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Compliance With Management Indicators In A Program For The Management Of Patients Living With Hiv/Aids

July Alejandra Bedoya[1], Andrea Del Pilar Correa[2], Luisa Consuelo Rubiano Perea[1] Robinson Pacheco López[1]

[1] Universidad Libre Cali, Research Group in Epidemiology and Services GRIEPIS.

*Corresponding Author: JulyAlejandraBedoya[1], Universidad Libre Cali, Research GroupinEpidemiologyand Services GRIEPIS.

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Abstract:

HIV / AIDS infection is a public health problem for which multiple control strategies have been developed. Colombia seeks to standardize care in specialized centers, under the recommendations of the current Clinical Practice Guide and with a multidisciplinary intervention.

Objective. To determine compliance with management indicators in a program for the management of patients living with HIV / AIDS, in a specialized IPS in Cali Colombia. Materials and methods. An observational, descriptive, longitudinal and retrospective study was conducted in a cohort of patients over 18 years of age who entered the program and started antiretroviral therapy (ART), between January and December 2016.

Results. Information from 173 clinical records and data reported in the High-Cost Account of patients diagnosed with HIV / AIDS was analyzed. 13 clinical are indicators were evaluated, all of them process three initial evaluations, two monitoring, six therapies and two specific preventions. 23.07% of the indicators met the goal established by the CAC consensus; 100% compliance with the recommendations was identified in 11% of the population and in terms of optimal virological response, 72.83% achieved undetectable viral load results between week 9 and week 117 after the start of ART; 69.3% reported viral suppression before week 48 and 1.15% of the population was evaluated for viral load within 48 weeks of treatment with a result <50 copies. Conclusion. This study determined compliance with management indicators in a population of patients infected with HIV / AIDS, by measuring evidence-based consensus indicators, to evaluate management and clinical outcomes and management and evaluation indicators. the implementation of the recommendations proposed in the clinical practice guide (CPG)

KeyWords: HIV / AIDS, adherence, virological response, determinants.

Introduction

Despite multiple efforts by countries to control the HIV/AIDS pandemic, the disease continues to be one of the main public health problems worldwide (1). It is estimated that since the 1980s, more than 70 million people have been infected with the HIV virus, and at least 35 million have died from it. By 2018, the number of people living with HIV/AIDS in the world was 37 million, and of these, only 59% of those over 15 years of age received antiretroviral treatment (ART) (1-3); however, advances in early diagnosis techniques, access to highly effective ARV (antiretroviral) treatment, and control of mother-to-child transmission are strategies promoted by international organizations in order to reverse and contain the HIV/AIDS epidemic (3); its implementation depends on the resources of each country, therefore, in low-income countries, such as in the sub-Saharan Africa region, the epidemic continues to rise (4). With regard to vertical transmission, in the absence of any intervention the transmission rate is 15-45%; Effective interventions reduce these numbers to levels below 5% (5,6). The Joint United Nations Programme on HIV/AIDS (UNAIDS) in partnership with the World Health Organization/Pan American Health Organization (WHO/PAHO) sets regional goals in Latin America and the Caribbean by 2020 to increase the proportion of people with HIV/AIDS who know their diagnosis to 90%, increase to 90% the proportion of people diagnosed receiving ARV treatment, and increasing the proportion of people on HIV treatment with an undetectable viral load to 90 per cent, through the 90-90-90 strategy. Complementary to these goals, the fourth goal is to reduce late

diagnosis; This is in order to control new infections, diagnose early stages of the disease, related death, as well as improve patients' quality of life (7).

The effectiveness of ART in suppressing serum viral load to undetectable values (< 50 copies/ml) at week 48 is close to 80% in people with no previous exposure to ART (8); in those who do not achieve viral suppression, they are at increased risk of developing ART resistance, which connotes virologic and immunological failure (3) (9,10). On the other hand, scientific evidence has shown that therapeutic adherence, defined as the degree of compliance necessary to obtain the greatest therapeutic benefit, is the fundamental pillar in the clinical outcome and constitutes a predictor of virological response. Reduced plasma viral load, increased TCD4 lymphocytes, and decreased the risk of related complications has been shown to require sustained adherence to ART of 95% (11,12). Pharmacological and non-pharmacological adherence involves multiple determinants, such as structural determinants related to the health care organization system, lifestyles, and the biological, demographic, and clinical characteristics of the individual (13).

In Colombia, according to the Ministry of Health and Social Protection, an estimated

150,116 people living with HIV in 2016, by 2018 108,648 (72%) had been diagnosed, which represents a decrease of 28% compared to the 2016 estimate. However, 25% of these patients do not have access to health services or have dropped out of care programs (14-16). Santiago de Cali, with a reported incidence rate of 42.97/100,000 inhabitants (ASIS 2018), is considered one of the four Colombian cities with the highest number of cases. In the city of Cali, there are 31 institutions authorized to care for patients living with HIV, of which 14 are Benefit Plan Administrative Companies (EAPB), 12 are Health Provider Institutions (IPS) and five are State Social Enterprises (ESE) (17).

Faced with this public health situation, the Ministry of Health and Social Protection of Colombia, Resolution No. 3186 of 2003,through the Policy on Comprehensive Care for Pathologies Classified as High Cost (Agreement 245 of 2003), seeks to guarantee equity, sustainability and strategies for the prevention and control of HIV/AIDS (18). Since 2014, the implementation of the practice guide has been promoted.This is a clinical approach based on scientific evidence, as well as the creation of a pathway that favors early diagnosis, initial assessment, clinical management, pharmacological treatment, and viral load monitoring periodically after the start of ART, with the aim of detecting virological failure in a timely manner (19). Since these recommendations are still in the process of being implemented, both the consensus of the high-cost account and the clinical practice guideline recommend that institutions that care for people living with HIV/AIDS evaluate annually the quality and effectiveness of institutional programs through indicators of initial evaluation, monitoring, specific therapy and prevention. The objective of this research was to determine the compliance with management indicators in a program for the management of patients living with HIV/AIDS, in a specialized IPS in Cali, Colombia.

Population And Study Area

Materials And Methods Type Of Study

An operational research was carried out through an observational, descriptive, longitudinal study with retrospective data collection.

Source of information

As sources of information, clinical records and data from the High Cost Account were used, from a cohort of patients who entered an institutional program for the comprehensive management of HIV/AIDS, between January 1 and December 31, 2016.

Reference population:

Patients with a confirmed diagnosis of HIV/AIDS, seen in the outpatient clinic in a specialized IPS, with follow-up for at least 48 continuous weeks, from the start of their ART.

Selection criteria

Inclusion: We included the records of adult patients over 18 years of age, of both sexes, with a confirmed de novo diagnosis of HIV/AIDS, enrolled in the Specialized IPS program, who started an ARV treatment scheme during 2016.

Exclusion: Records of patients who died of causes unrelated to HIV/AIDS infection during follow-up were excluded.

As adherence is an indirect response to compliance, it was measured according to the WHO (2004) definition, which corresponds to the degree to which a patient's behavior, in relation to taking medication, monitoring of a diet or the modification of lifestyle habits, corresponds to the recommendations agreed with the health professional (WHO) (20,21).

For viral load adopted according to the recommendations of the 2014 Clinical Practice Guideline (CPG), the amount of HIV virus quantified in a blood sample, is reported as the number of viral RNA copies per millimeter of blood. It is useful for determining prognosis, assessing response to treatment, and monitoring viral suppression; It should be performed on patients infected with HIV/AIDS at the start of ARV treatment, two months after initiation of the drug or when the drug regimen is modified, every 6 months as a follow-up after the start of ARV treatment whenever an undetectable viral load (< 50 copies/ml) is achieved and immediately upon suspicion of virological failure. The Clinical Practice Guideline defines virological failure as the presence of confirmed viral load above the limit of detection, six months after initiating or modifying the treatment regimen, in people who remain on ARV treatment, or detectable load in two consecutive determinations after an undetectable viral load. The purpose of the CPG is to unify and standardize, improve the quality of health care and the use of resources in the clinical care of patients with HIV/AIDS infection, as well as to promote the quality of information and the correct interpretation of indicators.

