

Factors associated with HIV/AIDS treatment dropouts in a special care unit in the City of Rio de Janeiro, RJ, Brazil

Fatores associados ao abandono de acompanhamento ambulatorial em um serviço de assistência especializada em HIV/aids na cidade do Rio de Janeiro, RJ

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Abstract

Objective: This study aimed to identify factors associated with the health care of patients with HIV/AIDS who drop out. **Methods:** The study was developed in a specialized health care unit of a University hospital in Rio de Janeiro, Brazil, considering a stratified sample of adult patients including all dropout cases (155) and 44.0% of 790 cases under regular follow-up. Bivariate analyses were used to identify associations between health care dropout and demographic, socioeconomic and clinical variables. Logistic and Cox regression models were used to identify the independent effects of the explanatory variables on risk for dropout, in the latter by incorporating information on the outcome over time. **Results:** Patients were, on average, 35 years old, predominantly males (66.4%) and of a low socioeconomic level (45.0%). In both models, health care dropout was consistently associated with being unemployed or having an unstable job, using illicit drugs and having psychiatric background - positive association; and with age, having AIDS, and having used multiple antiretroviral regimens - negative association. In the logistic regression, dropping out was also positively associated with time between diagnosis and the first outpatient visit, while in the Cox model, the hazard for dropping out was positively associated with being single, and negatively associated with a higher educational level. **Conclusions:** The results of this work allow for the identification of HIV/AIDS patients more likely to drop out from health care.

Keywords: Acquired Immunodeficiency Syndrome. HIV. Patient dropouts. Patient acceptance of health care. Socioeconomic factors. Epidemiology.

Resumo

Objetivo: Este estudo visou a identificar fatores associados ao abandono do serviço de saúde por pacientes com HIV/aids. **Métodos:** O estudo foi desenvolvido no Serviço de Assistência Especializada de um hospital universitário do Rio de Janeiro, considerando uma amostra estratificada de pacientes adultos, incluindo todos os casos de abandono (155) e 44,0% dos 790 casos em acompanhamento regular. Análises bivariadas visaram a identificar associações entre o abandono do serviço de saúde e variáveis demográficas, socioeconômicas e clínicas. Um modelo de regressão logística e um modelo de Cox foram utilizados para a identificação dos efeitos independentes das variáveis explicativas sobre o risco de abandono, no segundo caso incorporando a informação sobre a ocorrência do desfecho no decorrer do tempo. **Resultados:** Os pacientes tinham em média 35 anos, sendo predominantemente do sexo masculino (66,4%) e de nível socioeconômico baixo (45%). Em ambos os modelos, mostraram-se consistentemente associados ao risco de abandono estar desempregado ou possuir vínculo instável, usar drogas ilícitas e ter antecedentes psiquiátricos - associação positiva; e idade, ter o diagnóstico de aids e ter usado vários esquemas antirretrovirais - associação negativa. Na regressão logística, mostrou-se também positivamente associado à ocorrência de abandono o tempo entre o diagnóstico e a primeira consulta, enquanto no modelo Cox, o *hazard* de ocorrência de abandono mostrou-se positivamente associado a ser solteiro e negativamente associado a ter nível de escolaridade mais elevado. **Conclusões:** Os resultados deste trabalho permitem a identificação de pacientes com HIV/aids mais vulneráveis ao abandono do serviço de saúde.

Palavras-chave: Síndrome da Imunodeficiência Adquirida. HIV. Pacientes desistentes do tratamento. Aceitação pelo paciente de cuidados de saúde. Fatores socioeconômicos. Epidemiologia.

Introduction

In spite of the undeniable advances witnessed in AIDS treatment in the last fifteen years, there is still the challenge of guaranteeing the continuation of necessary treatment required by patients with HIV/AIDS, including not only the correct use of anti-retroviral drugs (ARVs), but also a good attendance at outpatient health care services¹.

