

Original article

Attitudes and Perceptions towards the Integration of Antiretroviral Therapy Services into Routine Out-patient Department Health Services in Yola, Nigeria

Grace Oluchi Okooboh¹, Olutayo Folashade Martins²

¹Department of Pharmacy, Federal Medical Centre, Yola, Nigeria.

²Department of Public Health, Federal Medical Centre Yola, Adamawa State

Corresponding author: Olutayo Folashade Martins

Abstract

Introduction: This study focused on assessing the attitudes and perceptions of patients and providers (healthcare providers and staff of donor agencies) towards integration of HIV services into regular out-patient health services in a tertiary health institution.

Method: A descriptive cross sectional study was carried out in the Federal Medical Center, Yola Nigeria involving 422 respondents from 4 groups; adult HIV patients enrolled into ART care, out-patients, health care workers involved in providing ART or out-patient care, or both and staff of donor agencies involved in providing care for HIV patients. A structured questionnaire designed with a 5 point Likert scale was used for data collection. A score of 1 was awarded for strongly disagree, 2 for disagree, 3 for don't know, 4 for agree and 5 for strongly agree. All scores were added to give an aggregate score for each domain and overall. ANOVA was used to test for statistical significance in attitude levels among the 4 groups of respondents. A p-value of ≤ 0.05 was considered statistically significant.

Results: A significant main effect was seen among the groups; $F(3, 381) = 4.513$, $p = 0.004$ for attitude scores. Significantly higher mean attitude scores were seen among PLWHA compared to out-patients (100.40 vs 95.40, mean difference = 5.00, $p = 0.003$).

Conclusion: Majority of respondents in all groups had a positive attitude to integration. However, among the PLWHA, despite positive attitudes towards integration, majority still preferred a separate HIV clinic.

Key words: Integration; HIV services; Out-patient services; attitudes; perceptions.

Introduction

An estimated 33million people live with HIV, two-third of them in sub Saharan Africa where three-fourth of all AIDS related deaths occur.¹The HIV prevalence rate among adults of ages 15 – 49 in Nigeria is 3.1%²and based on the report of the National HIV/AIDS and Reproductive Health Survey (NARHS), the prevalence in Adamawa state is 1.9%.³ In the absence of specific treatment, about half of people infected with HIV develop AIDS within ten years.⁴ Recent advances in HIV care and treatment that keep people alive while controlling, though not curing their conditions have led to increasing numbers of people surviving with chronic illnesses including HIV infection. With increasing access to Antiretroviral therapy (ART), the HIV response is evolving from a disease specific emergency response to a chronic disease management challenge which needs to be addressed within the context of other chronic health conditions.⁵HIV and some Non Communicable Diseases (especially cardiovascular diseases, cancers, chronic respiratory diseases and diabetes) are now the major chronic diseases of public health concern especially in low- and middle-income countries.⁶ People living with HIV/AIDS (PLWHA) also have high rates of non communicable

diseases (NCDs). With HIV programs rapidly expanding, people with HIV are living longer and are developing non-HIV related chronic conditions similar to the rest of the population. HIV programs are the first large scale chronic disease programs in many countries. They offer local and effective tools, models and approaches which can be replicated, adapted and expanded. Hence they might be used to ‘jump start’ the development of initiatives to provide prevention, care and treatment services for NCDs and other chronic conditions.⁷ Experience in addressing HIV and NCDs shows that many challenges are common to both: organizing and delivering adequate prevention services, chronic treatment and care, addressing the social and environmental determinants of these health issues, and reaching people without access to these services.⁵

Health systems comprise of a “horizontal system” of general services which provides prevention and care for prevailing health problems, and of “vertical programs” for specific health conditions. Not surprisingly, vertical (or fragmented) programs are found more frequently where poverty prevails and epidemics flourish; general health services are weakly developed under such conditions.⁸ A horizontal structure is defined as a health facility in which health workers are responsible for dealing with a wide range of health problems and respond to the felt needs of the community served.⁹ A vertical program is made up of a coherent package of activities designed to deal with a single health problem or a group of linked health problems.¹⁰ The creation of a program is the result of a political decision which *ipso facto* recognizes the importance (epidemiological, economic, social, cultural or political) of the health problem, thus justifying the establishment of a specific administrative structure responsible for the management of the program.⁹

The organization of health care services in Nigeria is complex, involving a wide range of providers in both the public and private sectors.⁸ Nigeria operates a decentralized health system in the public sector, led by the Federal Ministry of Health (FMoH) at the federal level; the State Ministry of Health (SMoH) at the state level; and the Local Government Health Department (LGHD) at the local government level. The FMoH is responsible for policy formulation, coordination and supervision of the activities of the other levels and providing tertiary care through teaching hospitals and federal medical centers. The SMoH provides secondary care through the state hospitals and comprehensive health centers while the LGHDs provide primary health care services through the primary health centers. Even though the LGHD is responsible for the oversight of the primary health care services, all three tiers of government as well as various agencies participate in its management, at times resulting in service duplication, overlap and confusion of roles and responsibilities.¹¹ Many primary health care services in sub Saharan Africa are delivered through fragmented systems such that services for tuberculosis, HIV/AIDS, routine outpatient care, maternal and child health care and family planning are collocated but use separate physical space, staff and medical records.¹²

Rapid growth in international donor funding to combat the HIV epidemic has placed an enormous additional strain on already weak public health systems and fueled the debate over fragmented (vertical) versus integrated (or horizontal) health systems, and their pros and cons.¹³ (Integrated approach to address HIV infection and NCDs as well as other chronic diseases need to be developed as integrating these services could strengthen health service delivery.⁶

The 2007 Cochrane systematic review of integration stipulated that studies investigating strategies to promote service integration in low and middle – income countries focused on the service supply side, but none examined or measured aspects of the demand side¹⁴ (assessing the client's view on integration which influences the uptake of integrated services and their effectiveness on community health).

