REVISTA ONLINE DE PESQUISA

CUIDADO É FUNDAMENTAL

Universidade Federal do Estado do Rio de Janeiro • Escola de Enfermagem Alfredo Pinto

RESEARCH

DOI: 10.9789/2175-5361.rpcfo.v13.9351

TEMPORAL AIDS TENDENCY AMONG YOUNG PEOPLE IN NORTHEASTERN BRAZIL

Tendência temporal da aids entre jovens no nordeste do Brasil

Tendencia temporal del SIDA entre los jóvenes del noreste de Brasil

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How to cite this article:
Rodrigues AFA, Oliveira LB, Carvalho HEF, Sousa KAA, Araújo TME, Fernandes APM. Temporal aids tendency among young people in northeastern Brazil. 2021 jan/dez; 13:619-625. DOI: http://dx.doi.org/0.9789/2175-5361.rpcfo.v13.9351.

ABSTRACT

Objective: To characterize the epidemiological profile of AIDS infection in young people aged 15 to 34 years notified with AIDS and the outlook of deaths from 2007 to 2017. **Method:** A descriptive study conducted through a survey in the SINAN-NET database. The collection took place July 2018. **Results:** The male gender obtained 69% of the notifications (69%). A homogeneous increase in the number of notifications was identified with a peak in the years 2010 (6.82%), 2014 and 2015 (12.41%) and 2017 (16.11%). Brown color prevailed (71.24%) and hererosexual exposure (23.1%). The capital obtained the highest percentage of cases (66.41%) and the number of deaths decreased over the years. **Conclusion:** As is the case in other states of Brazil, the profile of AIDS among young people living in the state is changing over the years, as well as a considerable increase in the number of reported cases and a decline in deaths.
DESCRIPTORS: Acquired immunodeficiency syndrome; Epidemiology; Young adult.

RESUMO

Objetivo: Caracterizar o perfil epidemiológico da infecção pela Aids em jovens entre 15 a 34 anos notificados com Aids e o panorama dos óbitos no período de 2007 a 2017. **Método:** Estudo descritivo realizado por meio de levantamento na base de dados SINAN-NET. A coleta ocorreu julho de 2018. **Resultados:** O sexo masculino obteve 69% das notificações (69%). Identificou-se um aumento homogêneo no número de notificação com um pico nos anos de 2010 (6,82%), 2014 e 2015 (12,41%) e 2017 (16,11%). Prevaleceram a cor parda (71,24%) e exposição hererosexual (23,1%). A capital obteve os maiores percentuais de casos (66,41%) e o número de óbito diminuiu ao longo dos

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anos. **Conclusão**: À exemplo do acontece nos demais estados do Brasil, o perfil da Aids em jovens residentes no Estado experimenta uma mudança ao longo dos anos bem como um considerável aumento do número de casos notificados e declínio dos óbitos.

DESCRITORES: Síndrome de imunodeficiência adquirida; Epidemiologia; Adulto jovem.

RESUMEN

Objetivo: Caracterizar el perfil epidemiológico de la infección por SIDA en jóvenes de 15 a 34 años notificados con SIDA y el pronóstico de las muertes entre 2007 y 2017. **Método:** Un estudio descriptivo realizado a través de una encuesta en la base de datos SINAN-NET. La colección tuvo lugar en julio de 2018. **Resultados:** El género masculino obtuvo el 69% de las notificaciones (69%). Se identificó un aumento homogéneo en el número de notificaciones con un pico en los años 2010 (6,82%), 2014 y 2015 (12,41%) y 2017 (16,11%). Prevaleció el color marrón (71.24%) y la exposición hererosexual (23.1%). La capital obtuvo el mayor porcentaje de casos (66,41%) y el número de muertes disminuyó con los años. **Conclusión:** Como es el caso en otros estados de Brasil, el perfil del SIDA entre los jóvenes que viven en el estado está cambiando con los años, así como un aumento considerable en el número de casos reportados y una disminución en las muertes.

DESCRITORES: Síndrome de inmunodeficiencia adquirida; Epidemiologia; Adulto joven.