There are various factors associated to difficulty in attending health care services, which could be related to the virus itself, to the ARVs used, to relationship problems with the healthcare staff, the organization of the healthcare system or to the psychosocial difficulties of people living with HIV/AIDS.⁴⁻⁹ Besides these difficulties, the fact that the drug treatment has no defined timeframe, they will probably have to take them for the rest of their lives, could also contribute to their dropout.⁸

Although there is plentiful literature on works that discuss the adherence to AIDS drug treatment^{4,6,8,9}, the same cannot be said with regard to the assessment of the situation of asymptomatic patients, in which dropout occurs whether anti-retroviral drugs are in use or not.

This study was carried out in a specialized HIV/AIDS unit in a university hospital in the city of Rio de Janeiro, where it is routine procedure to identify once every semester, those patients who are absent from the service, missing consultations. The objective of the study was to identify the factors associated with this dropout, with the intention of picking up on other factors, not just those that refer exclusively to difficulties with the ARVs.

The relevance of this study becomes clear in the sense that identification of factors associated with the dropout from outpatient treatment could open up new alternatives that would permit the health team to work preventively on the aspects raised, and thus avoid the dropout before it happens. Given the common characteristics of people who live with HIV/AIDS, it is possible that the

results of the investigation carried out by the outpatient department in question could be reproduced in other health units with the same clientele.

Methods

The sample population in this study corresponds to a group of patients (1,391 patients) registered with the HIV/AIDS Specialized Care Unit (Serviço de Assistência Especializada - SAE) of a university hospital in the city of Rio de Janeiro, from when it began to operate in June, 1997 until January, 2007, with the exclusion of 446 cases in minors, deaths, transfers and of patients with previous dropout from treatment. This left 945 patients, 155 of which dropped out of treatment at the Unit, and 790 patients continued in regular follow up treatment.

The sample was stratified in terms of cases of dropout and non-dropout from the healthcare service, and the group of dropout cases treated as certain, with the inclusion of all the 155 patients in this condition. For the group of patients who did not drop out of the program at the Health Care Unit, around 44.0% of the 790 patients were randomly selected based on the Hájek algorithm¹⁰. The sampling weight allocated to this group was defined by the inverse probability of the inclusion of each patient in the population studied¹¹. In order to adequately estimate the distribution of the characteristics associated to treatment dropout in the population studied, the weight of 1 was attributed to all the observations related to dropout and the weight of 2.277 (790/347) was attributed to all the observations related to non-dropout.

The classification of the cases as dropout or non-dropout was made based on the criteria adopted by the care unit, using literature¹², that considers as cases of dropout, those in which the patient's last visit to the Care Unit took place more than six months ago in the case of patients with symptoms and more than one year ago in the case of asymptomatic patients. All patients for

whom the use of ARVs is indicated are considered as symptomatic patients, even when they are not demonstrating clinical symptoms, but whose treatment is indicated due to their CD4 levels.

For the development of this study, the data was collected by the first author, using annotations from the patients' medical records, after having obtained prior authorization from the Hospital's Board of Directors, who are responsible for keeping these records, and also from the Ethics Committee of the Sergio Arouca National School of Public Health (Escola Nacional de Saúde Pública Sérgio Arouca - CAAE: 0080.0.031.000-07). There is no conflict of interest involved in this study.

The range of variables involved in building these patients' profiles was composed of data considered relevant to the individual's behaviour in view of prolonged clinical follow-up treatment at a public health outpatient clinic, as shown in the literature.^{4,6,13} Demographic data, lifestyle habits, information on the socioeconomic and clinical situation of the patients were obtained from their medical records.

The medical records used in this health care unit include standardized printed forms for each professional category, followed by registration of the case's progress written up by the multi-disciplinary team, organized in chronological order, with a satisfactory degree of information.

In order to identify the factors associated with dropout, bivariate analyses were carried out, contemplating the patients' demographic, socioeconomic and clinical characteristics and also data relating to the treatment they received. The occurrence of dropout between the variables by category was compared using as a basis the Chi-squared (χ^2) statistic test. In the case of continuous variables, the averages comparison was reached using the Wilcoxon Signed Rank test.