With increasing access to antiretroviral therapy (ART), HIV response is evolving from a disease-specific emergency response to a chronic disease management challenge which needs to be addressed within the context of other chronic health conditions. HIV infection shares interrelationship with other chronic infectious diseases (e.g. TB) and other non communicable diseases (e.g. cancer, diabetes, cardiovascular diseases etc) and the elements of prevention and management are similar. People living with HIV are living longer and ageing, they are also developing non-HIV-related chronic conditions similar to the rest of the population. Integrating the HIV services with the OPD services could minimize the number of hospital visits and could strengthen health system delivery. Integration may also foster the stewardship role of HIV programs by the government especially in the light of reduced donor support and funding for HIV programs.

It is believed that integrated services will ensure that services are managed and delivered together for an efficient and high quality service, separating out services for specific diseases results in inefficient services and service duplication. It is also believed that integration of care leads to better health overall, universal access to services and equal access for people from different communities and socio-economic backgrounds, and a more convenient and satisfying service.¹⁴

Aims and Objectives

The objective of this study was to determine the attitudes and perceptions of patients (PLWHA and Outpatients), Healthcare providers and Donor agencies (involved in ART care) towards the integration of ART services into routine OPD health services in the Federal Medical Center Yola.

Materials and Methods

This study was carried out in the Federal Medical Center Yola (FMC Yola), a tertiary health institution located in the state capital (Yola) of Adamawa state in the North-Eastern part of Nigeria. The Federal Medical Center Yola is a multifunction tertiary health care institution providing a polyvalent range of health care services on both out-patient and in-patient basis with about 78,000 estimated out-patient patronage in a year. It is also a comprehensive site for the provision of ART for people living with HIV/AIDS (PLWHA) with a total of 12,734 clients enrolled into ART care.

In the Federal Medical Center Yola, the out-patient department (OPD) provides episodic care to presenting patients. The ART unit operates as a separate clinic and provides long term care to HIV infected patients enrolled into care. However, ART patients presenting with other co-morbidities such as diabetes, hypertension and other chronic conditions, gynecological problems etc. are referred to the OPD for care. In most cases, this might warrant another hospital visit. There are about 300 health care workers involved in providing care to either ART patients or out-patients or both. The ART unit also receives additional assistance in terms of funds, capacity building and technical support from donor agencies including Family Health International 360 (FHI 360), Howard University

(HU-PACE) and John Snow Inc. A total of about 20 staff of these agencies provide care and technical aid for HIV patients in FMC Yola.

Study design

The study was a descriptive cross sectional study involving four respondent groups. Three of these groups were adult HIV infected patients who are diagnosed and enrolled into care, adult patients who presented at the OPD for episodic care, health care workers involved in providing care for either HIV patients or OPD patients or both all from FMC Yola and the last group consisted of staff of donor agencies involved in providing care and technical support for HIV patients in FMC Yola.

Data was collected between the period of March 2015 and April 2015.

Inclusion and exclusion criteria

Patients included in this study were both PLWHA and OPD patients above 18 years that consented. All staff of FMC Yola and donor agencies involved in both ART and out-patient care that consented. Those excluded from this study were those (patients and staff) who declined consent.

Sample size estimation

The sample size was calculated using the formula of Lemenshow et al.¹⁵

The prevalence of desired characteristics was estimated to be 50%. An initial sample size of 384 was obtained. With 10% for attrition a total of 422 obtained.

Sampling technique

The sampling technique used for administering questionnaires O and P (for the out-patient and PLWHA respondents respectively) was the systematic random sampling method. Questionnaires H and D (for Health care providers and staff of donor agencies) were conveniently sampled and consisted of all staff that were available at the time of the study and consented to partake in the study. Proportion to size was use to determine the number of participants sampled per study group

Ethical clearance

Ethical approval to conduct this study was obtained from the Health Research and Ethics Committee of the Federal Medical Center, Yola. An informed consent was obtained from each respondent.

Data collection

A validated and pretested questionnaire was employed as data collection tool. Four different questionnaires were developed and labeled accordingly for four categories of respondents i.e. Questionnaires P, O, H and D for People living with HIV/AIDS (PLWHA) or ART patients, OPD patients, Health care workers and staff of Donor agencies respectively. Questionnaires P and O were administered by trained research assistants while Questionnaires H and D were self administered by respondents.

The questionnaires each consisted of four sections with questions majorly similar for all categories of respondents with a few specific questions for specific group(s). Some statements were also simplified for particular respondent groups.