Of the three categories of indicators (structure, process, and outcome) proposed by Donabedian, et al. (22,23) and recommended by the CAC and the GPC for the evaluation of specialized programs in the care of patients with HIV/AIDS (18,19), this research focused on the measurement of process indicators.

Sample Size

This research included all records of patients who entered the program during 2016 and started ART, 173 records were analyzed. No sampling technique was required

Data analysis

Regarding the variables analyzed in the study were; 7 Demographic and Clinical at the time of Diagnosis, 16 Clinics at the beginning of ART and 16 Clinics at cut-off (December 31, 2016).Using the Stata14® software (StataCorp, College Station, Texas, USA), univariate analysis was performed, applying descriptive statistics; The distribution of the data was evaluated for all numerical variables, through the statistical test Shapiro Wilk Normality Test, the quantitative variables were summarized through the median with their interquartile ranges. Nominal variables were summarized through proportions, statistically significant differences with p-values equal to or less than 0.05 were considered.

This research used as a reference of compliance two groups of indicators, recommended by the evidence-based consensus to evaluate management and clinical results in care institutions for people living with HIV in Colombia, as well as the recommendations of the Clinical Practice Guideline (CPG) based on scientific evidence for the care of HIV/AIDS infection in adolescents (13 years of age or older) and adults (19). published in 2014. It was calculated as a proportion with their respective 95% confidence intervals, taking as numerator those subjects with HIV/AIDS who complied with 100% of the recommendations and as denominator the entire population with ART enrolled in the program during 2016. With respect to compliance with the indicators proposed by the CAC, 13 clinical area indicators were evaluated, all of them process-related; three forinitial evaluation, two for monitoring, six for therapy and two for specific prevention.

The optimal virologic response frequency, defined as a viral load of less than 50 viral RNA copies per mL, was calculated as a proportion with their respective 95% confidence intervals, taking the number of patients as the numerator with HIV/AIDS who obtained a viral load of less than 50 copies of viral RNA per milliliter at week 48 and the denominator was taken the entire ART population included in the program during 2016. With a compliance standard of 80% according to the Colombian Fund for High-Cost Diseases, a result > 80%, a medium of 80% to 70% and a low range < 70% is considered an adequate range(24).

Through bivariate analysis, the factors related to non-compliance with the indicators were identified, the OR with their respective confidence intervals was used as measures of association, the statistical association was carried out through the Chi2 statistical test and significant values of p were assumed to be equal to or less than 0.05. A multivariate analysis was performed through binomial logistic regression to adjust for possible confounders and determine the weight that each variable contributed to the non-compliance with the recommendations of the clinical practice guideline. The rate of viral suppression was assessed through survival analysis with the Kaplan-Meier curves; To determine the statistical differences between the curves by sex, the Log Rank Test was used.

Ethical Considerations

This research was approved as a risk-free investigation by the ethics committees of the specialized IPS and the Free University, according to minutes 007-2019, CD- 002714-S010010105 of 2019. This research is covered by international agreements on biomedical research according to the Helsinki Agreement, and the level of risk is declared according to Resolution 8430 of 1993 of the Ministry of Social Protection of Colombia. The authors declare no conflict of interest.

Results

The selection criteria of 271 clinical records of patients who entered the HIV program during January 1 and December 31, 2019 were evaluated.

2016; A total of 98 records were excluded because they did not meet the selection criteria, and information from 173 records was analyzed, Figure 1.

Regarding compliance with the indicators proposed by the CCS, to measure the quality of the process, an overall compliance of 23.07% (3/13), Annex 1, was obtained.

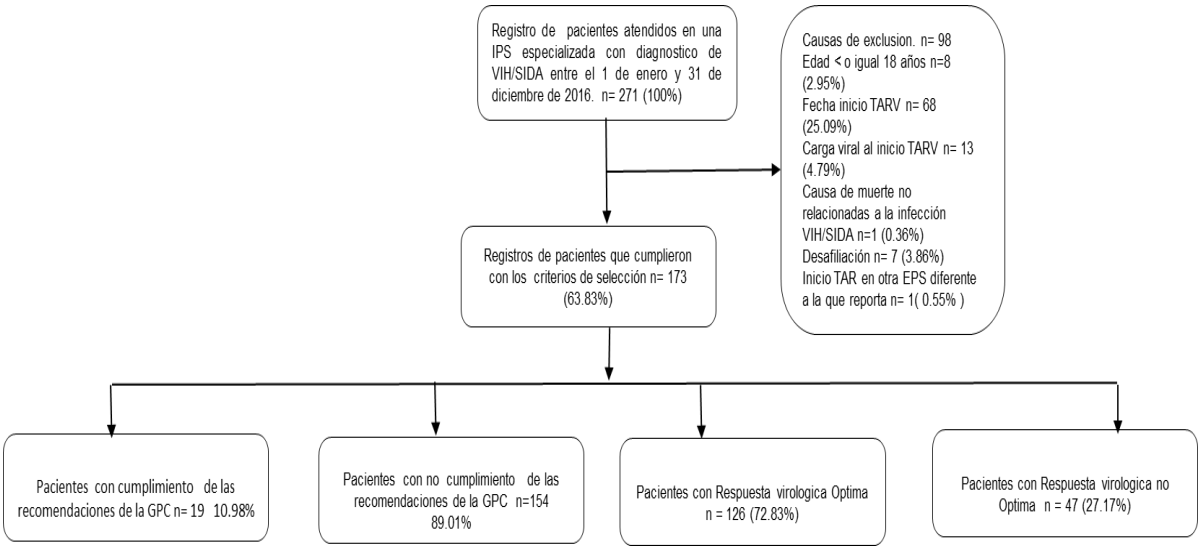

Figure 1. Diagram for the identification of patient registries with compliance with the recommendations of the CPG and with optimal virological response at week 48 in a Specialized IPS Cali 2016.

The study population was mainly made up of men with 86.7% (150/173), the median age was 32 years (IQR 25 - 44), 75.7% (131/173), reported having residence in Cali, the entire population belonged to the contributory regime, of the 23 women registered in the program, 17.3% (4/23) were pregnant. According to the stage of infection at the time of diagnosis, 63.5% (113/173) of patients were in stages.

In the early stages of A1-A2 and B1-B2 (25), the most frequently reported method of family planning was the barrier method (94.2% (163/173), Table 1.

Table 1: Demographic and Clinical Characteristics of the Population at the Time of Diagnosis

Feature	Description	Summary Measure n=173(%)
Sex	Man	150 (86.7)
	Woman	23 (13.2)
Age (years)	Years	Median 32 (RIC=25-44)
Origin: Cali	Yes	131 (75.7)
	No	42 (24.2)
Pregnant	Yes	4 (17.4)
	No	19 (82.6)
HIV Screening Test Offered	Yes	133 (76.8)
	No	40 (23.1)
CD4 Lymphocyte Count	Yes	161 (93.1)
	No	12 (6.9)
Number of CD4 lymphocytes	≥ 200	113 (65.3)
	<200	60 (34.6)

With respect to compliance with the initial assessment indications, proposed by the indicators of the clinical practice guideline and the evidence-based consensus of minimum indicators, to evaluate management and clinical outcomes in institutions for the care of people living with HIV in Colombia, 92.48% (160/173) of the people diagnosed with HIV infection received care from an expert physician and during follow-up had a median of 6 (IQR 4-7) medical care per year.

Regarding the measurement of the initial viral load (CV), this was performed in all diagnosed patients, of whom 98.8% (171/173)

reported viral load of one thousand or more copies at the start of ART and one patient with an undetectable viral load at the time of diagnosis. CD4 count was measured at diagnosis at 93.06% (161/173) with a median CD4 cell/mm3 (IQR 157-380), of which 31.8% (55/173) of the subjects had CD4 ≤ 200 and 16.1% (28/173) CD4 ≤ 100 patients; while the CD4 lymphocyte control count during follow-up was performed in 87.8% (152/173) of the patients. According to the CAC recommendation, 100% of patients should have a CD4 lymphocyte control count throughout the 48 weeks of follow-up from program entry, Table 2.