We next applied the logistic regression statistic technique to include the independent effect of variables identified in the bivariate analyses stages as being associated

or being *borderline* associated ($p \leq 0,15$) with dropout.

Additionally, the instantaneous risk of the occurrence of dropout, right from the patient's entry into the care unit was studied using the Cox proportional method.

The SAS® business analytical software package was used, incorporating the sampling weight to obtain estimates of the parameter studied in the sample population.

Results

Considering the investigation of demographic and socioeconomic factors, Table 1 shows that, age, marital status, who the patient lives with, educational level and employment situation all affect the risk of dropout. With regard the type of home, a positive association with dropout was observed, however the high number of unknown cases (around 25%) should be mentioned. No significant differences were observed between the dropout and no-dropout groups in relation to sex, color or race, nor in regard to the location of their home.

In relation to clinical factors, habits and factors relative to care production, Table 2 shows the positive association with Illegal drug use and psychiatric history. Having an AIDS diagnosis and having used four or more ARV regimes presented a negative association with dropout risk. Having been referred by A Testing and Counselling Center (Centro de Testagem e Aconselhamento - CTA), and alcohol use were not statistically shown to be associated with dropout occurrence

A statistically significant difference was observed between the two groups in relation to the patient's age at his first consultation, and the average age of the dropout group was around four and a half years younger than that of the group that stayed in regular follow-up treatment (32.5 *versus* 37.1 years, respectively; $p < 0,0001$).

The time elapsed between the patient receiving the diagnosis and his first consultation at the SAE health care unit also showed a significant difference ($p=0,0051$)

between the two groups, being greater in the dropout group (average of 1 year and four months) than in the regular follow-up group (average 7 1/2 months).

The laboratorial parameters of the clinical evolution were the first and last CD4 and HIV Viral Load tests registered in the patients' medical records. With regard the first CD4 test, there was no statistically significant difference between the average results measured in the two groups, although they were slightly lower in the regular follow-up group (338,6 cells/mm³) than in the dropout group (389,7 cells/mm³). When examined, the last CD4 test showed a significant difference between the two groups ($p < 0,0001$), with the dropout group's average being lower (388,8 cells/mm³) than the permanent group's (544,6% cells/mm³).

Regarding the Viral Load, the first dosage of the quantity of HIV in the organism was carried out by more than 98% of the patients in regular follow-up treatment and by around 88% of those that dropped out, and there was a significant difference between the levels measured in the two groups ($p < 0,0001$), being slightly higher in the first group. The second exam showed even more expressive results, with a greater percentage of patients in regular follow-up treatment reaching the main target for treatment with ARVs, which is to attain an undetectable Viral Load result (67.84% of the non-dropout patients *vs.* 12.90% of those who dropped out).

Table 3 shows the results obtained by the regression logistics model, and shows the independent factors related to treatment dropout. The factors with positive association with dropout include: unemployment or unstable employment, the time between diagnosis and the first consultation, the use of illegal drugs and the registered existence of previous psychiatric illness. However, age at diagnosis and history of use of four or more ARV regimes have a negative association with dropout, that is, they work as a protective factor in this outcome.

Estimates indicate that the risk of dropout was greater between the youngest

Table 1 - Bivariate analyses of the association between drop-out cases of HIV/AIDS treatment and demographic and socioeconomic characteristics of patients attending the Specialized Care Service at São Francisco de Assis School Hospital. Rio de Janeiro, Brazil, 2007.

Tabela 1 - Análises bivariadas da associação entre a ocorrência de abandono de tratamento de HIV/aids e as características demográficas e socioeconômicas dos pacientes do Serviço de Assistência Especializada (SAE) do Hospital Escola São Francisco de Assis. Rio de Janeiro, Brasil, 2007.

