

## **ORIGINAL ARTICLE**

# SOCIODEMOGRAPHIC PROFILE AND THE CLINICAL EVOLUTION OF PATIENTS WITH **HUMAN IMMUNODEFICIENCY SYNDROME**

PERFIL SOCIODEMOGRÁFICO E A EVOLUÇÃO CLÍNICA DOS PACIENTES COM SÍNDROME DA IMUNODEFICIÊNCIA HUMANA

PERFIL SOCIODEMOGRÁFICO Y LA EVOLUCIÓN CLÍNICA DE LOS PACIENTES CON SÍNDROME DE LA INMUNODEFICIENCIA HUMANA

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#### **ABSTRACT**

Objective: to evaluate the sociodemographic profile and clinical evolution of patients with human immunodeficiency syndrome. Method: it is a quantitative, retrospective and descriptive research carried out in a specialized health service. The data was collected in the medical and statistical archival service, in medical records. A form containing variables characterizing the clinical and sociodemographic profile of the patients was applied. A probabilistic sample was used, which totaled 172 medical records. Data was analyzed by the software Statistical Package for the Social Sciences. Results: the prevalence of adult males, single, in the brown color and with a mean age of 40 years and low socioeconomic level, with prevalence of co-infections due to protozoa, followed by bacterial infections were observed. Conclusion: it is noticed that there is a change in the profile of people living with the human immunodeficiency virus with the increase of cases among women and the internalization of this pathology. It is inferred that such findings can contribute to the adoption of health actions directed and adapted to the profile evidenced. Descriptors: HIV; HIV Infections; Acquired Immunodeficiency Syndrome; HIV Seroprevalence; Health Profile; Nursing.

Objetivo: avaliar o perfil sociodemográfico e a evolução clínica dos pacientes com síndrome da imunodeficiência humana. Método: trata-se de pesquisa quantitativa, retrospectiva e descritiva realizada em um serviço de saúde especializado. Coletaram-se os dados no serviço de arquivamento médico e estatístico, em prontuários. Aplicou-se um formulário contendo variáveis de caracterização do perfil clínico e sociodemográfico dos pacientes. Utilizou-se amostra probabilística que totalizou 172 prontuários. Analisaram-se os dados pelo software Statistical Package for the Social Sciences. Resultados: verificou-se o predomínio de homens adultos, solteiros, na cor parda e com média de idade de 40 anos e baixo nível socioeconômico, com prevalência das coinfecções causadas por protozoários, seguidas pelas infecções bacterianas. Conclusão: percebe-se que há uma mudança do perfil das pessoas que vivem com o vírus da imunodeficiência humana com o aumento de casos entre mulheres e interiorização dessa patologia. Infere-se que tais achados podem contribuir para a adoção de ações de saúde direcionadas e adaptadas ao perfil evidenciado. Descritores: HIV; Infecções por HIV; Síndrome de Imunodeficiência Adquirida; Soroprevalência de HIV; Perfil de Saúde; Enfermagem.

Objetivo: evaluar el perfil sociodemográfico y la evolución clínica de los pacientes con síndrome de inmunodeficiencia humana. Método: se trata de investigación cuantitativa, retrospectiva, descriptiva, realizada en un servicio de salud especializado. Se recogió los datos en el servicio de archivo médico y estadístico, en prontuarios, se aplicó un formulario conteniendo variables de caracterización del perfil clínico y sociodemográfico de los pacientes. Se utilizó muestra probabilística que totalizó 172 prontuarios. Se analizaron los datos por el software Statistical Package for the Social Sciences. Resultados: se verificó el predominio de hombres adultos, solteros, de color pardo y con promedio de edad de 40 años y bajo nivel socioeconómico, con prevalencia de las coinfecciones causadas por protozoarios, seguida por las infecciones bacterianas. Conclusión: se percibe que hay un cambio del perfil de las personas que viven con el virus de la inmunodeficiencia humana con aumento de casos entre mujeres e interiorización de esa patología. Se infiere que tales hallazgos pueden contribuir a la adopción de acciones de salud dirigidas y adaptadas al perfil evidenciado. Descriptores: VIH; Infecciones por VIH; Síndrome de Inmunodeficiencia Adquirida; Seroprevalencia de VIH; Perfil de Salud; Enfermería.