Table 2: Clinical characteristics of the population at the time of initiation of ART

CD4 Lymphocyte Count	Yes	168 (97.1)
	No	5 (2.9)
Viral Load	≤50	1 (0.5)
	51-999	1 (0.5)
	≥ 1000	171 (98.8)
Reason forInitiation of TAR	Clinical picture	5 (2.8)
	Pregnancy	4 (2.3)
	By CD4 T cell count value (< 200 cel)	73 (42.2)
	Viral load. (> 1000copies)	88 (50.8)
	For another reason.	3 (1.7)
Anemia	Yes	4 (2.3)
	No	169 (97.6)
Illness Chronic kidney	Yes	3 (1.7)
	No	170 (98.2)
Opportunistic infections	Yes	22 (12.7)
	No	151 (87.2)
Hepatitis B	Yes	2 (1.1)
	No	171 (98.8)
Tuberculosis	Yes	2 (1.1)
	No	171 (98.8)
Sarcoma of Kaposi	Yes	2 (1.1)
	No	171 (98.8)
Illness Psychiatric	Yes	3 (1.7)
	No	170 (98.2)
TAR Counseling	Yes	165 (95.3)
	No	8 (4.6)
Medication Change	Yes	54 (31.2)
	No	119 (68.7)
Cause Change Medicament	Reactions Adverse	50 (28.9)
	Any fault	3 (1.7)
	Improve Adhesion	1 (0.5)
Number of failures	0	169 (97.6)
	1	3 (1.7)
	3	1 (0.5)
Interconsultation with an Infectious Disease Specialist	Yes	13 (7.5)
	No	160 (92.4)
Genotyping	Yes	2 (1.1)
	No	171 (98.4)

Of the patients who reported CD4 count ≤ 200 at the time of diagnosis, 23.6% (13/55) had opportunistic infections, the most frequent being generalized histoplasmosis and meningeal cryptococcosis, followed by *Pneumocystis jirovecii pneumonia*, multifocal leukoencephalopathy and toxoplasmosis. Prophylaxis for these germs was documented in three registry patients, one patient received trimethoprim sulfa and fluconazole and two patients received trimethoprim sulfa alone.

The 173 patients included were initiated ART and 95.3% (165/173) received counseling before initiating treatment for ECT. (TEC = Compliance Advisory Worker). The most frequently reported cause for the initiation of ART was related to the viral load value at diagnosis in 50.8% (88/173), followed by CD4 lymphocyte count value (42.2% (73/173), Table 1, 2, Annex 1.

Regarding the monitoring indicators, proportion of PLHIV with annual screening for syphilis or STIs, 29.5% (51/173) were diagnosed with a sexually transmitted infection in the following 12 months of follow-up, with screening of 100% of the study population. with a 100% compliance standard according to the Colombian Fund for High Cost Diseases; A result > 95% is considered an appropriate range, medium from 95% to 90% and as low range < 90% (24).

Regarding the indicator of the proportion of PLHIV with annual PPD, 47.4% (82/173) were evaluated for latent TB infection through the PPD (purified protein derivative) skin test, of which 6.1% (5/82) of those evaluated reported a positive test ≥ 10 mm and of these, two received isoniazid prophylaxis. In the CCS, a measurement standard of 90% is considered as a goal in Colombia, with an adequate range > 80%, a medium range of 80% to 50%, and a low range < 50% (24).

Regarding compliance with the therapy indicators, all pregnant women (4/23) received ART, a standard of 100% is considered in the CAC as a goal in

Colombia. No active TB was diagnosed during the period evaluated, so none of them received anti-TB treatment. A 90% target is considered in the CCS in Colombia. Regarding the results related to the optimal virological response, it was found that 72.83% (126/173) achieved undetectable viral load results between week 9 and week 117 after initiation of ART. Regarding the indicator; proportion of PLHIV with undetectable viral load (CV) at 48 weeks or more of

48, with a standard of 80% according to the Colombian Fund for High-Cost Diseases. IPS that care for PLHIV are expected to meet the standard, with an adequate range being considered a result > 80%, a mean range of 80% to 70%, and a low range < 70% (24). The remaining patients suppressed throughout follow-up with viral suppression data achieved up to week 117 after initiation oftreatment. Of the patients with undetectable viral load, 95.2% (120/126) obtained results in ≥ 48 weeks, 3.9% (5/126) viral load < 48 weeks and 0.8 (1/126), she was only tested for viral load before starting ART and not for follow-up. However, of the patients with detectable viral load, 74.4% (35/47) had their viral load ≥ 48 weeks, 12.7% (6/47) had their viral load < 48 weeks, and 12.7% (6/147) only had their viral load before starting ART

50% of patients had their viral load assessed between week 68-92 after the start of ART. Continuing with the indicators of therapies; proportion of PLHIV with genotyping study in virologic failure as reported in clinical records, 100% (1/1), were studied with the viral genotyping test; it is considered a 90% standard in the CAC according to the Colombian Fund for High Cost Diseases. IPS that care for PLHIV is expected to meet the standard, with an adequate range being considered a result > 90%, a mean range of 90% to 70%, and a low range < 70%(24). and 1.1% (2/173) underwent genotyping.

Regarding the change of therapeutic scheme; In the indicator, proportion of PLHIV with a change in ART, 31.2% (54/173) of the subjects presented some change in the ART regimen; is considered a standard < 30% in the CCS according to the Fund Colombian Institute for High-Cost Diseases. IPS that care for PLHIV are expected to meet the standard, with an adequate range being considered a result < 30%, a mean range of 30% to 40%, and a low range > 40% (24); and the change associated with intolerance, adverse effect and drug interactions was 28.9% (50/173).

Regarding the prescription of patients who start ART within the reporting period, with any of the guidelines for choosing first-line treatment; the indicator, the proportion of PLHIV with initial ART prescription according to the choice guidelines defined in the Colombian Clinical Practice Guideline (CPG); for the Tenofovir/Emtricitabine/Efavirenz regimen, it was 19.6% (34/173), for the Tenofovir/Emtricitabine/Atazanavir/Ritonavir regimen 26.5% (46/173), for the Tenofovir/Emtricitabine/Darunavir/Ritonavir regimen 7.5% (13/173), for the Tenofovir/Emtricitabine/Raltegravir regimen 8.1% (14/173), for the Abacavir/Lamivudine/Efavirenz regimen 815/173) and likewise for the Abacavir/Lamivudine/Atazanavir/Ritonavir regimen (15/173). With respect to the level of compliance recommended by the CCS standards (adequate > 95%; medium 90-95%; and under < 90%), none of the requirements were met (24).

In relation to compliance with specific prevention indications, the proportion of patients with prophylaxis for Pneumocystis jirovecii pneumonia did not meet the goal established for patients with CD4<200/ml lymphocytes. Regarding the CD4>200/ml lymphocyte count at the time of diagnosis, 72.9% had a complete HBV vaccine regimen (78/107). A 100% standard is considered a target in Colombia in the CCS, Table 3.

In this evaluation, an overall adherence to the recommendations of the CPG and CAC was found to be 11% (19/173) (Table 3). Viral load measurement at 48 weeks was performed in two 1.15% patients, who had an undetectable viral load (< to 50 copies), Figure 2.

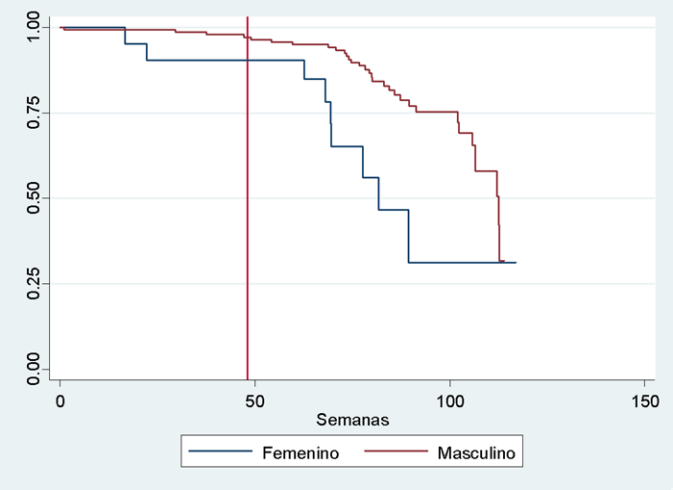

Figure 2. Viral Load Suppression Survival Analysis by Sex

Table 3: Current clinical characteristics at cut-off (December 31, 2016) of patients enrolled in the institutional program