Variable	n	%*	Dropout				χ^2 (p)
			Yes (n=155)		No (n=790)		
			n	%**	n	%**	
Age at 1st Consultation							<0.0001
18-29 years	251	26.6	67	26.6	184	73.4	
30-39 years	379	40.1	56	14.8	323	85.2	
40-49 years	239	25.3	27	11.3	212	88.7	
≥ 50 years	76	8.0	5	6.6	71	93.4	
Sex							0.8444
Male	628	66.4	104	16.6	524	83.4	
Female	317	33.6	51	16.1	266	83.9	
Color/Race							0.1398
White	497	52.6	76	15.3	422	84.7	
Mixed	232	24.6	34	14.6	198	85.4	
Black	166	17.6	32	19.3	134	80.7	
Unknown	50	5.2	13	26.0	36	74.0	
Martital Status							0.0410
Married	312	33.0	46	14.7	266	85.3	
Single	474	50.1	91	19.2	383	80.8	
Separated/Widowed	159	16.9	18	11.3	141	88.7	
Municipality of Residence							0.1485
Rio de Janeiro	615	65.08	105	17.0	510	83.0	
Outskirts (Baixada)	246	26.03	32	13.0	214	87.0	
Others	84	8.89	18	21.4	66	78.6	
Type of Residence							<0.0001
Owned	389	41.2	52	13.4	337	86.6	
Rented	194	20.5	39	20.1	155	79.9	
Loaned	67	7.1	19	28.4	48	71.6	
Others	58	6.1	24	41.4	34	58.6	
Unknown	237	25.1	21	8.9	216	91.1	
With whom patient resides							<0.0001
Family	604	63.85	82	13.6	522	86.4	
Partner	81	8.57	15	18.5	66	81.5	
Alone	170	18.01	29	17.0	141	83.0	
Others	81	8.59	22	27.1	59	72.9	
Unknown	9	0.98	7	77.8	2	22.2	
Educational Level							0.0024
No elementary schooling	259	27.4	59	22.7	200	77.3	
Elementary School Completed	204	21.5	37	18.2	167	81.8	
High School/University Completed	297	31.5	38	12.8	259	87.2	
Unknown	185	19.6	21	11.4	164	88.6	
Current Occupation							<0.0001
Employed/retired	499	52.8	53	10.6	446	89.4	
Unemployed	203	21.5	55	27.1	148	72.9	
Others	219	23.2	44	20.0	175	80.0	
Unknown	24	2.5	3	12.8	21	87.2	

Distribuição da população estudada por categorias das variáveis; **ocorrência (sim/não) de abandono por categorias das variáveis.

Distribution of sample population, according to variable category; Distribution of patient dropout (yes/no) according to variable categories.

Table 2 - Bivariate analyses of the association between HIV/AIDS treatment drop-outs and clinical characteristics, habits and aspects of the Specialized Care Service's patient care model at São Francisco de Assis School Hospital, Rio de Janeiro, Brazil, 2007.

Tabella 2 - Análises bivariadas da associação entre a ocorrência de abandono de tratamento de HIV/aids e as características clínicas, hábitos de vida e fatores relativos ao modo de produção de cuidado dos pacientes do Serviço de Assistência Especializada (SAE) do Hospital Escola São Francisco de Assis. Rio de Janeiro, Brasil, 2007.