INTRODUCTION

Acquired Immunodeficiency Syndrome (AIDS) is the advanced clinical manifestation of the disease caused by the Human Immunodeficiency Virus (HIV), an infection that affects the immune system, leaving the individual vulnerable to other infections.[1]

According to the Ministry of Health, between 2008 and 2018, 240,505 cases of HIV infection were registered in SINAN nationwide, with the highest concentration of infections in individuals aged 15 to 34 years, totaling 58,5% of cases. In the state of Piauí, between the years described above, 1,326 cases of HIV infection were recorded.[2]

Although most AIDS cases in Brazil are concentrated in adults aged 25 to 39 years, in the last 10 years the number of cases among adolescents (15-19 years) has more than tripled (from 2.1 to 6, 7 cases / 100 thousand inhabitants). Among young people aged 20-24 years, the detection rate went from 16.0 to 30.3 cases / 100 thousand inhabitants. The symptoms of AIDS are observed between seven and ten years after HIV infection, therefore, it is concluded that, possibly, most of the notifications obtained in the most frequent age range in the country correspond to people who obtained the infection in adolescence or in early youth.[3]

There are many factors that can contribute to the increased vulnerability of young people to HIV, among them the lack of appropriate information, the feeling of omnipotence, the economic and social obstacles, the exploration of new experiences, the sensation of future urgency, poor and poor health services, unpreparedness of professionals to deal with this public, family breakdown, the urgency of social consolidation and the increasing onset of early sexual activity, without proper knowledge about risks of an unprotected relationship.[4]

Young people make up a population group more susceptible to HIV infection, both in developed and developing countries, which can be seen by several factors, such as biological, psychic, social and economic, which influence the susceptibility of young people to Sexually Transmissible Infections (IST).[5]

Studies show that even with the spread of information about HIV through the media, adolescents and young people still have doubts about the prevention and transmission of infection and some rejection of condom use, becoming susceptible and increasing the occurrence rates of HIV disease. Thus, young people demonstrate specific needs that must be addressed through public health policies in the country, as well as HIV / AIDS control and prevention campaigns, enabling youth to act as a subject in health prevention and promotion.[5]

In this context, it is possible to give HIV / AIDS a significant epidemiological relevance, since it has a high transmission rate and can be a major problem in the mental, physical and reproductive health of young people. The nursing professional, the health professional condition, should pay attention to the prevention and health promotion of this population group susceptible to the risks to their sexual and reproductive health caused by HIV.[6]

Given this, this study aims to characterize the epidemiological profile of AIDS infection in young people aged 15 to 34 years, notified with AIDS and the panorama of deaths from 2007 to 2017 in a state of northeastern Brazil.

METHOD

This is a descriptive epidemiological study, conducted through data available in DATASUS, through the Notification of Disease Information System - SINAN. Data were collected in July 2018 and refer to the years 2008 to 2017.

The collection took place through existing instruments, SINAN NET notification forms in which the epidemiological profile of AIDS in young people is described. Inclusion criteria were people aged 15 to 34 years living in Piauí notified at SINAN with AIDS from 2007 to 2017.

After collection, data were tabulated in Excel spreadsheet software. Simple descriptive analysis was performed. Data analysis from SINAN was performed by the TABNET program. The most significant findings were presented in tables. The discussion of the data was based on the scientific production on the subject. Since the research was conducted from a public domain database, no submission to the Research Ethics Committee was required. However, it was submitted for approval by the Institution (Piauí State Secretariat of Health/Health Surveillance and Care Directorate), which granted access to the database.

Among young adults aged 15 to 34 years notified with AIDS during the study period, which constitute a total of 2,507 people. Regarding the year of notification of the disease in the population studied, a homogeneous increase in the number of AIDS cases was identified. In 2007, 118 (4.71%) cases were registered, with a peak of growth in 2014 and 2015 311 notifications respectively (12.41%) and in 2017 with 404 cases (16.11%).

