

Evaluation of referral letters to the antiretroviral therapy outpatient specialist clinic of the tertiary health facility in Ilorin, Nigeria.

¹OA Agede, ²JA Ogunmodede

1.Department of Medicine and Pharmacology, Division of HIV, Clinical Pharmacology and Therapeutics, University of Ilorin and University of Ilorin Teaching Hospital, Ilorin, Nigeria.

2.Department of Medicine, Division of Cardiology, University of Ilorin and University of Ilorin Teaching Hospital, Ilorin, Nigeria.

Abstract

Human immunodeficiency virus (HIV) disease is a chronic medical condition that requires lifelong treatment. Specialist care is of importance in its management and referral process to a specialist is mostly initiated through a referral letter. The ability to design a good management plan during consultation depends on the quality of clinical information in the referral. This study was designed to assess the information provided in referral letters presented to Antiretroviral Therapy (ART) outpatient specialist clinic in a tertiary hospital in Nigeria

It was a retrospective study conducted between January and June 2022. All referral presented to ART clinic on clinic days were reviewed for information provided using a data capture form.

A total of 142 referrals were analyzed. The majority of the referral provided information on patient identifiers. Information on clinical parameters considered important for quality review and management were generally unsatisfactory. Less than a quarter of the referral provided information on laboratory investigations like cluster of differentiation 4 count. Majority (97.9%) of the referrals stated the reason for the referral but physical examination findings and medication history were only reported in 38.7% and 43% respectively.

Referral letters to ART clinic were deficient in the information needed for quality review. The deficiencies delayed patient management. Institution of measures to address the deficiencies will help to improve HIV care. The use of a structured referral form and training of doctors on the required information in a referral letter will also impact positively on HIV care. Human Immunodeficiency Virus, Referral Letter, Specialist, Antiretroviral Therapy

Introduction

Human immunodeficiency virus disease is a disease of the human immune system caused by the human immunodeficiency virus (HIV). It has continued to be a serious health issue in many part of the world including sub-Saharan African countries.¹ The Joint United Nations Program on HIV and Acquired Immunodeficiency Syndrome (AIDS) (UNAIDS) in 2021 reported that there were 37.7 million people living with HIV and about 680,000 people died from the infection globally.² Infection with Human Immunodeficiency Virus and its progression to Acquired Immunodeficiency Syndrome (AIDS) have been a global crisis plaguing the healthy living of individuals.³ The discovery of Highly active antiretroviral therapy (HAART) was one of the greatest development in the response to the HIV pandemic. The use of HAART has brought succor to infected people with improvement in general wellbeing and quality of life. It has also significantly reduced HIV-related morbidity and mortality.³ HIV testing service has increased globally and is targeted at getting as many people as possible that have had the infection and to improve on antiretroviral therapy coverage.⁴ The potential for testing services to act as a gateway to HIV treatment can only be met if individuals diagnosed with HIV are subsequently referred to HIV treatment and care facilities in a prompt manner.⁴ Delay in referring patients that tested positive for HIV to a treatment facility for evaluation by a specialist may lead to late initiation of HAART and prophylaxis for opportunistic infections and this may result in poor outcomes.

Individuals diagnosed with HIV in developing countries are not always successfully linked to HIV treatment services resulting in missed opportunities for timely initiation of antiretroviral therapy or prophylaxis for opportunistic infections.^{5,6} Worried by this development in developing countries, UNAIDS launched the 90-90-90 campaign with the aim of meeting the set goal by 2020. The agenda was to diagnose 90% of people living with HIV, 90% of those diagnosed to be on antiretroviral therapy, and 90% of those on HAART would have achieved virologic suppression by the year 2020.⁴ This target was not met by the end of 2020 and now extended to 2030. People living with HIV infection have both individual and structural factors that made reaching the 90-90-90

Correspondence to:

Dr OA Agede

Division of HIV, Clinical Pharmacology and Therapeutics,
University of Ilorin and
University of Ilorin Teaching Hospital, Ilorin, Nigeria.
agede.aa@unilorin.edu.ng
+2348035887600

goals a challenge.⁷ One of the ways highlighted by UNAIDS to achieve these goals was the need for an improved referral mechanism.⁴ A well-written referral letter no doubt benefits the patient by reducing delays in accessing clinical care.^{8,9} It was noticed that few referral tools have been developed and as a result, there is a paucity of data on the number of persons who were successfully linked with treatment services following an HIV diagnosis.^{9,10} Referrals are communication channels between healthcare professionals. It is a way of transferring a patient from one health facility/worker to another usually from a lower level of care to a higher one for the continuation of care and expert services.^{11,12}