Variable	n	%*	Dropout				χ^2 (p)
			Yes (n=155)		No (n=790)		
			n	%**	n	%**	
Referred by CTA							0.1463
Yes	603	63.8	91	15.0	512	85.0	
No	342	36.2	64	18.7	278	81.3	
AIDS Case							<0.0001
Yes	748	79.1	92	12.3	656	87.7	
No	184	19.5	52	28.3	132	71.7	
Unknown	13	1.4	11	84.6	2	15.4	
ARV Use							<0.0001
Yes	776	82.1	102	13.1	674	86.9	
No	169	17.9	53	31.3	116	68.7	
Number of ARV Regimes							<0.0001
Never used	167	17.7	51	30.5	116	69.5	
1	286	30.3	54	18.9	232	81.1	
2	137	14.5	19	13.9	118	86.1	
3	130	13.8	21	16.1	109	83.9	
4	84	8.8	6	7.2	78	92.8	
5	51	5.4	1	1.9	50	98.0	
> 5	88	9.3	1	1.1	87	98.9	
Unknown	2	0.2	2	100.0	0	0	
Use of Alcohol							0.9694
Yes	651	68.9	107	16.4	544	83.6	
No	294	31.1	48	16.3	246	83.7	
Use of illegal drugs							0.0001
Yes	221	23.4	55	24.9	166	75.1	
No	724	76.6	100	13.8	624	86.2	
Psychiatric History							0.0003
Yes	108	11.5	31	28.7	77	71.3	
No	837	88.5	124	14.8	713	85.2	
Starting Viral Load							<0.0001
Undetectable	65	6.9	10	15.4	55	84.6	
80 to 1000.000	642	67.9	107	16.7	535	83.3	
100.001 to 500.000	157	16.6	14	8.9	143	91.1	
> 500.000	48	5.1	5	10.4	43	89.6	
Not tested	33	3.5	19	57.6	14	42.4	
Final Viral Load							<0.0001
Undetectable	556	58.8	20	3.6	536	96.4	
80 to 1000.000	289	30.6	64	22.1	225	77.9	
100.001 to 500.000	16	1.7	5	31.2	11	68.8	
> 500.000	5	0.5	5	100.0	0	0	
Not tested	79	8.4	61	77.2	18	22.8	

Distribution of sample population, according to variable category; Distribution of patient drop-out (yes/no) according to variable category. *Distribuição da população estudada por categorias das variáveis; *ocorrência (sim/não) de abandono por categorias das variáveis.*

Table 3 - Logistic Regression to identify factors associated with treatment drop-out in the Specialized Care Service at São Francisco de Assis School Hospital. Rio de Janeiro, Brasil, 2007.

Tabela 3 - Regressão logística identificando fatores associados ao abandono de tratamento no Serviço de Assistência Especializada (SAE) do Hospital Escola São Francisco de Assis. Rio de Janeiro, Brasil, 2007.

Variable	Coefficient	Default Error	χ^2 (p)	Odds Ratio	Confidence Interval 95%
Y Intercept	0.040	0.541	0.9416		
Age at 1st. consultation (years)	- 0.044	0.015	0.0034	0.957	0.929 0.985
Time between diagnosis and 1st. consultation (years)	0.129	0.055	0.0189	1.138	1.022 1.268
High School or College Education complete	- 0.384	0.250	0.1246	0.681	0.417 1.112
Being unemployed	1.265	0.276	<0.0001	3.544	2.062 6.089
Irregular income	0.654	0.288	0.0229	1.924	1.095 3.380
Having AIDS (disease)	- 1.039	0.268	0.0001	0.354	0.209 0.598
Illegal drug use	0.568	0.244	0.0198	1.765	1.095 2.848
Previous psychiatric history	1.010	0.325	0.0019	2.746	1.452 5.191
4 or more ARV regimes	- 1.549	0.401	0.0001	0.213	0.097 0.466

members of the population studied. The chances of dropout occurrence (*vs.* non-occurrence), show on average, a reduction of around 5.0% with each year of age. In relation to the patient's employment situation, the chances of dropout between those unemployed and those without a steady income were respectively, 3.5 and 1.9 times higher than those observed among individuals with a regular income (formally employed or retired). Report of illegal drug use and registration of history of psychiatric illness were also shown to be associated with increase in the chance of dropout by 1.8 and 2.7 times, respectively.

The chances of treatment dropout were shown to be reduced by around 65.0% and 79.0% among individuals who have developed AIDS symptoms and patients that have already used four or more ARV regimes, respectively.

In this analysis, having high school or university education levels did not present significant association ($p=0,1246$) with the studied outcome, however there does appear to be a lower tendency of occurrence treatment dropout among those who do.

Table 4 demonstrates the results of the Cox regression model, indicating the effects of the variables that were shown to be independently associated with the instan-

taneous occurrence of treatment dropout. Except for a few differences, these results are consistent with those obtained in the logistic regression model, which does not incorporate information on the occurrence the outcome over time.