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#### INTRODUCTION

It is known that the human immunodeficiency virus (HIV) epidemic arose from zoonotic infections with the immunodeficiency virus from African primates. It is believed that the first infected were hunters by the year 1920, which, along with social factors and the railway expansion of the time, favored the spread of the virus on a large scale even before the first cases recorded in the 1980s.<sup>1</sup>

It is reported that HIV infection progressively weakens the immune system, mainly affecting CD4 + T lymphocytes, thereby lowering the body's efficiency in combating other types of infectious antigens.<sup>1</sup> It is emphasized that Acquired Immunodeficiency Syndrome (AIDS) is the most advanced stage of HIV and, due to the virus-induced immune depression, opportunistic diseases.<sup>2</sup>

It is clear that AIDS continues to be a serious health problem worldwide and that in the last five years there have been approximately 1.9 million new infections among adults per year around the world. It is shown that in Brazil, in the same period, the incidence of HIV infections increased by 4%, which represents 40% of the new cases in Latin America and the Caribbean. It is noticed that there is a tendency of stabilization of numbers, when compared to the data of 2010 and 2015, however, this perception can not neglect such data, since they are still alarming.<sup>3</sup>

In the last epidemiological bulletin on HIV / AIDS of the Ministry of Health, the national incidence is higher among young men, as well as the lethality rate is higher among males. It should be noted that the profile of people with HIV is becoming dynamic, the rates among heterosexuals, women and the elderly are on the rise, and low income and low education groups remain as key groups. 5

It is important to talk about the social stigma of people living with HIV / AIDS (PLWHA), which is still very strong, mainly because it is associated with poverty and homosexuality. It is pointed out that the lack of knowledge on the subject generates fear and unfounded conjectures, leading to a cascade of prejudice, overloading the will of communities to respond more efficiently to the HIV epidemic.<sup>6</sup>

It is added that in Piauí, it is still necessary to discuss in greater detail the subject and invest in improvements to increase and improve the quality of life of patients with the virus, as well as reduce the number of new cases. Good practices of health professionals should be applied as strategies to combat disease, listing the pillars of prevention, commitment and humanization in the care and care for PLWHA. It is believed that, in this way, there will be a parameter for more assertive

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behaviors consistent with the worldwide efforts to promote quality of life for those affected by HIV / AIDS.

### **OBJECTIVE**

• To evaluate the sociodemographic profile and clinical evolution of patients with human immunodeficiency syndrome.

#### **METHOD**

This is a quantitative, descriptive and retrospective study carried out in a large sentinel hospital in the state of Piauí, in tropical and infectious-contagious diseases. Patients older than 18 years admitted to the hospital with a diagnosis of HIV / AIDS infection were selected as participants. Analyzes were carried out from January to December of 2016, from the infirmary and ICU and stored in the Medical and Statistical Archiving Service (MSAS).

The inclusion criteria were: exclusive records of patients with HIV / AIDS. The medical records in a precarious state of preservation, with illegible data and/or with a blank summary, were excluded.

The probabilistic sample was calculated based on the charts that followed the selection criteria (261), with a confidence level of 95%, a minimum of 0.5 and a sampling error of 5%. The formula n = N.Z2.p. (1-p) / Z2 p (1-p) + e2 (N-1). Thus, the sample of 156 medical records was collected. The final sample of 172 was added as a margin for possible losses as a margin for possible losses. The division of the sample by the number of months of the year was selected by means of uniform stratification so that the number of medical records/month were equivalent.

It is evidenced that the data collection was carried out between April and May 2017. A form produced by the researchers was duly identified, with closed questions and of easy applicability. Variables of interest in the study were: sex; breed; marital status; provenance; age; habits; main clinical manifestations; diagnostic method for HIV detection; antiretroviral therapy (ART); death; coinfections; time and number of hospitalizations.

A statistical analytical analysis of the sample was carried out after the data collection by means of the absolute (n) and relative (%) frequencies. Data were analyzed by Statistical Package for Social Sciences (SPSS) software, version 19.0. For the presentation of the results, tables and / or charts with simple distribution and percentages interpreted in light of the literature on the subject.

It is reported that this study obeyed the parameters established in Resolution 466/12 as recommended by the National Health Council, guaranteeing the confidentiality, integrity and

dignity of the individuals involved, making possible the ethical-legal scientific character of the research. A favorable opinion was obtained from the Research Ethics Committee of a public university in the Northeast under CAAE 66143517.1.0000.5214.