Feature	Description	Summary Measure: n=173(%)
Dyslipidemia	Yes	4 (2.3)
	No	169 (97.6)
Peripheral neuropathy	Yes	2 (1.1)
	No	171 (98.8)
Anemia	Yes	3 (1.73)
	No	170 (98.2)
Chronic Kidney Disease	Yes	2 (1.1)
	No	171 (98.8)
ITS	Yes	51 (29.4)
	No	122 (70.5)
Functional disability	Yes	2 (1.1)
	No	171 (98.8)
CD4 lymphocyte count	Yes	21 (12.1)
	No	152 (87.8)
Latest CD4 Lymphocyte Count	0-200 target/ml	7 (4)
	>200-499 target/ml	10 (17.3)
	≥500 goals/ml	4 (2.3)
	It was not done	152 (87.8)
Family Planning Method	Barrier	163(94.2)
	Sterilization definitive	4(2.3)
	Device intrauterine	1(0.5)
	Hormonal	5(2.8)
Vacuna Hepatitis B	Yes	119(68.7)
	No	54(31.2)
PPD	Yes	82(47.4)
	No	91(52.6)
PPD Result	Refusal	77(93.9)
	Positive	5(6.1)
Any Prophylaxis	Yes	14(8.0)
	No	159(91.9)
Last Viral Load Week	≥48 weeks	154 (89)
	<48 weeks	12 (6.9)
	for TAR	7 (4)
Optimal Viral Load	Yes	126 (72.8)
	No	47 (7.1)
Global Compliance	Yes	19(10.9)
	No	154(89.0)

To explore the possible clinical factors related to non-compliance with the Clinical and Management Results indicators proposed by the 2014 High Cost Account Consensus and the recommendations of the Clinical Practice Guideline (GPC); the bivariate analysis showed a statistically significant association with having a psychiatric illness at the beginning of ART, which behaved as a protective factor with an OR of 0.05 (95% CI 0.004-0.645) and a value of p = 0.0199; And this is a residual confounder; It could be associated with the samplesize and the clinical variables that did not reach non-compliance in the subjects. It was also found that consultation with an infectious disease physician favored compliance with the recommendations of the clinical practice guidelines in 80% (OR 0.2, 95% CI 0.06-0.8: p=0.041). Some clinically significant variables, such as male sex, CD4 lymphocyte count at the start of ART, and pregnancy status, did not show a significant association for non-compliance with the indicators, Table 4.

Table 4: Factors related to non-compliance with the recommendations of the clinical practice guidelines in an IPS specialized in the management of HIV/AIDS

Feature	Description	n	Meets (n=19; 10.82)	Doesn't comply (n=154; 89.18%)	OR (IC 95%)	p-value
Sex	Man	150	16	134	1,2 (0,3-4,7)	0,735
	Woman	23	3	20		
Age in Years	Median		32	32	1,0 (0,9-1,0)	0,838
	RIC		(24-43)	(25-45)		
Origin: Cali	Yes	131	13	118	1,5 (0,5-4,2)	0,434
	No	42	6	36		
Pregnant	Yes	4	1	3	0,35 (0,2-5,2)	0,444
	No	19	2	17		
Offer of the HIV Testing	Yes	133	15	118	0,8 (0,1-2,9)	0,821
	No	40	4	36		
Notification by	Other IPS	6	1	5	0,61 (0,6-5,4)	0,654
	Program	167	18	149		
Clinical stage at diagnosis	Early	113	10	103	0,5 (0,2-1,4)	0,223
	Late	60	9	51		
CD4 count at diagnosis	Yes	161	19	142	- (0,4- -)	0,2072
	No	12	0	12		
CD4 Count at ART	Yes	168	19	149	- (0,15- -)	0.4254
	No	5	0	5		
Baseline psychiatric illness at the end of the start TAR	Yes	3	2	1	0,05 (0,004- 0,645)	0,0199
	No	170	17	153		
TAR Counseling	Yes	165	19	146	- (- --3,8)	0,30
	No	8	0	8		
Medication Change	Yes	55	8	47	0,6 (0,2-1,8)	0,30
	No	118	11	107		
Infections Opportunistic	Yes	22	4	18	0,4 (0,1-2,2)	0,247
	No	151	15	136		
Interconsultation with an Infectious Disease Specialist	Yes	13	4	9	0,2 (0,06-0,8)	0,041
	No	160	15	145		
Conteo de linfocitos CD4	Si	21	0	21	- (- -1,3)	0,859
	No	152	19	133		
Vacuna Hepatitis B	No	54	4	50	0,7 (0,3-1,5)	0,424
	Si	119	15	104		
PPD	No	91	12	79	0,6 (0,1-1,8)	0,328
	Si	82	7	75		
Cualquier Profilaxis	Si	14	1	13	1,6 (0,2-13,4)	0,635
	No	159	18	141		
Última CV	≤50 copias	126	16	110	2,1 (0,5-11,9)	0,237
	>50 copias	47	3	44		

According to the multivariate analysis, it was found that the factors that independently explain compliance with the recommendations of the clinical practice guideline were interconsultation with an infectious disease specialist, the result of last CV and pregnant woman, and the variable opportunistic infections and psychiatric illness at the start of ART was excluded, which shows that this behaved as a confounder. Non-compliance is not related to the clinical variables of the subjects, since they do not explain the non-compliance with the indicators; Non-compliance may be related to program administrative variables that were not evaluated during the study; Therefore, it is important for programmes to assess administrative barriers (process indicators); Hence the importance of the epidemiology of health services, Table 5.

Table 5: Adjusted model of factors related to non-compliance with the management indicators and evaluation of the results of the implementation of the proposed recommendations of the clinical practice guideline (CPG) in an IPS specialized in the management of HIV/AIDS

"characteristic	description	n	OR (IC 95%)	"p-value"	"Adjusted Odds Ratio (95% CI)"	"p-value"
	"Yes"	4				
pregnant woman			0,35 (0,2-5,2)	0,444	0,22 (0,02-2,49)	0,226
	" "No	19				
Illness	Yes"	3	0,055	0,0019	0,13 (0,008 -2,10)	
psychiatric ward	No	169	(0,009-1,15)			0,153
start TAR						
	Yes"	22	0,49	0,247	0,79 (0,18- 3,48)	0,759
Infections			(0,13-2,28)			
Opportunistic	No	151				
Interconsulta con Infectólogo	Yes"	13	0,23 (0,06-0,85)	0,041	0,29 (0,06 -1,40)	0,126
	No	160				
Resultado de última CV	≤50 copies	126	2,13 (0,56-11,93)	0,237	2,31 (0,59- 8,95	0,223
	>50 copies	47				

Factors related to optimal virological response were also explored, and the following variables were found to be statistically significant: CD4 lymphocyte count, which behaved as a protective factor with an OR = 0.18 (95% CI 0.07-0.46) and a p≤0.001 value. A statistically significant association was also found between optimal viral load and non-performance of PPD (OR = 2.42, 95% CI 1.19-4.9 with a value of p = 0.014). Other variables of clinical significance, according to the theoretical framework of the research, such as age, sex, and change of ART medications, among others, were not statistically significant in this study, Table 6.

Table 6: Factors related to the non-optimal virological response of the management indicators and evaluation of the results of the implementation of the proposed recommendations of the clinical practice guideline (CPG) in an IPS specialized in the management of HIV/AIDS.