DOI: 10.9789/2175-5361.rpcfo.v13.9351
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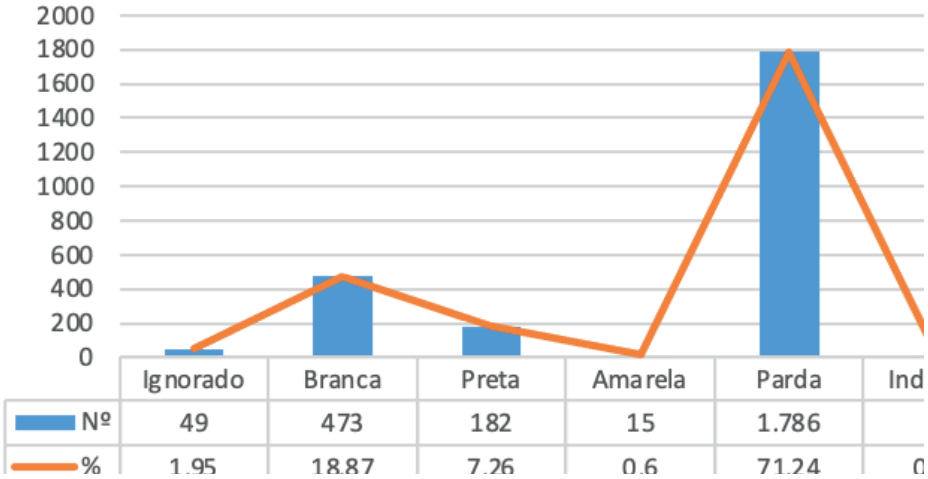
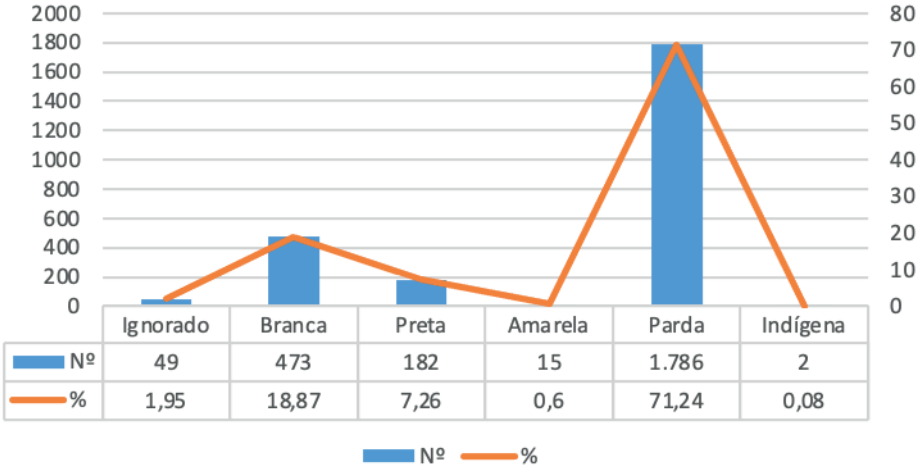
Graph 1 - Distribution of AIDS cases among young people from 15 to 34 years, according to the year of notification in the municipality of Piauí - 2007 to 2017. (N = 2,507). Teresina, Piaui, Brazil, 2019.



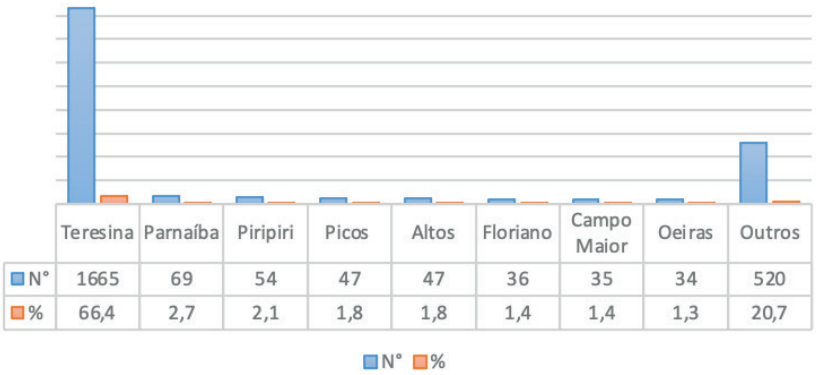
Males still contribute the largest number of reported AIDS cases by 1730 (69%). The highest number of reported cases was in individuals who declared themselves brown with 1786 cases (71.24%), while the indigenous were less reported with this condition, corresponding to 2 (0.08%) and 49 (1.95%).) of the cases was ignored according to graph 02.

Graph 2 - Distribution of AIDS cases among young people from 15 to 34 years old, by race / color in the municipality of Piauí - 2007 to 2017. (N = 2,507). Teresina, Piaui, Brazil, 2019.



