is no single tool that can provide guidance on priority setting, we suggest that decision-makers in resource-poor countries should consider economic and ethical principles, either singly or in combination, as they may be found useful in making difficult resource decisions.

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## Conflict of interest

There is no conflict of interest to declare with respect to the present manuscript submitted for publication.

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