Section 1; consisted of the respondents' demographic variables such as sex, age, marital status, level of education, place of residence, department/profession (Questionnaires H and D) and patient's HIV status (Questionnaire P).

Section 2; consisted of 10 statements to address the attitudes of respondents on the benefits of integrating ART services with routine out-patient services.

Section 3; consisted of 5 statements each assessing the attitude of respondents on integration and the changes that might be arise with it such as; increased workload for healthcare workers thus might reducing the quality of care provided, less personal attention, possibility of accidental HIV status disclosure, etc.

Section 4; consisted of 10 statements to assess the views of respondents on the determinants of integration such as infrastructure, human resource, training and retraining of healthcare workers, political involvement, etc.

For sections 2 to 4 answer options were a five (5) point Likert scale ranging from “Strongly Agree” (SD) through “Agree” (A), “Don’t Know” (DK), “Disagree” (D), to “Strongly Disagree” (SD).

Validation of instrument

The contents of each questionnaire type were reviewed by a group of experts which included three public health consultants and two experts in infectious diseases. The experts agreed the contents of the questionnaires were valid and reflected the study objective. The questionnaires were then pretested at another comprehensive site with a population having similar socio demographic variables as that of FMC Yola. Reliability test of attitudes for questionnaires P, H, D, and O gave Cronbach’s alpha values of 0.803, 0.861, 0.833 and 0.563 respectively.

Data analysis

Data collected was analyzed using SPSS (Statistical Package for Social Sciences) version 22. Questionnaires were manually validated for errors. All the data with interval and ratio scale were explored using graphical methods (histogram with normal distribution curve) to test for normality. Measures of central tendency and dispersion were used to describe continuous data while percentages were used to describe categorical data.

For the 5 point Lickert scale used ranging from strongly disagree to strongly agree; a mark of 1 was awarded for strongly disagree, 2 for disagree, 3 for don’t know, 4 for agree and 5 for strongly agree. All the scores were added to get the aggregate score for each section and overall. A respondent that scored 76 to 125 on the attitudinal scale was considered to have a high attitude towards the integration of ART services while a respondent that scored 25 to 75 on the attitudinal scale was considered to have a low attitude towards the integration of ART services. One way ANOVA was used to test for statistical significance difference among the mean attitude scores for the various groups (PLWHAs, Health workers, Outpatients and Donor agencies). A p-value of ≤ 0.05 was considered statistically significant.

Results

Response rate

A total of 422 questionnaires were administered out of which 384 were returned giving a response rate of 90.7%.

Socio demographic characteristics of respondents

Table 1 shows the socio-demographic characteristics of all respondents in this study. These include the healthcare workers, outpatients and PLWHA of FMC Yola and workers of donor agencies.

Most 134 (34.9%) respondents were between the ages of 31 to 40 years. Most of the workers were male; 12 (75.0%) of the workers in donor agencies and 31 (62.0%) of healthcare workers, while majority of the patients were female 111 (66.1%) amongst the outpatients and 99 (66.0%) amongst the PLWHA). Most

respondents were married; 14 (87.5%) of the staff of donor agencies, 36 (72.0%) of the healthcare workers, 119 (70.8%) of outpatients and 88 (58.7%) of PLWHA. All 16 (100%) staff of the donor agencies had attained tertiary education, while 49 (98.0%), 127 (75.6%) and 44 (29.3%) of healthcare workers, outpatients and PLWHA had attained tertiary education respectively. Minority had no form of education; 8 (4.8%) outpatients and 12 (8.0%) PLWHA (Table 1). All 16 (100.0%) staff of donor agencies were aware of their HIV status, while 46 (92.0%) of healthcare workers and 148 (88.1%) of outpatients were aware of theirs.

Table1 Socio demographic characteristics of respondents

PERSONAL CHARACTERISTICS	RESPONDENT GROUPS			
	HEALTH PROVIDER GROUPS	PATIENT GR		
	STAFF OF DONOR AGENCIES	HEALTHCARE WORKERS	OUTPATIENTS	
Age (yrs)	≤20	0 (0.0%)	2 (4.0%)	11 (6.5%)
	21-30	3 (18.8%)	11 (22.0%)	60 (35.7%)
	31-40	6(37.5%)	24 (48.0%)	52 (31.0%)
	41-50	4(25.0%)	13 (26.0%)	25 (14.9%)
	50-59	2(12.5%)	0 (0.0%)	16 (9.5%)
	>60	1 (6.3%)	0 (0.0%)	4 (2.4%)
Total	16(100.0%)	50 (100.0%)	168 (100.0%)	
Sex	Male	12 (75.0%)	31 (62.0%)	57 (33.9%)
	Female	4 (25.0%)	19 (38.0%)	111 (66.1%)
	Total	16 (100.0%)	50 (100.0%)	168 (100.0%)
Marital Status	Married	14 (87.5%)	36 (72.0%)	119 (70.8%)
	Single	2 (12.6%)	14 (28.0%)	32 (19.0%)
	Separated	0 (0.0%)	0 (0.0%)	2 (1.2%)
	Divorced	0 (0.0%)	0 (0.0%)	2 (1.2%)
	Widowed	0 (0.0%)	0 (0.0%)	13 (7.7%)
Total	16 (100.0%)	50 (100.0%)	168 (100.0%)	
Education	None	0 (0.0%)	0 (0.0%)	8 (4.8%)
	Primary	0 (0.0%)	0 (0.0%)	5 (3.0%)
	Secondary	0 (0.0%)	1 (2.0%)	27 (16.1%)
	Tertiary	16 (100.0%)	49 (98.0%)	127 (75.6%)
	Others	0 (0.0%)	0 (0.0%)	1 (0.6%)
Total	16 (100.0%)	50 (100.0%)	168 (100.0%)	