#### **RESULTS**

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Prevalence was obtained in males. The mean age was 40 years, with a predominant age group of 30 to 41 years corresponding to approximately 42% of those affected by HIV / AIDS. It was found that the patients registered in the brown color were significantly larger (83.8%) than the white and black ones, which were equivalent to each other (Table 1).

Table 1. Distribution of patients according to gender, age group and race. Teresina, Pl, Brazil, 2017.

Variábles       N       %         Gênder           Male       102       59.3         Female       70       40.7         Age group           18 to 23       7       4.1         24 to 29       21       12.2         30 to 35       33       19.2         36 to 41       39       22.7         42 to 47       28       16.3         48 to 53       28       16.3         54 to 59       8       4.7         60 to 65       7       4.1         66 to 71       1       0.6         Race          Brown       144       83.8         White       14       8.1         Black       14       8.1	TI, DIAZIL, ZOTT.		
Male       102       59.3         Female       70       40.7         Age group       40.7         18 to 23       7       4.1         24 to 29       21       12.2         30 to 35       33       19.2         36 to 41       39       22.7         42 to 47       28       16.3         48 to 53       28       16.3         54 to 59       8       4.7         60 to 65       7       4.1         66 to 71       1       0.6         Race       8       14         Brown       144       83.8         White       14       8.1	Variábles	N	%
Female       70       40.7         Age group       40.7         18 to 23       7       4.1         24 to 29       21       12.2         30 to 35       33       19.2         36 to 41       39       22.7         42 to 47       28       16.3         48 to 53       28       16.3         54 to 59       8       4.7         60 to 65       7       4.1         66 to 71       1       0.6         Race       8       144       83.8         White       14       8.1	Gênder		
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54 to 59       8       4.7         60 to 65       7       4.1         66 to 71       1       0.6         Race       0       0         Brown       144       83.8         White       14       8.1	42 to 47	28	16.3
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66 to 71 1 0.6 Race Brown 144 83.8 White 14 8.1	54 to 59	8	4.7
Race Brown 144 83.8 White 14 8.1	60 to 65	7	4.1
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White 14 8.1	Race		
	Brown	144	83.8
Black 14 8.1	White	14	8.1
	Black	14	8.1

It was identified the prevalence of single individuals (61%) and that the majority resides in the own capital where the hospital where the study was done. It is worth noting that the number

of patients coming from other states (23.3%) is equal to the number of patients coming from the north and south of the state (24.4%) (Table 2).

Table 2. Distribution of patients according to marital status and origin.

Teresina, Pi, Brazil, 2017	•	
Variables	N	%
Marital status		
Single	105	61
Married	51	29.7
Widow	10	5.8
Divorced	6	3.5
Origin		
Teresina	90	52.3
Another state	40	23.3
South of Piaui	27	15.7
North of Piaui	15	8.7

It was stated that, although approximately 60% engaged in some paid activity, they were characterized as low income, since, for the most

part, they are self-employed and farmers (Figure 1).

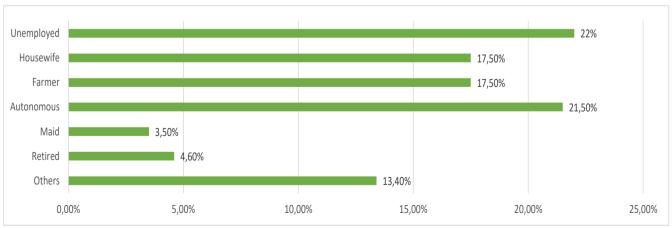


Figure 1. Distribution of patients according to their labor situation. Teresina, PI, Brazil, 2017.

The non-infectious pathologies (such as medication toxicity, anemia, surgical dehiscence, autoimmune diseases and gastroenteritis) were found to correspond to most hospitalizations (30.2%), followed by hospitalizations (Table 3).

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isolated infectious diseases: neuro-toxoplasmosis (13.9%), pneumonia (13.4%) and leishmaniasis (8.7%), followed by infectious diseases combined with each other and other types with lower frequencies.

Table 3. Distribution of comorbidities presented by patients. Teresina, PI, Brazil, 2017. (n = 172).

