

Anti-Retro Viral Treatment implementation and its barrier at St. Paul's hospital millennium medical college

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Abstract

Background: HIV infection is the major public health, social and economical problem around the world. However, retain patients in care and adherence to antiretroviral therapy standards are the major problems, Ethiopia has an estimated 298,512 adults on ART.

Objective: To study ART implementation and its barriers at St. Paul's hospital millennium medical college.

Methods: By using cross-sectional study, 299 clinical records of adults were randomly retrieved from Sept 11, 2013, to Sept 10, 2014, and an in-depth interview was done on 9 key informants. SPSS version 20 and thematic analysis were used for the quantitative data and qualitative data analysis. The associations were measured by odds ratio along with its 95% confidence interval.

Results: About 64.9% (194) of clients were missing important components of HIV care recommended by the national guidelines. There is no resource problem regarding antiretroviral therapy; implementation guideline, trained staff, laboratory facilities and drugs were available. However, there is a high workload due to the shortage of human resource.

Conclusion: Adherence to standards of HIV/AIDS care at the facility was inadequate. Compliance was better at the start of ART but declined during the follow-up period. Regular assessment of ART implementation with the national guideline can optimize the effectiveness of national ART programs.

Keywords: HIV, National Guideline, ART, Adherence, Indicator

Introduction

Globally, out of 36.9 million people living with HIV, 34.3million were adults. There were 2.0 million new HIV infections and 1.2 million AIDS deaths (UNAIDS 2014). Even though ART decreased morbidity and mortality(Egger et al. 1997; Vittinghoff et al. 1999; Assefa et al. 2012), only 9.7 million low-and-middle-income countries PLWHIV were receiving ART of as compared to 10.6 million PLWHIV live in high-income countries (UNAIDS 2013; UNAIDS 2014; Braitstein et al. 2006; Assefa et al. 2005-2007). Among 793,700 PLWHIV in Ethiopia, 298,512 adults were on treatment and 70.3% of individuals who ever started ART were currently on treatment (Country progress reports on the HIV response 2014; Multisectoral HIV/AIDS Response Annual Report 2013). According to Ethiopian Demographic Health Survey (EDHS), prevalence of HIV in adults was 1.5% (Central Statistical Agency (CSA) & ICF International 2012).

One of the priority areas indicated in the national guideline is monitoring the number and percentage of different group of populations who have initiated ART based on the new eligibility criteria (FMoH 2014). Although many hospitals and health centers are providing ART services, there were limited

studies done on its implementation as compared to the national guidelines. Therefore, this study was aimed to assess ART implementation and its challenges which may provide information for future programming.

Materials and Methods

Facility based cross-sectional study was done on 299 randomly selected records of ≥ 15 years old clients those enrolled on ART from September 2013 to September 2014 and on 9 full-time staff key informants. Patients who have been in treatment for at least 6 months were eligible for record review and patients who transferred in or out to other health facilities, lost follow up, dead, pregnant women and breast feeding women with in the study period were excluded from the study. National and WHO ART implementation guideline formats for data extraction, semi-structured questionnaire of United Nations Program on HIV/AIDS (USAIDS), equity and access to ART in Ethiopia for the in-depth interview were used (Braitstein et al. 2006; WHO 2004; (Egger et al.1997; Vittinghoff et al.1999; Assefa et al. 2012)). Descriptive statistics were used to determine the magnitude of adherence to the national standard guideline. Qualitative data was analyzed by using

thematic analysis. Moreover, internal comparisons were made using bivariate and multivariable logistic regressions. Ethical clearance was obtained from Mekele University, Addis continental institute of public health and SPHMMC.

Results

About 59% were females' record and 44.1% were clients within the age range of 26-36 years. About 53.3%, 37% and 52.5% were married, had primary education and full time employees respectively.

Seventy seven percent of the retrieved data belonged to orthodox Christian followers. About 78.3%, 72.9%, 79.3% and 81.3% of clients were never use tobacco, alcohol, soft and hard drugs respectively. Even though all the 299 patients were eligible for CPT, for only 75.6% of them were prescribed (Table1). About 64.9% of clients were not adhere the 8 standard indicators as per the national guideline. The in-depth interview with the key informants showed presence of Cotrimoxazole in the stock.

Table 1: Status of retrieved client charts based on indicators at St Paul hospital millennium medical colleague, September 11, 2013 – September 10, 2014

Indicators	Category	
	Yes Number (%)	No Number (%)
CD4 count or WHO clinical stage at baseline	299 (100)	
Prescribed daily cotrimoxazole	226 (75.6)	73 (24.4)
Assessed for TB in every visit	262 (87.6)	37 (12.4)
Adherence counseling in every visit	29799.3	2 (0.7)
CD4 count measured at least once with in the last 6 months	186 (62.2)	113 (37.6)
Started ART within 2 weeks after eligibility is confirmed	292 (97.3)	8 (2.7)
Laboratory workup before initiating ART	277 (92.6)	22 (7.4)
Currently on ART	275 (92.0)	24 (8.0)

Table 2: Factors associated with patients to be currently on ART at SPHMMC from September 2013 to Sept 2014