Feature	Description	n	0 hp <50 copies n=126; 72.83%	1 CV >50 copies n=47; 27.17%	OR	p-value
Sex	Man	150	112	38	0,5 (0,2-1,3)	0,171
	Woman	23	14	9		
Age in Years	Median		32.5	32	0,9 (0,9-1,0)	0,953
	RIC		(25-45)	(28-43)		
Provenance of Cali	Yes	131	96	35	0,9 (0,4-1,9)	0,814
	No	42	30	12		
Pregnant	Yes	4	2	2	1,71(0,1-15,0)	0,631
	No	19	12	7		
Offer of the HIV Testing	Yes	133	95	38	1,3 (0,6-3,1)	0,450
	No	40	31	9		
Notification by	Program	167	122	45	1,3 (0,2-7,6)	0,731
	Other IPS	6	4	2		
Clinical Stage at Diagnosis	Early	113	84	29	1,2 (0,6-2,4)	0,542
	Late	60	42	18		
CD4 count at diagnosis	Yes	161	117	44	0,88 (0,14 3,77)	0,8611
	No	12	9	3		
CD4 Count at ART Baseline	Yes	168	122	46	0,.66 (0,013-6,94)	0,7146
	No	5	4	1		
	Yes	3	3	0	-(- -3,4)	0,285
psychiatric illness at the end of the start TAR	No	170	123	47		
TAR Counseling	Yes	165	121	44	0,6 (0,1-2,6)	0,505
	No	8	5	3		
Medication Change	Yes	55	44	11	0,5 (0,2-1,2)	0,151
	No	118	82	36		
Opportunistic infections	Yes	22	14	8	1,6 (0,5-4,5)	0,299
	No	151	112	39		
Interconsultation with an Infectious Disease Specialist	Yes	13	8	5	1,7 (0,5-5,6)	0,356
	No	160	118	42		
Counting CD4 lymphocytes	Yes	21	8	13	0,1 (0,07-0,4)	<0,001
	No	152	118	34		
Vacuna Hepatitis B	No	54	35	19	0,6 (0,4-0,9)	0,47
	Yes	119	91	28		
PPD	No	91	59	32	2,4 (1,1-4,9)	0,014
	Yes	82	67	15		
Prophylaxis	Yes	14	11	3	0,7 (0,8-2,6)	0,616
	No	159	115	44		
Result of Latest CV	Non-Compliance	154	110	44	2,1 (0,5-11,9)	0,237
	Compliance	19	16	3		

According to the multivariate analysis, the associated factors that independently explain the increased risk for optimal virologic response according to the recommendations of the clinical practice guideline were the CD4 lymphocyte count and not performing the PPD, it is possible that it is an indicator variable of administrative barriers that were not evaluated; The reading was not recorded in all subjects to whom the PPD was applied, Table 7.

Table 7: Adjusted model of factors related to the non-optimal virological response of the management indicators and evaluation of the results of the implementation of the proposed recommendations of the clinical practice guideline (CPG) in an IPS specialized in the management of HIV/AIDS

Feature	Description	n	Virologic OR response	p-value	Virologic OR response Tight	p-value
Sex	Man	140	0,5 (0,1-1,3)	0,171	0,3 (0,1-1,0)	0,068
	Woman	33				
Medication Change	Yes	55	0,5 (0,21,2)	0,151	1,08 (0,94- 1,24)	0,241
	No	118				
Counting CD4 lymphocytes	Yes	21	0,1 (0,07-0,4)	<0,001	0,2 (0,085- 0,64)	0,005
	No	152				
PPD	No	91	2,4 (1,1-4,9)	0,014	2,3 (1,06- 4,96)	0,034
	Yes	**82**				

According to the survival analysis to estimate the rate of viral suppression taking week 117 as an outcome, where 72.83% (126) of the subjects evaluated managed to suppress viral load (viral load RNA < 50 copies/mm3) at 79 weeks of follow-up, the probability of viral non-suppression was 0.8323. (0.7570- 0.8861). At week 48 after the initiation of ART, only 3.66% of the population had achieved virologic suppression 0.9634 (0.9203-0.9834). Significant differences were found in the survival curve on the speed of viral suppression according to sex. However, curves discriminated by ART were not compared. It was observed that females suppressed viral load more rapidly than males. However, over time during follow-up (week 109), the lines cross, showing similar behavior for both sexes. According to the value of p and Log Rank

<0.0001.

Table 8: Main studies cited

Estudio	Bedoya, et al., Cali Colombia 2019 n= 173	Varela, et al., Cali Colombia 2013 n= 127	Alave, et al., Peru 2012 n=1478	Ceballos, et al., Chile 2015 n=860	Degroote, et al., Bélgica 2014 n=218	Forbes, et al., Bahamas 2014 n=250	Bijker R, et al; África Subsahariana y Asia. 2017 n= 3934
Características demográficas y clínicas al diagnóstico							
Sexo masculino	150 (86,7)	97 (76,4)	1028 (69,6)	797 (93,0)	173 (79,4)	134 (54,0)	1991 (50,6)
Mediana de edad (en años)	32 (25-44)	42,5 (9,9)	35 (29-41)	42 (21-87)	46 (24-72)	36 (14)	37,8 (9,3)
Gestante	4 (17,4)	_	_	11 (17,4)	_	_	
Linfocitos TCD4 >= 200	113 (65,3)	_	444 (29,0)	569 (66,1)	_	227 (91,0)	1134 (28.8)
Mediana de TCD4	276 células/mm3 (RIC 157-380)	_	105	202	_	301	
Características clínicas al inicio de TAR							
Valor de Carga Viral > a	171 (98,8)	_	591 (40,0)	364 (42,0)	_	208 (83,2)	

10000 copias							
Motivo de inicio de TAR							
Por linfocitos TCD4 < 200	73 (42,2)	_	975 (66,0)	291 (33,8)	_	116 (46%)	2760 (70.1)
Por reporte de Carga Viral	88 (50,8)	_	_	395 (46,0)	_	_	
Enfermedad renal crónica	3 (1,7)	_	_	6 (0,7)	_	_	
Dislipidemia	4 (2,3)			94 (11,0)	_	_	
Anemia	4 (2,3)	_	_	_	_	_	
Infecciones oportunistas	22 (12,7)	_	637(43,1)	323 (38%)	_	_	
Tuberculosis	2 (1,1)	_	168 (11,4)	_	_	_	
Sarcoma de Kapossi	2 (1,1)	_	_	35 (4,0)	_	_	
Enfermedad Psiquiátrica	3 (1,7)	_	_	81 (9,4)	47 (21,6)	_	
Características clínicas al corte (diciembre 31 de 2016)							
Dislipidemia	4 (2,3)	_	_	266 (31,0)	_	_	
Enfermedad renal crónica	2 (1,1)	_	_	_	_	_	
Anemia	3 (1,7)	_	_	_	_	_	
Toma de linfocitos TCD4 de control	21 (12,1)	127 (100)	905(61,0)	705(82,0)	212 (97,2)	_	
Uso de condón como método de planificación	163 (94,2)	_	_	_	_	_	
Vacuna Hepatitis B	119 (68,7)	_	_	_	_	_	
Resultado de PPD negativo	77 (93,9)	_	_	845 (85,0)	_	_	
Carga viral óptima	126 (72,8)	90 (78,3)	1119 (76,0)	688 (80,0)	174 (79,8)	48 (19,2)	1867 (47,4)
Cumplimiento	19 (11,0)	66 (84,0)	1119(98,3)	_	173(79,4)	79 (32,0)	93 %en africa y 95% en asiá.
Transmisión Vertical	0	_	_	0	_	_	

DISCUSSION

This research evaluated the clinical and demographic characteristics of patients diagnosed with HIV/AIDS infection, enrolled in a specialized IPS in Cali, Colombia, during 2016, and determined compliance with management indicators in a program for the management of patients living with HIV/AIDS, in a specialized IPS in Cali, Colombia. virologic response and determinants of optimal virologic response at week 48. The main reason for patients not having a viral load at week 48 after starting ART was the lack of timely follow-up by the program's multidisciplinary group.

It was found that 11% of the population studied by the specialized IPS complied with the guidelines of the CPG and the indicators of

the CAC; in contrast to data provided by the Ministry of Health and Social Protection, in Colombia in 2018, 75% of the diagnosed population had access to pharmacological treatment and remained adhered to care programs (14). Since no information about drug adherence was obtained through surveys in the registries of the study population, it was not possible to measure it or obtain information about it to compare it with the studies reviewed in the literature.