The referral process is commonly initiated by communication in the form of a referral letter written by the referring doctor or healthcare worker as the case may be. A referral form (either a card or piece of paper) should ideally be standardized and contain essential information. The minimum information required on the referral form as designed by UNAIDS in collaboration with World Health Organization (WHO) includes: (a) The date of the referral request. (b) The type of services needed. (c) The name of the patient. (d) The name and contact information of the institution or department initiating the referral request. (e) The name and contact information of the institution or department to which the referral request is directed. (f) The names of the designated contact persons at both institutions or departments.⁴

The quality of clinical information provided in the referral letter guides the specialist in making an informed decision during consultation. This is also of importance in the management of the patient as it helps in effective and efficient triage of patients which facilitates valuable patient-specialist interaction and management. The ability to effectively and efficiently formulate an appropriate management plan for a patient at the time of specialist consultation depends on the quality of clinical details provided in the referral letter which includes diagnostic information like the physical

examination findings and laboratory results. A good referral has been found to be cost effective for the patients and the healthcare system at large.^{13,14}

The aim of this study was to assess the adequacy of information provided in referral letters to the antiretroviral therapy outpatient specialist clinic of the University of Ilorin Teaching Hospital (UITH) and provide information on the current practice, identify the deficiencies, and give constructive feedback to the referring doctors or healthcare workers. The findings can be used to design appropriate interventions that will enhance the writing of a quality referral letter which will aid in prompt patient management.

Materials and Methods

This study was a retrospective cross-sectional study of evaluation of all referral letters presented to the antiretroviral therapy outpatient specialist clinic of University of Ilorin Teaching Hospital between January and June 2022. Ethical approval was obtained from Ethics and Research Committee of UITH with approval number ERC PAN/2022/07/0309. The referral letters were assessed for information considered essential for good quality review, patient triage, and the development of an effective management plan for the patient using a data capture form. The data capture form was designed by the researcher using the information provided by WHO as essential for referring HIV/AIDS patients to a treatment facility.

Descriptive and frequency statistics were obtained for the variables studied. Data analysis was carried out using the Statistical Package for Social Sciences (SPSS), version 22.0 (SPSS Inc., Chicago, IL, USA). Categorical variables were expressed as percentages and *p* value of <0.05 was considered statistically significant.

Results

A total of 142 referral letters were presented, reviewed and analyzed in this study. They were written

Table 1: Source of Referral Letters presented to the Antiretroviral Therapy Outpatient Specialist Clinic in UITH (n=142)

Source of Referral		Frequency	Percentage
Internal (n=120)	Accident and Emergency Unit	9	7.5
	Family Medicine Department	67	55.8
	Obstetrics and Gynecology Department	4	3.3
	Other Medical Outpatient Specialist Clinics	21	17.5
	Other Specialty Clinics(Eye, Dental,ENT)	14	11.7
	Surgical Outpatient Department	5	4.2
External (n=22)	General Hospital Ilorin	3	13.6
	Sobi specialist Hospital, Ilorin	2	9.1
	Various Private Hospitals	12	54.6
	Not specified	5	22.7

Table 2: Patient identifier information on referral letters presented to the Antiretroviral Therapy Outpatient Specialist Clinic in UITH (n=142)

Variables	Present n(%)	Absent n(%)
Patient's name	141 (99.3)	1 (0.7)
Hospital Number	130 (91.5)	12 (8.5)
Date of referral	134 (94.5)	8 (5.6)
Address of patient	114 (80.3)	28 (19.7)
Patient's age	137 (96.5)	5 (3.5)
Patient's gender	137 (96.5)	5 (3.5)
Patient's weight	80 (56.3)	62 (43.7)
Patient's marital status	80 (56.3)	62 (43.7)
Patient's occupation	90 (63.4)	52 (36.6)
Source of referral	137 (96.5)	5 (3.5)

Table 3: Information on clinical parameters in referral letters presented to the Antiretroviral Therapy Outpatient Specialist Clinic in UITH