Attitude of staff of donor agencies towards benefits of integrating HIV services with out-patient health services

Majority of the staff of donor agencies strongly agreed or agreed to the perceived benefits of integrating HIV services with out-patient services (Table 2)

Table 2 Attitude of staff of donor agencies towards benefits of integrating HIV services with out-patient health services

BENEFITS OF INTEGRATION	ATTITUDE LEVEL					TOTAL
	STRONGLY AGREE	AGREE	DON'T KNOW	DISAGREE	STRONGLY DISAGREE	
Integration increases HIV awareness and education	10(62.5%)	5(31.3%)	0(0.0%)	1(6.3%)	0(0.0%)	16(100.0%)
Makes hospital visit more efficient since it reduces the number of hospital visits, cost and time	4(25.0%)	10(62.5%)	0(0.0%)	2(12.5%)	0(0.0%)	16(100.0%)
Addresses the issue of skewed resource allocation (ie. Allows sharing of scarce resources)	4(25.0%)	10(62.5%)	1(6.3%)	0(0.0%)	1(6.3%)	16(100.0%)
Reduces patient waiting time	4(25.0%)	4(25.0%)	3(18.8%)	4(25.0%)	1(6.3%)	16(100.0%)
Avoids missed opportunities for key interventions and minimizes patients being lost to follow up	6(37.5%)	6(37.5%)	4(25.0%)	0(0.0%)	0(0.0%)	16(100.0%)
Improves efficiency of healthworkers as there is shared workload, knowledge and skill	6(37.5%)	9(56.3%)	0(0.0%)	0(0.0%)	1(6.3%)	16(100.0%)
Can lead to reduced stigma on HIV patients	8(50.0%)	8(50.0%)	0(0.0%)	0(0.0%)	0(0.0%)	16(100.0%)
Has more chance of ensuring more equitable access to a	2(12.5%)	11(68.8%)	1(6.3%)	2(12.5%)	0(0.0%)	16(100.0%)

broad range of services

Would contribute to the

improvement in program management at the national, state and facility level 7(43.8%) 7(43.8%) 1(6.3%)
0 1(6.3%) 0(0.0%) 16(100.0%)

Would improve stewardship

role by the government for sustained care of HIV patients 4(25%) 8(50.0%) 2(12.5%)
% 1(6.3%) 1(6.3%) 16(100.0%)

Attitude of health care workers towards benefits of integrating HIV services with out-patient health services

Most healthcare workers strongly agreed or agreed to the perceived benefits of integrating HIV services with out-patient services (Table 3). Twenty four (48.0%) and 19 (38.0%) strongly agreed and agreed respectively to the statement “Integration increases HIV awareness and education”. Twenty two (44.0%) and 13 (26.0%) strongly agreed and agreed that integration would help avoid missed opportunities for key interventions and minimizes patients being lost to follow up. However seven (14.0%) and 11 (22.0%) of healthcare workers disagreed and strongly disagreed respectively that the integration of the ART services with outpatient services would reduce patient waiting time (Table 3).

Table 3 Attitude of Health care workers towards benefits of integrating HIV services with out-patient health services

BENEFITS OF INTEGRATION	ATTITUDE LEVEL					TOTAL
	STRONGLY AGREE	AGREE	DON'T KNOW	DISAGREE	STRONGLY DISAGREE	
Integration makes it possible for more people to be tested and enrolled into HIV care	21(42.0%)	18(36.0%)	2(4.0%)	4(8.0%)	5(10.0%)	50(100.0%)
Integration increases HIV awareness and education	24(48.0%)	19(38.0%)	2(4.0%)	1(2.0%)	4(8.0%)	50(100.0%)
Makes hospital visit more efficient since it reduces the number of hospital visits, cost and time	15(30.0%)	20(40.0%)	2(4.0%)	6(12.0%)	7(14.0%)	50(100.0%)

Addresses the issue of skewed resource allocation (ie. Allows sharing of scarce resources	9(18.0%)	26(52.0%)	5(10.0%)	3(6.0%)	7(14.0%)	50(100.0%)
Reduces patient waiting time	18(36.0%)	10(20.0%)	4(8.0%)	7(14.0%)	11(22.0%)	50(100.0%)
Avoids missed opportunities for key interventions and minimizes patients being lost to follow up	22(44.0%)	13(26.0%)	4(8.0%)	6(12.0%)	5(10.0%)	50(100.0%)
Improves efficiency of health workers as there is shared workload, knowledge and skill	17(34.0%)	26(52.0%)	3(6.0%)	1(2.0%)	3(6.0%)	50(100.0%)
Can lead to reduced stigma	20(40.0%)	16(32.0%)	4(8.0%)	3(6.0%)	7(14.0%)	50(100.0%)
Has more chance of ensuring more equitable access to a broad range of services	16(32.0%)	23(46.0%)	4(8.0%)	2(4.0%)	5(10.0%)	50(100.0%)
Would improve stewardship role by the government for sustained care of HIV patients	17(34.0%)	19(38.0%)	6(12.0%)	2(4.0%)	6(12.0%)	50(100.0%)