The hazard (or instant risk) of dropout between the unemployed or those with unstable employment was 2.1 and 1.5 higher than that observed with people with a steady income. There was also an increase in the risk of dropout among patients with psychiatric history (HR=2.9) and illegal drug users (HR=2.0). As opposed to the logistic regression model, in this model the fact of being single had a positive association with the hazard of treatment dropout (HR=1,5).

The patient's age, having AIDS and having used various anti-retroviral regimes are underlined as having negative association with the hazards of treatment dropout. Another statistically significant negative association between incidence of treatment dropout is a higher education level (high school or university).

Discussion

The results obtained from the method used in this study have been shown to be consistent, permitting identification of the

Table 4 - Cox's Regression model to assess HIV/AIDS treatment drop-out in patients attending the Specialized Care Service at São Francisco de Assis School Hospital (n = 945). Rio de Janeiro, Brasil, 2007.

Tabela 4 - Modelo de regressão de Cox para análise da ocorrência de abandono de tratamento de HIV/aids dos pacientes do Serviço de Assistência Especializada (SAE) do Hospital Escola São Francisco de Assis (n = 945). Rio de Janeiro, Brasil, 2007.

Variable	Coefficient	Default Error	Pr> χ^2	Hazard ratio	Confidence Interval (95%)
Age at 1st. consultation (years)	-0.029	0.012	0.0191	0.972	0.949 0.995
High School or College Education complete	-0.912	0.256	0.0004	0.402	0.243 0.664
Marital status – single	0.407	0.204	0.0464	1.502	1.007 2.240
Being unemployed	0.748	0.238	0.0016	2.114	1.327 3.367
No steady job	0.430	0.265	0.104	1.538	0.915 2.584
Having AIDS (disease)	-0.972	0.255	0.0001	0.378	0.229 0.624
Illegal drug use	0.675	0.213	0.0015	1.964	1.294 2.979
Previous psychiatric history	1.075	0.231	<0.0001	2.929	1.862 4.608
2 or 3 ARV regimes	-0.578	0.264	0.0282	0.561	0.335 0.940
4 or more ARV regimes	-1.710	0.401	<0.0001	0.181	0.082 0.397

factors associated with treatment dropout, by means of comparison between the group that dropped out and the group that regularly maintained their clinical follow-up.

The difficulties of staying in treatment during the first months recurrent in the findings of the literature and have come to light in the scope of this study.^{4,13,14} The fact that the patients in the group that dropped out took more time to seek the health care service for the first time than those in the regular follow-up group probably reflects the greater difficulty in accepting the diagnosis. The results obtained also permit measurement of the importance of the existence of a social support network, a safe haven providing security and protection represented by family and friends in the life of a person with HIV/AIDS. The fact of not living with the family, nor with a partner, but alone or with "others" (meaning those that live in lodgings, public shelters, religious institutions or even on the streets), presented a tendency of association with dropout occurrence, although this effect has not remained independently significant in the multivariate models. However, on the other hand, being single, a characteristic probably co-related to a greater chance of living alone or with "others", was shown to

be statistically associated to an increased risk of treatment dropout in the Cox model.

In relation to treatment dropout, in view of the difficulties involved in the use of ARVs, examination of the results identified the fact that patients who had already used four or more ARV regimes was observed to be a protecting factor against dropout, or, in other words, presented a negative association with the risk of dropout. This finding appears to be related to the fact that the patient that finds himself in a more advanced stage of the clinical syndrome, probably already showing symptoms, perceives the necessity of clinical follow-up. It should be mentioned that, also in the statistical analysis, having the "AIDS-disease", or, as is said in clinical practice, "closing the case" of AIDS, also appeared as protecting factor against dropout.

Other aspects related to the patient's clinical situation, such as the results of the CD4 and Viral Load tests were also assessed. The first CD4 test, carried out before starting treatment, that interprets the patient's immune situation soon after diagnosis, showed slightly lower results in the group in regular follow-up treatment that those of the group that dropped out, but does not represent a statistically significant

difference. However, one fact that merits highlighting is that while all patients in regular follow-up treatment really did have this test carried out, in the dropout group, 13 of the 155 patients, or 8.4%, did not have it done, possibly due to having dropped out of the treatment right after the first medical consultation.