Variable	Categories	Present n (%)	Absent n (%)
History	Duration of the disease	78 (54.9)	64 (45.1)
	Medication Information	61 (43.0)	81 (57.0)
	Other treatment modalities	39 (27.5)	103 (72.5)
Physical Examination	Blood pressure	29 (20.4)	113 (121.6)
	Other findings	55 (38.7)	87 (61.3)
Result of Investigations	HIV screening	139 (97.9)	3 (2.1)
	HIV confirmatory test	68 (47.9)	74 (52.1)
	CD4 Count	24 (16.9)	118 (83.1)
	Viral load	19 (13.4)	123 (86.6)
	Packed Cell Volume	110 (77.5)	32 (22.5)
	Full blood count	27 (19.0)	115 (81.0)
	Liver function test	23 (16.2)	119 (83.8)
	Electrolyte, urea, creatinine	26 (18.3)	116 (81.7)
Referring Doctor identifier	Lipid profile	14 (9.9)	128 (90.1)
	Name	117 (82.4)	25 (17.6)
	Signature	134 (94.4)	8 (5.6)
Other information	Reason for referral	139 (97.9)	3 (2.1)
	Feedback request	0 (0)	142 (142)

CD- cluster of differentiation

by doctors from other clinics within UITH and hospitals outside UITH. Referral from within UITH constituted the majority, and this accounted for 84.5 % of the total referrals. Considering the source of referral letters from within UITH, Family Medicine department, Medical outpatient department and other specialty clinic accounted for 47.2% ,14.8% and 9.9% respectively (Table 1).

Almost all the referral letters (99.3%) included the patient's name while Hospital number and date of referral were indicated on 91.5% and 94.4% of the referral letters respectively. However, 3.5% of the letters omitted patients' age, gender, and source of

referral respectively (Table 2).

The information provided on clinical parameters in the referral letter were as shown in Table 3 below. HIV confirmation test result was reported in less than 50% of the referral letters. The CD4count and viral load were only reported in 16.9% and 13.4% of the referral letters respectively.

Other investigation results like liver function test, renal function test, lipid profile and full blood count tests were only reported in 16.2%, 18.3%, 9.9% and 19.0% of the referral letters respectively. Packed cell volume (PCV) was reported in 77.5% of the referrals. (Table 3).

Most (97.9%) of the referral letters indicated the reasons for the referral, 82.4% of the referring doctors (majorly interns) documented their names and 94.4% signed the referral letters. None of the referral letters requested feedback on the patient.

Discussion

Patient are referred on regular basis for specialist care, evaluation and management in healthcare system. An ideal referral letter is expected to have all the relevant information needed to ensure effective communication, reduce unnecessary repetition of investigations, avoid drug-drug interaction and delay in instituting treatment.^{4,15} The adequacy of information in the referral letter has been shown to either delay or expedite patient evaluation and treatment.^{16,17} Adequate information reduces waiting time on the part of patient and ensure prompt treatment. This study revealed that the highest number of referral letter came from Family Medicine department which was similar to report by Onajaet al¹⁸ but at variance with report by Aworantiet al¹⁹ who reported that most of their referrals came from Obstetrics and Gynaecology department. The least number of referral letters were from Sobi specialist hospital, Ilorin (1.4%), and this was probably because the specialist hospital has facilities for HIV management. Aworantiet al¹⁹ and Onajaet al¹⁸ found that the least number of referrals were from the Radiation Oncology department and ENT department respectively.

It was observed in this study that referral letters to the antiretroviral therapy outpatient specialist clinic often did not contain the information considered to be important for a timely and quality consultation, effective patient triage to reduce waiting time and facilitate prompt treatment. Some studies evaluating the adequacy of information in referral letters also shown that they were grossly inadequate.^{20,21} Many reasons have been put forward for these inadequacies and one of such was the deficiency in knowledge regarding the acceptable standard of care of HIV patients. A number of approaches have been suggested in a bid to improve the quality of information in referral letters to specialist clinics. These include the use of structured or standardized form as referrals. This form will contain highlights of relevant information designed in a format to improve the documentation of the information in a systematic manner.^{22,23} A remarkable proportion of the referral letters did not contain the name and/or signature of the writer. This finding may necessitate cross-checking of referral for writers' identifiers by the writer and/or a senior colleague.