Attitude of PLWHA towards benefits of integrating HIV services with out-patient health services

Majority of the PLWHAs strongly agreed and agreed to the perceived benefits of integrating HIV services with the out-patient services. The highest positive attitude was seen in their responses to the statement “Integration makes it possible for more people to be tested and enrolled into HIV care” were 90 (60.0%) and 48(32.0%) strongly agreed and agreed respectively (Table 4).

Table 4 Attitude of people living with HIV/AIDS towards benefits of integrating HIV services with out-patient health services

BENEFITS OF INTEGRATION	ATTITUDE LEVEL					TOTAL
	STRONGLY AGREE	AGREE	DON'T KNOW	DISAGREE	STRONGLY DISAGREE	
Integration makes it possible for more people to be tested and enrolled into HIV care	90(60.0%)	48(32.0%)	1(0.7%)	3(2.0%)	8(5.3%)	150(100.0%)
Through integration, more people get to know about HIV	73(48.7%)	56(37.3%)	11(7.3%)	3(2.0%)	7(4.7%)	150(100.0%)
With integration, the number and cost of hospital visit is reduced	78(52.0%)	53(35.3%)	9(6.0%)	5(3.3%)	5(3.3%)	150(100.0%)
Integration allows people to access care irrespective of their status	82(54.7%)	53(35.3%)	5(3.3%)	8(5.3%)	2(1.3%)	150(100.0%)
Integration of services allows sharing of scarce resources	71(47.3%)	59(39.3%)	12(8.0%)	6(4.0%)	2(1.3%)	150(100.0%)
With integration, the length of time before receiving care is reduced	64(42.7%)	52(34.7%)	12(8.0%)	7(4.7%)	15(10.0%)	150(100.0%)
With integration, opportunities for important interventions are not missed and less patients are lost to follow up	56(37.3%)	65(43.3%)	16(10.7%)	7(4.7%)	6(4.0%)	150(100.0%)
There is shared workload among health workers hence better efficiency	63(42.0%)	66(44.0%)	14(9.3%)	3(2.0%)	4(2.7%)	150(100.0%)
Integration can lead to reduced stigma on HIV	80(53.3%)	48(32.0%)	12(8.0%)	6(4.0%)	4(2.7%)	150(100.0%)

patients

Integrated services has

more chance of ensuring more equitable access to many services	72(48.0%)	67(44.7 %)	3(2.0%)	3(2.0%)	5(3.3%)	150(100.0 %)
---	-----------	---------------	---------	---------	---------	-----------------

Attitude of out-patients towards benefits of integrating HIV services with out-patient health services

Most out-patients strongly agreed and agreed to the perceived benefits of integrating HIV services with out-patient services. Highest frequencies of positive attitudes were seen for the statements “Integration makes it possible for more people to be tested and enrolled into HIV care” and “Through integration, more people get to know about HIV” (Table 5).

Table 5 Attitude of out-patients towards benefits of integrating HIV services with out-patient health services

BENEFITS OF INTEGRATION	ATTITUDE LEVEL					TOTAL
	STRONGLY AGREE	AGREE	DON'T KNOW	DISAGREE	STRONGLY DISAGREE	
Integration makes it possible for more people to be tested and enrolled into HIV care	91(54.2%)	68(40.5%)	2(1.2%)	4(2.4%)	3(1.8%)	168(100.0%)
Through integration, more people get to know about HIV	50(29.8%)	111(66.1%)	3(1.8%)	2(1.2%)	2(1.2%)	168(100.0%)
With integration, the number and cost of hospital visit is reduced	54(32.1%)	94(56.0%)	7(4.2%)	9(5.4%)	4(2.4%)	168(100.0%)
Integration allows people to access care irrespective of their status	56(33.3%)	95(56.5%)	12(7.1%)	4(2.4%)	1(0.6%)	168(100.0%)
Integration of services allows sharing of scarce resources	57(33.9%)	87(51.8%)	15(8.9%)	4(2.4%)	5(3.0%)	168(100.0%)
With integration, the length of time before receiving	47(28.0%)	92(54.8%)	15(8.9%)	10(6.0%)	4(2.4%)	168(100.0%)

care is reduced

With integration,

opportunities for important

interventions are not missed 48(28.6%) 93(55.4%) 20(11.9%) 2(1.2%) 5(3.0%) 168(100.0%)

and less patients are lost to

follow up

There is shared workload

among health workers 51(30.4%) 97(57.7%) 12(7.1%) 3(1.8%) 5(3.0%) 168(100.0%)

hence better efficiency

Integration can lead to

reduced stigma on HIV 51(30.4%) 102(60.7%) 6(3.6%) 4(2.4%) 5(3.0%) 168(100.0%)

patients

Integrated services has

more chance of ensuring 44(26.2%) 98(58.3%) 20(11.9%) 3(1.8%) 3(1.8%) 168(100.0%)

more equitable access to

many services

Perceptions of staff of donor agencies on integration of HIV services with out-patient health services

Most staff of donor agencies; six (37.5%) and five (31.3%) disagreed and strongly disagreed respectively that the integration of the HIV services into the out-patient services would increase their work load. All of these staff 16 (100%) agreed that there would be reduced service duplication with integration.