Characteristics		Yes (N)	No (N)	COR (95% CI)	P-value	AOR(95% CI)	p-value
Sex	Male	110	12	-	-		
	Female	165	12	-	-		
Age	15-25	39	4	0.94(0.29-3.05)	0.91	1.79(0.31-10.4)	0.51
	26-36	119	13	1.68(0.43-6.6)	0.46	1.91(0.41-8.87)	0.40
	37-47	82	5	1.79(0.31-10.4)	0.51	1.07(0.19-5.76)	0.94
	48+	35	2	1			
Education	No education	56	3	1.57(0.41-5.92)	0.50	0.64(0.17-2.4)	0.51
	Primary	100	11	0.76(0.31-1.87)	0.56	1.3(0.53-3.2)	0.56
	Secondary/Tertiary	119	10	1			
Tobacco	Never	220	14	1			
	Rarely	19	3	0.32(0.124-0.86)	0.024*	0.38(0.14-0.98)	0.78
	Never	207	11	1			
Alcohol	Rarely	30	6	0.28(0.10-0.79)	0.016*	0.92(0.28-3.03)	0.89
Soft drugs	Never	222	15	1			
	Rarely	14	2	0.38(0.14-0.98)	0.046*	1.25(0.23-6.78)	0.79
Hard drugs	Never	228	15	1			
	Rarely	6	1	0.34(0.13-0.84)	0.021*	1.17(0.12-11)	0.89

COR: Crude Odds Ratio

AOR: Adjusted Odds Ratio

*P-value<0.05

In the bivariate analysis, tobacco, alcohol, soft drug and hard drug usage were significantly associated with patients' eligibility for ART unlike in the multivariate logistic regression in which no factor was independently associated. According to the in-depth interview, changing of clients' addresses, low

economic status of clients, lack of recognition of ART case team as outpatient departments by the hospital officials, lack of conducive environment, lack of ventilation and being narrow of the examination rooms were the challenges to implement the guideline and to adhere ART.

Table 3: Factors associated with patients started ART within 2 weeks of eligibility at SPHMMC from September 2013 to Sept 2014.

		Yes in №	No in №	COR (95% CI)	P-value	AOR(95% CI)	p-value
Sex	Male	120	2	-			
	Female	171	6	-			
Age	15-25	42	1	1.17(0.07-19.3)	0.91	0.86(0.05-14.1)	0.91
	26-36	127	5	0.70(0.08-6.23)	0.75	1.41(0.16-12.5)	0.75
	37-47	86	1	2.39(0.14-39.2)	0.54	0.41(0.25-6.87)	0.54
	48+	36	1	1		1	
Education	No education	56	3	1.43(0.31-6.62)	0.64	6.8(0.69-67.3)	0.09
	Primary	107	4	6.8(0.69-67.3)	0.09	4.8(0.52-43)	0.16
	Secondary/Tertiary	128	1	1		1	
Tobacco	Never	229	5	1		1	
	Rarely	21	1	0.44(0.08-2.38)	0.34	1.02(0.08-11.9)	0.99
	Never	213	5	1		1	
Alcohol	Rarely	35	1	0.50(0.09-2.68)	0.42	1.62(0.14-18.7)	0.69
Soft drugs	Never	232	5	1		1	
	Rarely	15	1	0.47(0.08-2.52)	0.38	0.68(0.05-8.0)	0.76
Hard drugs	Never	238	5	1			
	Rarely	7	0	-	-	-	-

Discussion

In this study, prevalence of patients' eligibility for ART was 92%. A study conducted in Mizan-Teferi, Ethiopia recommended the need to understand the health-seeking behavior of patients for ART to implement strategies in HIV clinics (Moshago et al. 1995). Adherence to ART and CPT were 75.6% which is lower than studies done in northern Ethiopia (97.3%) (Kiflie et al. 2009), in Jimma University Specialized Hospital (Diriba et al. 2008) and in Asia-Pacific, sub-Saharan Africa and Americas (88%) (Stephany et al. 2014). This could be due to failure to prescribe CPT for eligible patients during clinic visits and poor compliance of patients with CPT accordingly with the national guideline even though there is no shortage of cotrimoxazole in the stock. But increase adherence to CPT prevents the occurrence of fatal opportunistic infections (Grimwade et al. 2005) and Abidjan (Anglaret et al. 1999) if it is used according to WHO's and UNAIDS recommendation (WHO, UNAIDS 2000). Unlike the baseline (100%), determination of clients' CD4 or WHO clinical stage at least once CD4 count measured during the last 6 months only was low (62.2%) which was similar to a study conducted in northern Ethiopia (Kiflie et al. 2009). Similarly, need to initiate ART within 2 weeks clinical eligibility (97.3%) and basic laboratory workup before initiating ART (92.6%) were higher than the same activities done in follow-up care. This finding is comparable to another study done in Ethiopia (Kiflie et al. 2009), Uganda (Burua et al. 2014), USA (McGlynn et al. 2003), which showed that patients are more likely to

receive the recommended HIV care during their first visit. In this study, 87.6% of HIV clients were checked for TB in each visit. This finding was the same as a study conducted in Uganda (Burua et al. 2014).

Conclusion and Recommendation

In this study, seven out of eight standard indicators were not adhere as per the national guide. Along with physicians, other health care providers and higher hospital officials should play their role to improve health-seeking behavior of patients for ART and the implementation status of guidelines. Moreover, there is a need of supportive supervision which can ensure and improve quality, effectiveness, and efficiency of services provided.

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