With regards the last CD4 test, the difference between the two groups translated the damaging effect of irregular attendance to treatment sessions on the defence cells' behaviour, with the average of those who dropped out of treatment being lower than that of the permanent group

The Viral Load analysis also returned similar results in relation to the effect that treatment dropout may represent for the patient with HIV/AIDS. The levels found in the tests of patients in regular follow-up treatment, in the first measurement also showed a clinical parameter a little worse than those that dropped out of treatment. The most marked difference however, was observed in the test results from the last visit in which 64.84% of the patients of the group that stayed in the follow-up treatment managed to reach an undetectable result. On the contrary, only 12.9% of the patients that dropped out of treatment managed to obtain this result, which is one of the main goals of treatment with ARV drugs.

It should be noted that the last CD4 and Viral Load test results recorded in the medical records and analyzed here, were taken before the patient dropped out of treatment. Therefore the less favorable results of the dropout group appear to point towards an indication that this group of people was already registering some degree of poor adherence to the treatment program, especially with regard to the use of the ARVs.

In relation to the socioeconomic aspects, unemployment or irregular employment and low education levels were identified as factors that favored dropout.

Analysis of the type of home was negatively affected due to the high number of "unknown" cases (around de 25%). It should be mentioned that the option to treat miss-

ing data as categories in the analyses had the pragmatic purpose of avoiding making the unviable in the study, the role these variables play on dropout from the health care unit, while assuming the need for caution in the interpretation of the results.

In principle, it is expected that a patient who has been referred to the SAE health care unit following counselling from the CTA, would present a lower risk of dropping out of treatment, because of the characteristics of the assistance that is provided in this sector, based on the principle of all round care. However this impression was not confirmed in the study.

The use of alcohol, which in this study could not be differentiated from the abuse of this substance because of the way in which this annotation appeared in the medical records, did not demonstrate an association with dropout occurrence. However, the use of illegal drugs, in spite of the annotations also being unclear in the medical records, also presented a positive association with dropout, as did a history of psychiatric problems. Other works found similar results^{4,13}.

From the results found, it can be concluded that there are periods that are more vulnerable to treatment dropout, such as in the initial phase. Other factors were identified as being associated with dropout: the lack of a social support group, socio-economic difficulties and those related to the use of the anti-retrovirals. Certain characteristic related to the patients' lifestyle and habits presented a higher relation to the risk of dropout, such as drug use and psychiatric history. It was also possible to conclude that in general, individuals that drop out of treatment already presented signs of poor adherence to the therapeutic proposals during the period in which they attended the health care unit.

The diversity of factors involved in the care of these patients becomes very complex and is and the task of these special care units is a big responsibility. Once the patients' vulnerabilities have been identified, an intervention space is established in order to increase the accompaniment of the health

team; by means of establishing support strategies for these patients whose aim will be to improve their emotional and social well-being. A limitation to this study was the fact that the aspects relating to the organization of the work carried out in the SAE care unit and its impacts on the patient's continued attendance at the unit were not assessed more thoroughly. This could be improved on in further studies.

Given the complexity of the demand originating from the clientele treated in the specialized HIV/AIDS health care units, due to the limits and possibilities of the current health care system, it is imperative that those responsible for planning and policymaking are permanently involved in maintaining the adequacy of this service. The need to formulate strategies for earliest intervention, and multi-disciplinary

support in the care of this clientele is very evident, if the incidence of treatment dropout is to be avoided.

According to the results presented, assistance to people that live with HIV/AIDS, must be provided on a continuous basis, starting even before confirmation of the diagnosis – by counselling - and individual accompaniment of this person during the entire course of his illness. Finally, it is worth underlining that, respecting the intrinsic limits of the type of study carried out, there is a possibility for the results obtained to be used to collaborate in the development of early approaches with the aim of avoiding treatment dropout not only in this SAE unit, but also in other HIV/AIDS specialized treatment units of the SUS Brazilian Public Health Service.

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