Perceptions of health care workers on integration of HIV services with out-patient health services

Majority 36 (72.0%) of health care workers had positive perceptions on the integration of the HIV services with the out-patient health services. Majority 32 (64.0%) also felt their workload would increase after integration and this could affect the quality of service provided.

Perceptions of PLWHA on integration of HIV services with out-patient health services

Among the PLWHA majority 91(60.6%) preferred a separate clinic for HIV patients, most 108(72.0%) of them perceived that HIV clinics were better equipped than other units offering non HIV services while 104 (69.4%) believed that they would receive less personal attention in an integrated care setting.

Perceptions of out-patients on integration of HIV services with out-patient health services

Majority of the outpatients had a positive perception towards integration. One hundred and eight (64.2%) preferred an integrated care setting, 114 (67.9%) did not mind being in the same waiting area as HIV positive patients, 99 (58.9%) were of the opinion that HIV clinics were not better equipped than other clinics offering non-HIV services while 107 (63.7%) did not believe they would receive less personal attention due to integration.

Group main effect on attitude scores towards integration of HIV services with regular out-patient

health services

Results of one way ANOVA analysis showed there was a significant statistical difference in the means of the attitude scores among the groups (donor workers, healthcare workers, outpatients and PLWHAs);F (3, 381) =4.513, p = 0.004 (Table6).

Table 6 Group main effect on attitude scores towards integration of HIV services with regular outpatient health services

Outcome measure	GROUPS, n				df	One way ANOVA F	p value
	Mean, SD (95% CI)						
Attitude towards integration	Staff donor agencies n =16	of Healthcare workers n = 50	Out-patients n = 168	PLWHA n = 150	3,380	4.513	0.004*
	97.38, 9.20 (92.48-102.27)	98.04,12.28 (94.55-101.53)	95.40,8.11 (94.16-96.63)	100.40,15.58 (97.89-102.91)			

*significant at <0.05

Further post hoc analysis showed a significantly higher mean attitude scores of the PLWHA compared to out-patients (100.40 vs 95.40, mean difference = 5.00, p = 0.003) (Table 7).

Table 7 Multiple pair wise comparison of group main effect of attitude scores

Outcome measure	Groups, n	Mean difference	95% CI of mean difference	p value
Attitude towards integration	Staff of donor agencies (n=16) vs Healthcare workers (n=50)	-0.67	-8.69 – 7.36	1.000
	Staff of donor agencies (n=16) vs Out-patients (n=168)	1.98	-5.03 – 8.98	0.950

Staff of donor agencies (n=16)	PLWHA (n=150)	-3.03	-10.48 – 4.43	0.816
Out-patients (n=168)	Healthcare workers (n=50)	-2.64	-7.65 – 2.34	0.632
PLWHA (n=150)	Healthcare workers (n=50)	2.36	-3.41 – 8.13	0.851
PLWHA (n=150)	Out-patients (n=168)	5.00	1.24 – 2.34	0.003*

*significant at <0.05

Proffered challenges to integration of HIV services with out-patient health services

Out of the 384 respondents, a total of 40 (10.4%) respondents proffered possible challenges to the integration process. Twenty three (57.5%) identified service challenges such as inadequate infrastructure and human resource along with infection control hazards. Sixteen (40.0%) identified policy and system challenges such as lack of political will, cost, weak management and the possibility of ‘politicking’ the process. Eighteen (45.0%) identified other challenges such as attitudes of health care workers, attitudes of the PLWHA, attitudes of out-patients, inadequate sensitization and awareness, and possibility of reduced support by donors.

Discussion

Attitude towards the benefits of integration

Highest positive frequencies to the statement “Integration makes it possible for more people to be tested and enrolled into care” is similar to the findings of a study carried out in Lusaka, Zambia where all the respondents had a positive attitude to the benefits of integration especially with respect to the equitable distribution of scarce resources, shared workload among healthcare workers, reduced stigma and reduced service duplication.¹⁶

Majority of respondents felt that the patient waiting times would reduce with integration; this could be due to the fact that will be a shared work load among health care works. However, various proportions of staff of donor agencies, health workers, PLWHA and out-patients were of the opinion that patient waiting time would increase with integration (Tables 2, 3, 4 and 5); the highest frequency being seen among the health care providers. This could be due to the assumption that integration would increase their workload as integration would increase the ‘disease mix’ in the out-patient department such that health providers might take occasional mental breaks when switching from a patient type to another, this could also increase the waiting times for both groups of patients. Increase in

waiting times for both out-patients and PLWHA has been reported after integration in an intervention study carried out by Deo *et al.*¹⁷

Majority of respondents have the belief that integrated services may offer a less stigmatizing environment that could reduce stigma associated with HIV/AIDS infection because of perceived anonymity. This follows the common speculation that vertical HIV programs (e.g. HIV clinics) could be particularly stigmatizing, because any patient walking through the door of the clinic is often labeled as being HIV positive leading to an involuntary status disclosure. However, in a report by Church and his group, HIV positive patients in stand-alone HIV clinics felt their status were most protected since every other patient in the clinic was positive.¹⁸

The positive attitude of the out-patients to integration could be due to the increasing knowledge and awareness about HIV infection and its mode of transmission and so, less people feel threatened associating with HIV infected people. Also, the high prevalence of the disease in the state makes it possible that many individuals are related, associated, or support at least one HIV infected person, so if one visit to the health facility would take care of most or all of the patient's health needs, then integration would be a welcomed innovation.