Regarding the analysis of demographic factors, the present study reported that 86.7% of the population corresponds to the male sex, which is in agreement with what has been reviewed in the literature; regarding pregnant women, a study carried out in South America reported that 75% of pregnant women started ART after 26.6 weeks of gestation until 11.7 weeks after delivery. as a strategy for the prevention of mother-to-child transmission, this prophylaxis resulted in CVP (Plasma viral load) < 400 copies/ml in less than 6.7 weeks of treatment, in 75% of cases; in 5 cases it remained detectable. The time to obtain the CVP < 400 copies/mL was reduced if the initial CVP was < 100,000 copies/mL and the prophylactic antiretroviral regimen was not changed. This suggests that antiretroviral prophylaxis should not be postponed after 26-28 weeks of treatment.

gestation to achieve a CVP < 400copies/ml at delivery (26-28). The study found that all pregnant women (4/23) received ART; 2 of them had started ART before pregnancy and the other 2 pregnant women started ART between the 17th and 27th week of gestation, since they entered the specialized HIV/AIDS program. The viral load after the first four weeks of starting ART reported more than one thousand copies/ml for all pregnant women, however, viral suppression was achieved at the end of gestation in 75% (3/4) only one pregnant woman reported detectable viral load but less than a thousand copies at the end of pregnancy. It is considered late entry; A pregnant woman who presents after 28 weeks with a diagnosis of HIV and has never received ART should begin treatment with HAART (a combination of three or more antiretroviral drugs). without delay (29).

On the other hand, the study reported that 1.7% (3/173) of patients at the start of ART had chronic kidney disease, however, the stage of the disease or the need for dialysis replacement therapy is not specified. However, the expert panel of the clinical practice guideline (CPG) recommends management with antiretrovirals in all HIV-infected persons with nephropathy, taking into account analytical descriptive studies suggesting a relationship between virological control, preservation of renal function and survival; since HIV-associated nephropathy is the main cause of end-stage renal disease in this group of patients and is characterized by HIV- associated renal disease. due to involvement of glomerular capillaries, tubular microcystic dilation and tubulo-reticular inclusions. Therefore, if this condition is left untreated, it usually progresses to end-stage renal failure in a matter of weeks to months(19). It was found in the literature through the consensus on the management of renal pathology in patients with HIV infection Expert Panel of the AIDS Study Group (GESIDA) of the Spanish Society of Infectious Diseases and Clinical Microbiology (SEIMC),the Spanish Society of Nephrology (S.E.N.) and the Spanish Society of Clinical Biochemistry and Molecular Pathology (SEQC). whereas renal function should be monitored in all HIV-infected patients on a regular basis, as well as, those on renal replacement therapy or pre-dialysis (GFR < 20 ml/min/1.73 m2) should be placedon the kidney transplant waiting list as long as they meet the generalcriteria after evaluation for kidney transplantation and the specific criteria for HIV infection. (Quality of evidence: High.

Recommendation Rating: Strong (30). Several studies have shown cost-effectiveness for the health system of kidney transplantation; Data reported in Argentina and Colombia show that kidney transplantation is the best treatment alternative for patients with end-stage chronic kidney disease and provides better results in terms of survival, quality of life, and cost-effectiveness than dialysis replacement therapy, improving the sustainability of health systems (31-33).

In relation to the analysis of the factors related to non-compliance with the Clinical and Management Results indicators proposed by the 2014 High Cost Account consensus and the recommendations of the Clinical Practice Guideline (CPG), none of the clinical variables analyzed in this study could independently explain, after adjustment, non-compliance with the recommendations of the clinical practice guideline could be explained by the limitations in the sample size, as well as by possible confounding variables such as psychiatric illness, interconsultation with an infectious disease specialist, which in the multivariate analysis lost the significance presented in the bivariate. In contrast, studies conducted in India found a relationship between clinical variables and compliance or adherence, where 96.8% of patients had optimal adherence (> 95%), with the TCD4 count (p= 0.05) and the effect of education to patients by programs on the importance of compliance and adherence to recommendations (p=0.04). While the main variables related to non-compliance were alterations in mental health (p=0.001), this could explain that in the face of serious mental illnesses that require a companion or caregiver, their assistance could favor adherence or compliance with the recommendations of the clinical practice guidelines (34-36). The impossibility of this study to find factors

The clinical differences related to compliance and adherence could be explained by the size of the sample or the fact that in this cohort the administrative variables have a greater strength of association than the clinical ones, however, these administrative variables were not available in the information sources consulted. In this study, demographic variables related to non-compliance were also not found, as demonstrated in countries with a high burden of HIV/AIDS such as sub-Saharan Africa and Asian countries, it was found that non-compliance was related to age under 30 years and female sex (37)

The review of the literature made it possible to compare the results found with those found in other studies such as the one conducted in the Bahamas in 2014, which determined optimal adherence or compliance if there were medical prescriptions in 11 months or more for each patient and viral suppression with a viral load was considered < 1000 copies, out of 250 people included in the study, 32% were kept under care and only 41% of those who received treatment achieved viral suppression (38). On the other hand, the clinical practice guideline (CPG) mentions that initiating ART aims to prevent viral replication and achieve undetectability in the shortest possible time, generally before 6 months after initiation of therapy, and to maintain it at that level for as long as possible to limit the progression of the disease in PLHIV and avoid the risk of HIV transmission. Achieving an undetectable viral load provides evidence of adequate medication adherence (19); In the present study, viral suppression was considered a viral load of less than 50 copies, in this sense 72.83% of the patients achieved undetectability, complying with medical prescriptions for 12 months, attendance at consultations with infectious diseases, expert doctor, intervention by psychology, social work, nursing and nutrition; all of the above is part of the recommendations of the Clinical Practice Guideline

(CPG). that defines the interventions for the initial assessment and follow-up of these patients, to guarantee evaluation and compliance by all the specialties that make up the multidisciplinary group, in order to favor the greatest probability of success in the comprehensive care of patients with HIV/AIDS (19). It should be noted that a checklist was made with the previously mentioned items for each of the patients, in order to evaluate compliance with the CPG.

According to studies carried out in the population of the city of Cali, Colombia, compliance or adherence ranges between 40% and 80%, and the analysis of related sociodemographic factors showed that the lower opportunity to achieve optimal adherence or compliance (>95%) was related to age under 40 years (OR = 3.9; p=0.01), low socioeconomic stratum (OR= 4.7; p= 0.018), polypharmacy (more than 4 pills per day) (OR=3.6; p=0.062) and women with a partner or children diagnosed with HIV/AIDS (OR=2.43; p=0.083) (39-41). In contrast to the study conducted, compliance was 11% and the analysis of sociodemographic factors did not show statistical significance.

The proportion of patients who achieved viral suppression at the sixth month (week 24) of treatment was less than 1%, while at the first year (week 48) it was 1.15%. Survival analysis at week 117 (2.25 years), the last follow-up of the cohort, showed that 73% of followed patients achieved optimal viral suppression at more than twice the time recommended by the GPC. In studies in the European population, it was reported that 42% of patients had viral loads of less than 200 copies/ml in the first month of ART, while in the third month this percentage reached 53% and at week 48, 48.1% achieved viral suppression (viral load <50 copies/ml). This difference with respect to the viral suppression time of the European studies, with our study, can be explained by the fact that the European health system is better formed in terms of multidisciplinary group, where there is close follow-up and administrative barriers are minimal, the programs are made up of a multidisciplinary team, with a nurse specialized in behavioral intervention and substance abuse counseling. motivational interviewing and the support of social work, responsible for referring patients to local health centers (42,43).

North America reported through its observational and experimental studies that about 70% of patients achieved rapid and successful immune and virological response to ART; Factors that predicted this response included early initiation of ART and age over 50 years,

85% had an undetectable viral load for 12 months (44-50). In relation to age, in the present study, virological suppression cannot be explained, because the risks are not proportional over time. It seems that in the group around 60 years of age, the rate of viral suppression is faster compared to the other two groups. However, the population of patients included in this age group is too small to be compared. Nationwide, 70% of patients with ART managed to suppress their viral load and about 29.5% of patients on antiretroviral therapy (ART) were considered to be in Therapeutic Failure (TF), of which virological failure was the most frequent with 20.9%. In patients who showed lack of adherence to treatment, the chances of presenting a TF and virological were higher, 6.67 and 12.19 times, respectively, compared to patients who showed good adherence and in terms of early vs. late genotyping, it was found that the most frequent type of resistance in patients under ART was to non-nucleoside inhibitors in 76% and the late study group had a higher risk of resistance to nucleoside inhibitors and protease inhibitors. The most frequently found association was non-adherence to treatment (51,52). This is very similar to the present research, given that 84.21% of patients who complied with 100% of the program's benefits achieved undetectable viral load.