Comorbidities	n	%
Candida	6	3.4
Cellulite	2	1.2
Dengue hemorrhagic fever	1	0.6
Encephalitis	1	0.6
Enteroinfection	2	1.2
Staphylococcal	1	0.6
Lepra	2	1.2
Herpes zoster	3	1.7
Urinary tract infection	6	3.4
Klebsiella infection	1	0.6
Leishmaniasis	15	8.7
Pulmonary mycosis	1	0.6
Meningoencephalitis	1	0.6
Meningitis	5	2.9
Neurocysticercosis	1	0.6
Neurocryptococcosis	1	0.6
Neurotoxoplasmosis	24	13.9
Neurotoxoplasmosis + candida	1	0.6
Neurotoxoplasmosis + leishmaniasis	1	0.6
Neurotoxoplasmosis + meningitis	1	0.6
Neurotoxoplasmosis + pneumonia	2	1.2
Neurotoxoplasmosis + Pneumonia + sepsis	1	0.6
Non-infectious pathology *	52	30.2
Pbmycosis	1	0.6
Pneumonia	23	13.4
Pneumonia + Herpes simplex	1	0.6
Pneumonia + oral moniliasis	2	1.2
Pneumonia + non-infectious pathology	1	0.6
Pneumonia + sepsis	1	0.6
Cytomegalovirus retinitis	1	0.6
Syphilis	3	1.7
Tuberculosis	7	4.0
Tuberculosis+ leishmaniasis	1	0.6

\*Note: In this variable, auto-immune diseases such as lupus and psoriasis and other complications such as surgical dehiscences, side effects or adverse events to the medication in use.

It is stated, with regard to patients' habits, that 23.2% were only alcoholics; 4.6%, smokers only; 12.2% were smokers and alcoholics; 7.5%, drug users and 52.5% denied such habits. It is described that the rapid test was performed 41 times, corresponding to 95.2% of the diagnostic methods to confirm HIV and, for the treatment, the combination of Lamivudine + Tenofovir + Efavirenz stands out, which was equivalent to 73.1% of used drugs. It is also reported that the combination of Lamivudine + Tenofovir + Lopinavir + Ritonavir and Lamivudine + Zidovudine + Efavirenz corresponded to 5.2% each.

For the most frequent clinical manifestations, 52.3% had fever; 29.8%, diarrhea and / or vomiting; 24%, respiratory failure or cough; 21.5%, weakness / asthenia and 20.5%, headache. The mean hospitalizations of patients from one to three months were obtained, as well as the hospitalization time and the rate of death recorded in the study year were 3.5%.

### **DISCUSSION**

It was found that the greater prevalence of males and of the brown color is in agreement with the national tendency.<sup>4</sup> It is pointed out that the age group among adults is directly related to the improvement of care and engagement of health organizations in controlling HIV/AIDS, in addition to increasing awareness and adherence of patients to continuous treatment, conferring lower mortality and higher quality and life prospects.<sup>5-7</sup>

It was revealed through the study that singles made up the majority of the participants. Studies in southern Africa and the United States have found that there is a relationship between marital status and HIV in which unmarried persons are more likely to be HIV positive than married women and associations with HIV death/AIDS is stronger with singles. <sup>8-9</sup> It is explained that single marital status can be explained by the stigma and lack of social support that influence interpersonal relationships and the emotional / loving life of people living with the virus. <sup>10-11</sup>

It was identified in the study that the labor situation can be identified as a vulnerability factor, since 60% do not work and those who exercise some labor activity are low income or uncertain gain, such as farmers and self-employed. It is noteworthy that international studies indicate that precarious socioeconomic conditions have an inverse relationship, statistically significant, with HIV infection. 12-13

It was observed that 35.4% of the patients consumed alcohol, 12.2% of which were also smokers. It is known that the ingestion of alcoholic beverage negatively influences health, especially in this group, since it alters adherence to treatment and increases the risk of unprotected sex, and ethanol is also linked to greater chances of toxicity of the medication and is related to treatment inefficiency, since it competes with it, in addition to being associated with the lower CD4 + T lymphocyte count and higher viral load. 14-15

It is emphasized that smoking is associated with increased mortality in infected patients, with the risks of developing atherosclerotic disease, respiratory diseases and diverse lung diseases; furthermore, cigarette use is associated with inductions of inflammatory responses greater than would be expected in a smoker without HIV infection.<sup>16</sup>

It is also stated that patients received from other states came from the interior of small cities, as well as patients regulated from the south or north of the state, which is equivalent to almost half of the attendances of the year 2016. It is worth mentioning a change in HIV/AIDS, which was previously restricted to large urban centers, to the dynamics of internalization, where there is a decrease in cases in urban conglomerates and an increase in smaller municipalities.<sup>4-5,17</sup>