Perceptions of respondents towards integration

In the 'provider' group of respondents (staff of donor agencies and health workers), though high frequencies were reported for positive perceptions towards integration, the higher frequency among the staff of donor agencies could be due to the perception that integration would have no effect or would reduce their workload which is not the case of health care workers who would actually provide the integrated service.

Again, unlike majority of the staff of donor agencies, majority of both the 'patient' group and the health care workers agree that integration would lead to an increased workload for the health workers which might result in a decrease in the quality of service rendered. The assumption that there might be the loss of free treatment and other advantages such as gifts of food supplements and other items may further explain why PLWHA still prefer a separate clinic.

Group main effect on attitude scores towards integration of HIV services with out-patient health services

A significant statistically higher mean attitude score of the PLWHA compared to out-patients indicates that the PLWHA had a more favorable attitude towards integration than the out-patients. Reasons for this may be due to the fact that with integration, they could mix with other patients freely, accessing a polyvalent range of services irrespective of their status. Also, with integration, the number and cost of hospital visit is reduced since they can access services for most/or all of their health needs in a single visit thus making the visit cost effective.

Possible challenges to the process of integration

Some respondents were of the opinion that the process of integration could be subjected to 'politicking' probably due to service overlaps or managers trying to maintain control over their 'territories'. In a paper presented by Lush *et al* that provided historical comparison between the health systems in Ghana, Kenya, Zambia and South Africa, to examine the progress made on integration of HIV and sexually transmitted diseases (STD) with maternal and child health/ family planning services since 1994. It was observed that the success observed in South Africa was due to political commitment to ensuring access to primary health care rather than expanding vertical programs.¹⁹ Thus,

political commitment to integration should be guided by a desire to improve equity in availability and access to health care.

Some other identified challenges include the attitude of health care workers, attitude of the PLWHA, and the attitude of out-patients. Health care workers might resist integration due to the perception that their workload might increase (as discussed above) more so, if there are no incentives attached. Also the social disapproval or stigma associated with HIV infection might also influence their attitude towards HIV clients as highlighted by Bart *et al.*⁹This could result in involuntary status disclosure. Some out-patients due to fear of being infected (probably due to poor knowledge about HIV infection) might resist the idea of integration. Some PLWHA might resist the idea of integration due to 'felt' stigma (i.e. negative perception they have about themselves) or 'enacted' stigma (discriminatory behavior by others). Some of them might not want to lose the advantage of free treatment and gifts as well as the mutual support and 'perceived status protection' gained in HIV alone clinics and thus might not want to mix with other patients.

Limitations of this research include the fact being a single hospital based study it may not be representative of other health workers and donor agency workers in Nigeria. With the questionnaire being the tool for data collection a lot depends on the truthfulness of the respondents. Also, this study was a cross sectional study that measured the attitude of respondents to integration at a single contact and attitudes may change over time if respondents are made to understand all that integration entails.

Comparison with other studies was limited due to the uniqueness of the study which is aimed at assessing the attitudes of out-patients, PLWHA, staff of the health facility (involved in providing care to out-patients, PLWHA or both) as well as the staff of donor agencies involved in providing care to HIV/AIDS patients.

Strengths of the study include that it took into consideration most of the stakeholders involved in providing care to out-patients and PLWHA.

Conclusion

The adoption of an innovation (such as integration of health services) is influenced by what the innovation entails, how complex it is, the perception of would-be adopters and how easy it is to align it to fit in with existing mechanisms. From the findings of this study, majority from all respondent groups had a positive attitude towards integration of ART services with routine out-patient services. However, despite positive attitudes towards integration, majority of PLWHA still preferred a separate clinic for HIV infected patients. Proffered potential challenges to the integration process include: service challenges, policy and system challenges, possibility of reduced donor support and the attitude of the various stakeholders. With respect to stigma on HIV patients and patient waiting times, majority of respondents in the 'patient' population felt that both stigma and waiting times would be reduced with integration. Among the 'provider' group, majority felt that stigma on HIV patients would be reduced with integration; however there were differing views on the effect of integration on patient waiting time.

The implication of the findings of this study is important since the perceptions of the various stakeholders towards integration affect the adoption and utilization of the process. Implementing integration without considering the views of relevant stakeholders could result in poor utilization by users and a reduction in the quality of service provided by health workers.