Most of the referral letters provided information on patients' biodata such as patient's name, age, and gender. This is similar to report by Onojaet al¹⁸ and Osinaikea et al²¹ Information on physical

examination findings, basic laboratory tests such as viral load, CD4 count, electrolytes and liver function test were largely deficient and this may result in hinderance to timely review, counselling and treatment of patients. The CD4 count and viral load are important biomarkers with strong predictive value for the development of treatment failure and AIDS defining illnesses. Jani et al²⁴ and Faalet al²⁵ in their work emphasized the importance of CD4 in timely management of HIV patients.

A significant number of the referral letter (77.5%) reported the packed cell volume (PCV) of the patient which could probably aid patient triage and management. This may be due to the fact that PCV can easily be done in the side laboratory and was prominently the basis for referring most of the patients. The majority (97.9%) of the referrals provided the reason for the referrals similar to findings by Orimadegunet al¹⁷ but in contrast to the report by McGrath et al²⁶ who found that only 20.1% of referrals in their study provided the reason for the referral.

Pharmacotherapy constitute over 90% of treatment modality in HIV/AIDS care.²⁷ Medication history is an important part of patient evaluation and management. More than 50% of the reviewed referral letters did not contain information on the medication history of the patient. This finding is similar to reports in literature from previous studies.^{28,29} Inadequate medication history could lead to drug-drug interaction and adverse drug reactions which increases the burden of the disease. Abuyassin et al²⁹ in their study also reported poor documentation of medication history. The absence of medication history in referral letters suggests that the information was either not obtained from the patient or was considered unnecessary to be written in the referral. This occurrence underscores the need for training on writing referral letter to doctors or its inclusion in medical curriculum of medical student particularly now when WHO is scaling up the fight against medication errors. The deficiencies in information on referral letter increase the cost of care for the healthcare system and patient (in terms of duplication of investigations, polypharmacy, and wasting of man-hour).

This study is limited by the fact that it was conducted in one tertiary hospital in the country and the findings may not represent what is happening in other teaching hospitals and therefore limit the generalization of the findings to other centers.

Conclusion

Most of referral letters to the antiretroviral therapy outpatient specialist clinic did not contain required information needed for a timely quality review and management of HIV/AIDS patients. The deficiencies can be minimized by the use of a well-designed structured referral form and training of

doctors on the required information in a good referral letter which will impact positively and improve HIV management.

Conflicts of interest :None declared

Financial support: None

Acknowledgements

I want to specially appreciate Dr. Elizabeth Dairo, Dr. Lois Oyeniyi, Dr. Aisha Oyerinde, Dr. Babajide Oyebiyi, and Mrs. Motunrayo Mohammed for their roles and immense contribution to the success of this work.