It should be noted that the spatial conformation of the virus began in metropolises and cities bordering Brazil and for years remained in the urban area. This scenario was modified with seasonal migrations, population increase and regional disparities, increase of detections in the North and Northeast, and decrease in the South and Southeast. It is shown that the move to areas of lower economic development, lacking resources and information by the population, is an important factor in preventing, treating and increasing the incidence and mortality associated with the virus. If

The most common signs and symptoms were fever, dehydration (diarrhea / vomiting), muscular asthenia/weakness and headache, expected symptomatology of both the initial phase in the acute retroviral syndrome and in the secondary phase with the so-called constitutional signs characterized by fever, weight loss, night sweats and fatigue.<sup>2</sup>

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It was found, therefore, that the most common coinfections in this study were, respectively, neuro-toxoplasmosis, pneumonia and leishmaniasis. We highlight toxoplasmosis, the most common cause of neurological complications in these patients, which has a high morbimortality rate, which usually occurs due to reactivation of the disease, since the protozoa is not eliminated from the body, so all HIV-positive patients should be tested for the presence of Toxoplasma gondii antibodies.<sup>20</sup>

It is pointed out that the prevalence of toxoplasmosis in tropical countries exceeds 50%. It was estimated, in a study conducted in Teresina, that about 90% of the population had anti-T IgG. gondii. Thus, the importance of this pathology is demonstrated, especially when considering the immunosuppression of patients.<sup>20-21</sup>

It is known that, even with the benefits brought by antiretroviral therapies, in relation to infection control, pulmonary diseases are a relevant problem in these patients.<sup>22</sup> It was found that pneumonia is the most common opportunistic pulmonary disease in immunocompromised patients and that the lack of knowledge about the disease by this high-risk group leads to late presentation to health services and consequently to more severe complications.<sup>23-24</sup>

It is emphasized that leishmaniasis is another disease that deserves attention, especially in endemic areas, such as the Northeast, as it behaves as a relevant opportunistic pathology in infected patients. It is inferred that the internalization of HIV infection, concomitant with the process of urbanization of leishmaniasis, favors this coinfection. <sup>25-26</sup>

It should be noted that the HIV detection tests are mainly used in three situations: for serological screening of blood donation, blood products and organs for transplantation; for epidemiological surveillance studies and for the diagnosis of the infection. In addition, for the infectious detection of HIV, immunoassays, among them, the fast test.<sup>27</sup>

It was found that the rapid test was used more than 90% of the time for the diagnosis of HIV, since it is easy to apply, safe and regulated by Administrative Rule No. 29, of December 17, 2013, speeding up the time between detection and treatment, in addition to having great precision in sensitivity and specificity, with the bonus of being less expensive compared to the more sophisticated laboratory tests.<sup>28</sup>

For the initiation of antiretroviral therapy, immediate initiation, regardless of CD4 count, is recommended for all PLWHA, pregnant, symptomatic (including active tuberculosis), and failure to perform CD4 counts, with a view to reducing transmissibility of HIV, considering the motivation of PLWHA.<sup>2</sup>

The use of the combination of Lamivudine + tenofovir + Efavirens has been found to result in 73% of the drugs used in the treatment of patients, since this combination is the first-line therapy regimen used in Brazil and in accordance with international recommendations. use nucleoside reverse transcriptase inhibitors, such as lamivudine and tenofovir, with chain transfer integrase inhibitors such as Efavirenz.<sup>2,29</sup>

It is noticed that this study presents limitations that are related to the correct and complete filling of the medical records and the bureaucracy in filling out the billing forms, preventing these medical records or other variables from being consulted. It is considered, however, that the study may contribute to reflections on the theme, possibly guiding health actions, directing and adapting the care to the profile evidenced.

# CONCLUSION

It is concluded that the results presented here revealed a profile analogous to that found in national data, with tendencies of feminization and internalization of this pathology. The attendance of people from other states reveals the deficiency of health care in smaller cities and an overload to the hospital that receives them.

It is emphasized that the investigation and analysis of the sociodemographic characteristics of a population facilitates the elaboration of more effective strategies in the actions directed to the prevention and education in health. Clinical monitoring of people living with HIV/AIDS is necessary to also observe if there are advances, setbacks or parking of treatment and consequent improvement of the quality of life of the individual.

It is added that this study does not exhaust the knowledge about the epidemiological situation of people living with HIV, therefore, there is room for new scientific productions that aggregate more information on the subject and generate future actions consistent with the population in question.

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