Future studies should seek to evaluate the various contextual circumstances (such as facility-level infrastructure) in the health system and develop operational models of integration that can align with existing mechanism to create a unified framework that is accountable and sustainable

Acknowledgments

The authors wish to acknowledge the contributions and support of Mr Stephen E. Okooboh, Daphne-Grace Okooboh, Mr Chima Enwereuzo and Mrs Chima Enwereuzo. Also acknowledged are the contributions of Dr Abdulfatai Salawu, staff of the Pharmacy unit of FMC Yola; Manasseh Pakchama, Musa Aya and Shuaibu Labaran, Gloria Haniel of the ART unit of FMC Yola and Ishaku for their contributions to the success of this work.

References

1. Joint United Programme on HIV/AIDS(UNAIDS) (2010). Getting to zero: 2011-2015 strategy. http://www.unaids.org/sites/default/files/sub_landing/files/JC2034_UNAIDS_Strategy_en.pdf. Accessed 17/10/2014.
2. CIA World Factbook (2012). "HIV/AIDS – adult prevalence rate". <https://www.cia.gov/library/publications/the-world-factbook/rankorder/2155rank.html> Accessed 17/10/2014
3. National Reproductive Health Survey (NARHS) Plus II 2012 Final 18112013|Okeiyi Daniel-Academia.edu. Available from: http://www.academia.edu/9469489/NARHS_Plus_2012_Final_18112013 Accessed 17/10/2014
4. Mandell GL, Bennett JE and Dolin R eds (2010). Mandell, Douglas and Bennett's principles and practice of infectious diseases. Chapter 118 <https://www.amazon.com/Bennetts-Principles-Practice-Infectious-Diseases/dp/0443068399>. Accessed 18/10/2014.
5. Joint United Programme on HIV/AIDS(UNAIDS) (2012). The HIV experience and other chronic diseases www.unaids.org/en/resources/presscenter/featurestories/2012/july/20120722chronicdiseases/ Accessed 6/11/2015
6. Tilahun N. Integration of HIV and NCDs in health care delivery in low and middle income countries. *Prev.Chronic Dis.*2012; 9:110331. doi <http://dx.doi.org/10.5888/pcd9.110331>
7. Rabkin M, El-Sadr WM. Why reinvent the wheel? Leveraging the lessons of HIV scale-up to confront non-communicable diseases. *Global Public Health*2011; 6(3) :247-56
8. WHO (2005a) Vertical-horizontal synergy of the health workforce. 2005;83(4);241-320 www.int/bulletin/volumes/83/4/editorial10405/en/ Accessed 24/5/14
9. Bart C, Vincent DB, Sylvie D. Integration of vertical programs in multi-function health services. *Studies in Health services, organizations and policy*1997; 3:7-42 <http://www.itg.be/itg/generalsite/infservices/downloads/shsop03.pdf>
10. Cairncross S, Peries H, Cutts F. Vertical health programs. *The Lancet* 1997; 349 (suppl III) 20-22.
11. World Bank (2010). Improving primary health care delivery in Nigeria: Evidence from 4 states. Working paper No.187. Washington DC. <http://documents.worldbank.org/curated/en/2010/04/12098056/improving-primary-health-care-delivery-nigeria-e>. Accessed 20/10/2014

- 12 Doherty T, Chopra M, Tomlinson M, Oliphant N, Nsibandé D and Mason. Moving from vertical to integrated child health programs: experiences from a multi country assessment of child health days approach in Africa. *Trop Med Int Health*, 2010;15:296-305
- 13 Briggs CJ, Garner P. Strategies for integrating primary health services in middle and low income countries at the point of delivery. *The Cochrane Database of Systematic Reviews*, 2006, issue 2. Art No. CD03318. doi: 10.1002/14651853.CD003118.pub2 <http://www.thecochranelibrary.com>. Accessed 20/10/2014.
- 14 Lemeshow S, Hosmer DW, Klar J, Lwanga. *Adequacy of sample size in health studies*. Hoboken, NJ: Wiley.
- 15 Levine R and Oomann N. Global HIV/AIDS funding and health systems: Searching for the win-win. *Journal of Acquired Immune Deficiency Syndromes*, 2009; 52:53-55
- 16 Topp SM, Chipukuma JM, Giganti M, Mwango LK, Chiko LM, Tambatamba-Chapula B, Wamulume CS, Reid S. Strengthening health systems at facility level: feasibility of integrating antiretroviral therapy in primary health care services in Lusaka, Zambia. *PLoS ONE* 5 (7):e11522. doi: 10.1371/journal.pone.0011522.
- 17 Deo S, Topp SM, Garcia A, Soldner M, Yagci SK, Chipukuma J, Chibesa SW, Stewart ER, Swann J. Modeling the impact of integrating HIV and outpatient health services on patient waiting times in an urban health clinic in Zambia. *PLoS ONE* 7(4): e35479. doi:10.1371/journal.pone.0035479
- 18 Church K, Wringe A, Fakudze P, Kikuyi J, Simelane D, Mayhew SH and The Integra Initiative. Are integrated HIV services less stigmatizing than stand-alone models of care? A comparative case study from Swaziland. *Journal of the International AIDS Society* 2013.16-17981
- 19 Lush L, Cleland J, Walt G, Mayhew S. Integrating reproductive health: myth and ideology. *Bulletin of the World Health Organization* 1999; 77:771-7.