In relation to virological response, the determinants found in the literature that were not evaluated in the present study were associated with the health care system, lifestyle, drug abuse, low income, and low level of education (young adults) (50) (53-63).

Regarding the indicator of CD4 count and prophylaxis of opportunistic infections, this study found that 97% of the population had CD4 counts, of which 48% (83/173) of patients had CD4

$\leq$ 200 cells per cubic millimeter and of these, 8.09% received prophylaxis. Of the 55 patients with CD4 counts $\leq$ 200, 23.6% (13/55) were diagnosed

opportunistic infections. These indicators are considered below the U.S. Public Health Service and the USPHS/IDSA Guidelines for the Prevention of Opportunistic Infections in Persons Infected with Human Immunodeficiency Virus. MMWR 2002; 51(No. RR-8) (64). These low percentages in compliance with this indicator may be due to the limited time established by the program to provide the comprehensive care required by this population and consequently affects the quality of care and the information contained in medical records.

Given the complexity of the management and the deficiencies for the problematic management of people living with HIV/AIDS, the Ministry of Health of Colombia guarantees integrity in care through resolutions 3202 and 429 of 2016, in addition to promoting responsible sexual and reproductive health, in order to reduce the incidence of patients with HIV/AIDS; Offer testing in friendly service programs (rapid testing), to ensure early diagnosis and timely treatment in positive cases. In the care of patients diagnosed with HIV/AIDS, ensure comprehensive care, with expert personnel in management, and comply with the criteria established by the GPC; Actively integrate the intervention of the psychosocial group, provide follow-up and continuity in pharmacological and non-pharmacological treatment, reduce accessibility barriers for the population of dispersed areas, administrative barriers, promote responsible sexual health, construction, review and periodic measurement of clinical and administrative indicators of process and result. It also recommends the evaluation of management and clinical results in institutions for the care of people living with HIV in Colombia and, at the same time, the generation of improvement plans in those that are not being met according to the established goal(65-67). However, in addition to compliance with these regulations,the success of PLHIV management programs also depends on patient adherence, which in turn depends on the humanization of the service, the elimination of administrative barriers, the quality of care, and safety of patients. All of the above should be monitored through administrative and clinical outcome indicators.

CONCLUSIONS

The HIV epidemic continues to be a challenge for the world's public health systems, and its control must take into account not only clinical indicators, but also administrative ones.

The demographic characteristics of PLHIV in this program are consistent with those reported in the literature and mainly affect men aged 32 years.

The diagnosis, treatment and follow-up of PLHIV is complex and requires participatory care from both the patient and the program.

Another weakness of the information system is the quality of the clinical records to extract real data that reflect the current situation of the population.

Program evaluation should be ongoing, focused on quality of care and clinical outcomes.

Limitations And Strengths

Due to the fact that this research was retrospective, the information on the exposure and the quality of the data in the clinical records was limited (information bias); a margin of error was found in the completion of the medical record and in the typing of the data recorded in the high-cost account. An attempt was made to control the error by corroborating the information recorded in the CAC with the clinical, laboratory and administrative records of the IPS; variables such as socioeconomic status, marital status, occupation, educational level, physical activity, and consumption of psychotoxic substances, were not measured since they were not recorded in the medical record and are not part of the CCS variables. No record was found of any self-reported survey to measure pharmacological adherence in the population enrolled in the program, as this tool was not available, only records of the months that the medications were formulated were obtained. The information found is similar to that of the national population, given that it has similar sociocultural, economic and health characteristics; In addition, specialized programs must be aligned with the CPG, with which the study population was evaluated. However, it is important to evaluate other determinants, which were not included in this research, but are of utmost importance, in order to analyze the population in a comprehensive way.

In relation to the measurement of evidence-based consensus indicators, it was not possible to measure monitoring indicators such as the proportion of PLHIV with CD4 follow-up and viral load in the last six months and the proportion of PLHIV with annual cardiovascular risk assessment (CVR), since these data were not recorded in the reported registries.

Recommendations

Encourage further studies that allow for follow-up over a longer period of time, including tools to assess adherence to ART and according to social determinants, adverse effects related to medication use and barriers to access to medications in care facilities, the use of psychoactive substances, the transfer from rural areas, the educational level, the economic income, the family or social support given that there is a knowledge gap.

Program evaluation processes through operational research should be included in order to adjust HIV/AIDS prevention and control strategies and improve the safety and quality of HIV/AIDS care population, as well as strengthening sexual and reproductive health services. In addition, at the institutional level, each IPS or specialized program must evaluate the efficiency of its HIV/AIDS strategies, evaluating adherence to antiretroviral treatment, virological response to pharmacological treatment on a regular basis according to the recommendations of national and international guidelines based on the best evidence, as well as comprehensive and multidisciplinary care with quality. that positively impact this specific population.

Conflicts Of Interest

All authors declare that they have no conflicts of interest that could influence the resuls or conclusions of the article.

Anexo 1: Indicadores Clínicos y de Resultados de Gestión propuestos por el consenso de la cuenta de alto costo 2014.

Initial evaluation	Proportion of PLHIV with Diagnosis Within the Reporting Period Who Receive Care from an Expert Physician (According to CPG)	173	Número de nuevos casos de PVVIH en el periodo en atención por medico experto.	Number of new cases of PLHIV in the period in care by an expert doctor.	92,48	100%	The IPs that serve PLHIV are expected to comply with the standard, Consider an Adequate Range A Result > 95%, Medium 95% To 90% And How Low Range < 90%
Initial evaluation	Proportion of PLHIV with Performing Cd4 Lymphocyte Count in the Initial Assessment	173	Total number of new cases of PLHIV in the period in which a CD4 count was performed in the assessment initial	Total number of new cases of PLHIV in the period .	93,06	100%	The IPs that serve PLHIV are expected to comply with the standard, Consider an Adequate Range A Result > 95%, Medium 95% To 90% And How Low Range < 90%
Initial evaluation	Proportion of PLHIV with Diagnosis Within the Reporting Period With Realization of Viral Load (VL) in the Initial assessment	173	Total number of new cases of PLHIV in the period in which HIV plasma viral load was measured in the assessment initial	Total number of new cases of PLHIV in the period.	100	100%	The Ips that serve PLHIV are expected to comply with the standard, Consider an Adequate Range A Result > 95%, Medium 95% To 90% And How Low Range < 90%
Monitoring	Proporción De PVVIH Con Realización De PPD Anual	173	Total number of new cases of PLHIV in which PPD has been performed in the last 12 months.	Number of PLHIV reported	47,39	90%	The Ips that serve PLHIV are expected to comply with the standard, Consider an Adequate Range A Result > 80%, Medium 80% To 50% And How Low Range < 50%
Monitoring	Proportion of PLHIV with Annual Syphilis Screening (STI)	173	Number of PLHIV reported with syphilis or STI in the last 12 months.	Number of PLHIV reported	29,47	100%	The IPs that serve PLHIV are expected to comply with the standard, Consider an Adequate Range A Result > 95%, Medium 95% To 90% And How Low Range < 90%
Therapy	Proporción De TAR En PVVIH Gestantes	4	Número de PVVIH embarazadas reportadas con TAR	Número de PVVIH embarazadas reportadas	100	100%	Se Espera Que Las Ips Que Atienden PVVIH Cumplan El Estándar,, Se Considera Un Rango Adecuado Un Resultado 100 %, Medio Un Resultado < 100%