References

- World Health Organization. Global update on HIV epidemic. Geneva:2019
- Joint United Nations Program on HIV/AIDS (UNAIDS) report, 2021
- WHO. Guideline on when to start antiretroviral therapy and on pre-exposure prophylaxis for HIV. Geneva: WHO; 2019.
- UNAIDS. 90-90-90: an ambitious treatment target to help end the AIDS epidemic. Geneva: UNAIDS; 2020
- Braunstein SL, Umulisa MM, Veldhuijzen NJ, Kestelyn E, Ingabire CM, Nyinawabega J, et al. HIV diagnosis, linkage to HIV care, and HIV risk behaviors among newly-diagnosed HIV positive female sex workers in Kigali, Rwanda. *J Acquir Immune Defic Syndr*. 2011; 57:70–76.
- Kranzer K, Zeinecker J, Ginsberg P, Orrell C, Kalaw NN, Lawn SD, et al. Linkage to HIV care and antiretroviral therapy in Cape Town, South Africa. *PLoS One*. 2010; 5:13.
- Rosen S, Fox M. Retention HIV care between testing and treatment in sub-Saharan Africa: a systematic review. *PLoS Medicine*. 2011; 8:100.
- Mshana GH, Wamoyi J, Busza J, Zaba B, Chagalucha J, Kalluvya S, et al. Barriers to accessing antiretroviral therapy in Kisesa, Tanzania: a qualitative study of early rural referrals to the national program. *AIDS Patient Care STDS*. 2006; 20:649-657
- Atkinson S, Ngwengwe A, Macwan'gi M, Ngulube TJ, Harpham T, O'Connell A. The referral process and urban health care in sub-Saharan Africa: the case of Lusaka, Zambia. *Soc Sci Med*. 1999; 49:27-38.
- Nordberg E, Holmberg S, Kiugu S. Exploring the interface between first and second level of care: referrals in rural Africa. *Trop Med Int Health*. 1996; 1:107-111.
- Low A, de Coeyere D, Shivute N, Brandt LJ. Patient referral patterns in Namibia: identification of potential to improve the efficiency of the health care system. *Int J Health Plann Manage*. 2001; 16:243-257
- Decroo T, Panunzi I, das Dores C, Maldonado F, Biot M, Ford N, et al. Lessons learned during down referral of antiretroviral treatment in Tete, Mozambique. *J Int AIDS Soc*. 2009; 12:6.
- Ramanayake RP. Structured printed referral letter(form letter); saves time and improves communication. *J Family Med Prim Care*. 2013;2:145-8
- Kamau, Osuga, and Njuguna. Challenges Facing Implementation of Referral System for Quality Health Care Services in Kiambu County, Kenya. *Health Syst Policy Res*. 2017;4:1.
- Haeusler IL, Sajan M, Parrish A. Mind the message: Referral letter quality at a South African medical outpatient department. *S Afr Med J*. 2020;110:396-9
- Janati A, Amini A, Adham D, Naseriasl M. Assessing the quality of referral letters written by general practitioners: A cross-sectional study in rural Iran. *Cad Saude Publica*. 2017;33:43-6.
- Orimadegun AE, Akinbami FO, Akinsola AK, Okereke JO. Contents of referral letters to the children emergency unit of a teaching hospital, southwest of Nigeria. *Pediatr Emerg Care*. 2008;24:153-6
- Onoja A, Nwannadi A, Onoja A, Aba I, Jatau E, Osho P, et al. Referral pattern and haematological disorders in a tertiary hospital. *J Biomed Res Clin Pract*. 2021;4:61-9
- Aworanti OW, Anyanwu-Yeiyi C, Shonde-Adebola KB, Olaniyi JA, Shokunbi WA. Haematology consultations in a tertiary health care centre in Nigeria. *West Afr J Med* 2020;37:662-5.
- Ibiyemi O, Ibiyemi T. Quality and contents of referral letters from peripheral health centers to the dental centre of a teaching hospital, southwestern Nigeria. *Acta Odontol Scand*. 2012;70:165-8.
- Osinaikea BO, Esezobor CI, Akinsola OJ. Quality of referral letters to the paediatric department of a tertiary hospital in Nigeria. *Nig Q J Hosp Med*. 2013;23:273-9
- Tattersall MH, Butow PN, Brown JE, Thompson JF. Improving doctors' letters. *Med J Aust* 2002;177:516-20.
- Tobin-Schnittger P, O'Doherty J, O'Connor R, O'Regan A. Improving quality of referral letters from primary to secondary care: A literature review and

- discussion paper. *Prim Health Care Res Dev*. 2018;19:211-22.
24. Jani I, Siteo N, Alfai E, Chongo P, Lehe J, Rocha B, et al. Effect of point-of-care CD4 cell count tests on retention of patients and rates of antiretroviral therapy initiation in primary health clinics: an observational study. *Lancet*. 2011; 378:1572–1579
 25. Faal M, Naidoo N, Makgamatha L, Venter WD, Osih R. Effect of an immediate CD4 result during VCT on patient retention in ART. *J Acquir Immune Defic Syndr*. 2011; 58:54–59.
 26. McGrath N, Glynn JR, Saul J, Kranzer K, Jahn A, Mwaungulu F, et al. What happens to ART-eligible patients who do not start ART? Dropout between screening and ART initiation: a cohort study in Karonga, Malawi. *BMC Public Health*. 2010; 10:1–8.
 27. Gleason KM, Groszek JM, Sullivan C, et al. Reconciliation of discrepancies in medication histories and admission orders of newly hospitalized patients. *Am. J. Health Syst. Pharm*. 2004; 61:1689-1695.
 28. Carney SL. Medication accuracy and general practitioner referral letters. *Intern. Med J*. 2006; 36:132-134. 14.
 29. Abuyassin BH, Aljadhey H, Al-Sultan M, Al-Rashed S, Adam M, Bates DW. Accuracy of the medication history at admission to hospital in Saudi Arabia. *Saudi Pharm J* 2011;19:263-7