							A 95% Y Como Rango Bajo < 95%
Terapia	Proporción De PVVIH Con Tuberculosis (Tb) Activa En Tratamiento Simultaneo Para Tb Y Con TAR	2	Número de personas con TB activa y VIH a los que se le prescribe TAR y tratamiento antiTB	Número de personas con TB activa y VIH	0	90%	Se Espera Que LasIps Que Atienden PVVIH Cumplan ElEstándar, Se Considera Un Rango Adecuado Un Resultado > 80%, Medio De 80% A 60% Y Como Rango Bajo < 60%
Terapia	Proporción De PVVIH Con Carga Viral (CV) Indetectable A Las 48 Semanas O Más De TAR	173	Número de PVVIH en TAR con 48 semanas o más (semana 117) de tratamiento y logran una cv < 50 copias/ml	Número de PVVIH en TAR con 48 semanas o más de tratamiento	69,36	80%	Se Espera Que Las Ips Que Atienden PVVIH Cumplan El Estándar,, Se Considera Un Rango Adecuado Un Resultado > 80%, Medio De 80% A70% Y Como Rango Bajo < 70%
Terapia	Proporción De PVVIH Con Estudio De Genotipificación En El Fracaso Virológico	1	Número de PVVIH que ha tenido fracaso virológico y se les realizo estudio de Genotipificación	Número de PVVIH que ha tenido fracaso virológico	100	90%	Se Espera Que Las Ips Que Atienden PVVIH Cumplan El Estándar,, Se Considera Un Rango Adecuado Un Resultado > 90%, Medio De 90% A70% Y Como Rango Bajo < 70%
Terapia	Proporción De PVVIH Con Cambio De TAR	173	Número de PVVIH que iniciar TAR dentro del periodo de reporte que cambia alguno de los fármacos de la TAR dentro de los 12 meses posteriores al inicio.	Número de PVVIH que iniciar TAR dentro del periodo de reporte	31,21	95%	Se Espera Que Las Ips Que Atienden PVVIH Cumplan El Estándar,, Se Considera Un Rango Adecuado Un Resultado < 30%, Medio De 30% A40% Y Como Rango Bajo > 40%
Terapia	Proporción De PVVIH Con Prescripción De TAR Inicial De Acuerdo A Las Pautas De Elección Definidas En La Guía Práctica Clínica (Gpc) Colombiana	173	Número de PVVIH que inician TAR dentro del periodo de reporte con algunas de las pautas de elección de la GPC	Número de PVVIH que inician TAR dentro del periodo de reporte	Esquema TAR Tenofovir /Emtricitabina/ Efavirenz 19,6	95%	Se Espera Que Las Ips Que Atienden PVVIH Cumplan ElEstándar, Se Considera Un Rango Adecuado Un Resultado > 95%, Medio De 95% A 90% Y Como Rango Bajo < 90%

Terapia	Proporción De PVVIH Con Prescripción De TAR Inicial De Acuerdo A Las Pautas De Elección Definidas En La Guía Práctica Clínica (GPC) Colombiana	173 Número de PVVIH que inician TAR dentro del periodo de reporte con algunas de las pautas de elección de la GPC 26,5	Número de PVVIH que inician TAR dentro del periodo de reporte con algunas de las pautas de elección de la GPC	Esquema TAR que Tenofovir TAR/Emtricit abina/ delAtazanav deir/Ritona vir	95% Se Espera Que Las Ips Que Atienden PVVIH h Cumplan El Estándar, Se Considera Un Rango Adecuado Un Resultado > 95%, Medio De 95% A 90% Y Como Rango Bajo < 90%
Terapia	Proporción De PVVIH Con Prescripción De TAR Inicial De Acuerdo A Las Pautas De Elección Definidas En La Guía Práctica Clínica (GPC) Colombiana	173 Número de PVVIH que inician TAR dentro del periodo de reporte con algunas de las pautas de elección de la GPC 7,5	Número de PVVIH que inician TAR dentro del periodo de reporte con algunas de las pautas de elección de la GPC	Esquema TAR que Tenofovir TAR/Emtricit abina/ delDarunavi der/Ritonav ir	95% Se Espera Que Las Ips Que Atienden PVVIH Cumplan El Estándar, Se Considera Un Rango Adecuado Un Resultado > 95%, Medio De 95% A 90% Y Como Rango Bajo < 90%
Terapia	Proporción De PVVIH Con Prescripción De TAR Inicial De Acuerdo A Las Pautas De Elección Definidas En La Guía Práctica Clínica (GPC) Colombiana	173 Número de PVVIH que inician TAR dentro del periodo de reporte con algunas de las pautas de elección de la GPC 8,1	Número de PVVIH que inician TAR dentro del periodo de reporte con algunas de las pautas de elección de la GPC	Esquema TAR que Tenofovir TAR/Emtricit abina/ delRaltegrav ir de	95% Se Espera Que Las Ips Que Atienden PVVIH Cumplan El Estándar, Se Considera Un Rango Adecuado Un Resultado > 95%, Medio De 95% A 90% Y Como Rango Bajo < 90%
Terapia	Proporción De PVVIH Con Prescripción De TAR Inicial De Acuerdo A Las Pautas De Elección Definidas En La Guía Práctica Clínica (GPC) Colombiana	173 Número de PVVIH que inician TAR dentro del periodo de reporte con algunas de las pautas de elección de la GPC 8,6	Número de PVVIH que inician TAR dentro del periodo de reporte con algunas de las pautas de elección de la GPC	Esquema TAR que Abacavir/ TARLamivudi na/ delEfavirenz de	95% Se Espera Que Las Ips Que Atienden PVVIH Cumplan El Estándar, Se Considera Un Rango Adecuado Un Resultado > 95%, Medio De 95% A 90% Y Como Rango Bajo < 90%
Terapia	Proporción De PVVIH Con Prescripción De TAR Inicial De Acuerdo A Las Pautas De Elección Definidas En La Guía Práctica Clínica (GPC) Colombiana	173 Número de PVVIH que inician TAR dentro del periodo de reporte con algunas de las pautas de elección de la GPC 8,6	Número de PVVIH que inician TAR dentro del periodo de reporte con algunas de las pautas de elección de la GPC	Esquema TAR que Abacavir/ TARLamivudi na/ delAtazanav deir/Ritona vir	95% Se Espera Que Las Ips Que Atienden PVVIH Cumplan El Estándar, Se Considera Un Rango Adecuado Un Resultado > 95%, Medio De 95% A 90% Y Como Rango Bajo < 90%
Terapia	Proporción De PVVIH Con Prescripción De TAR Inicial De Acuerdo A Las Pautas De Elección Definidas En La	173 Número de PVVIH que inician TAR dentro del periodo de reporte con algunas de las pautas	Número de PVVIH que inician TAR dentro del periodo de reporte con	Esquema TAR que Abacavir/ TARLamivudi na/ delDarunavi der/Ritonav ir	95% Se Espera Que Las Ips Que Atienden PVVIH Cumplan El Estándar, Se Considera Un Rango Adecuado Un Resultado > 95%, Medio De

	Guía Práctica Clínica (GPC) Colombiana	de elección de la GPC			95% A 90% Y Como Rango Bajo < 90%
			Esquema No Iniciado En El Periodo Evaluado		
Terapia	Proporción De PVVIH Con Prescripción De TAR Inicial De Acuerdo A Las Pautas De Elección Definidas En La Guía Práctica Clínica (GPC) Colombiana	173 Número de PVVIH que inician TAR dentro del periodo de reporte con algunas de las pautas de elección de la GPC	Número de PVVIH que inician TAR del periodo de reporte	Esquema TAR Abacavir/ Lamivudina/ Raltegravir	95% Se Espera Que Las Ips Que Atienden PVVIH Cumplan El Estándar, Se Considera Un Rango Adecuado Un Resultado > 95%, Medio De 95% A 90% Y Como Rango Bajo < 90%
		Esquema No Iniciado En El Periodo Evaluado			
Prevención Especifica	Proporción De PVVIH Con Profilaxis Para Neumonía Por *Pneumocystis jirovecii*	7 Número de PVVIH con linfocitos CD4<200/ml que recibe profilaxis frente *P jirovecii*	Número de PVVIH con último recuento linfocitos CD4<200/ml	0 con	100% Se Espera Que Las Ips Que Atienden PVVIH Cumplan El Estándar, Se Considera Un Rango Adecuado Un Resultado > 95%, Medio De 95% A90% Y Como Rango Bajo < 90%
Prevención Especifica	Proporción De PVVIH Con Esquema Completo De Vacuna Para Hepatitis B (Si Esta Indicada)	107 Número de PVVIH con linfocitos CD4>200/ml con esquema completo de vacuna para VHB	Número de PVVIH con linfocitos CD4>200/ml al momento del diagnostico	72,89 con	95% Se Espera Que Las Ips Que Atienden PVVIH Cumplan El Estándar, Se Considera Un Rango Adecuado Un Resultado > O Igual Al 95%, Resultado Menor De 95% A90% Y Como Rango Bajo < 90%

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