Sexual infection corresponds to most cases with 2148 (85.68%), of which 1342 (53.49%) occurred among heterosexuals. Vertical transmission is one of the main exposure categories for bloodstream infection, despite low records 22 (13.32%) of cases and 334 (13.32%) notifications were ignored at the time of screening (Graph 03).

Graph 3 - Distribution of AIDS cases among young people from 15 to 34 years old, according to the exposure category in the municipality of Piauí - 2007 to 2017. (N = 2,507). Teresina, Piaui, Brazil, 2019



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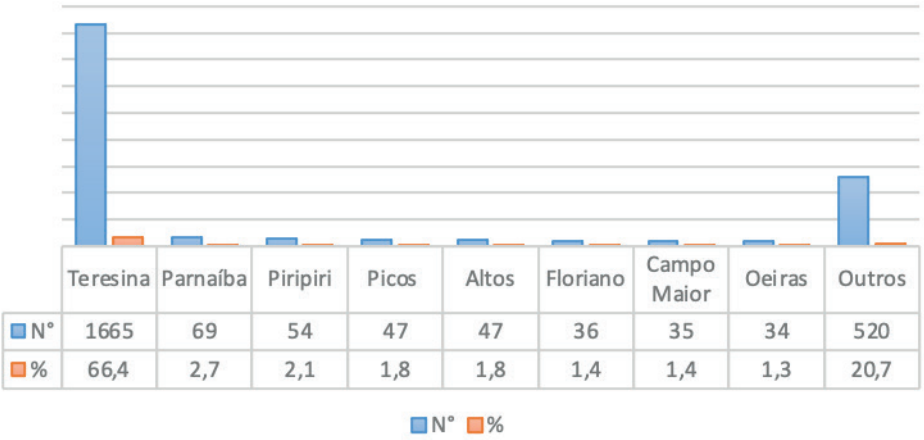
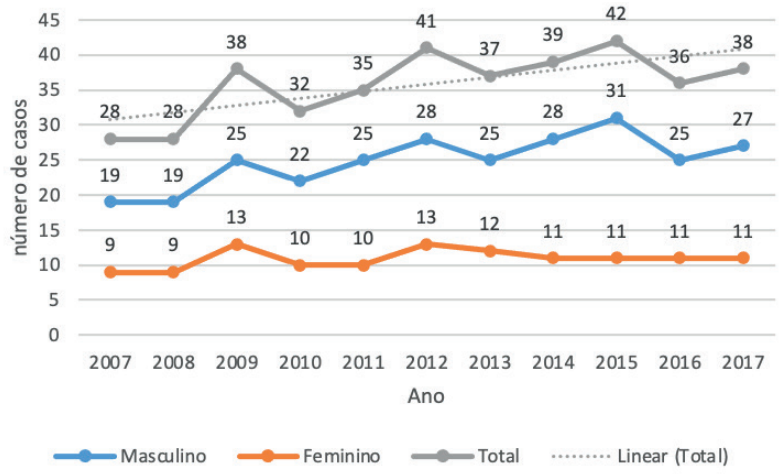
Regarding the municipality of residence of the notified individuals, the cities with the highest incidence were the capital Teresina, with 1665 (66.41%) of the cases, Parnaíba, with 69 (2.75%) of the notifications and Piripiri where there were 59 (2, 15%) of the records, the other 135 municipalities of the state recorded 520 (20.74%) AIDS cases during the study period.

Graph 4 - Ranking of municipalities with the highest number of AIDS cases reported in young people aged 15-34, from 2007 to 2017. (N = 2,507). Teresina, Piaui, Brazil, 2019.



The total number of deaths 1002 including all age groups during the decade of the historical series, and among young adults aged 15 to 39 years, 394 cases represented a percentage of 40% of the total number of deaths. It is noticed that there was a heterogeneous decline of cases, however, in 2009 (11.9%) there was a significant increase of cases and then the years 2013 and 2014 also showed an increase of records (10.4%). and (10.1%), respectively.

Graph 05 - Distribution of AIDS death cases among young people from 15 to 34 years old, according to sex in the municipality of Piauí 2007 to 2017. (N = 394)



DISCUSSION

The distribution of AIDS cases in this macrocenary draws attention due to the number of cases throughout the historical series, this infection affects mainly young men, brown, residing mainly in the state capital of Piauí. The form of exposure occurred mainly through heterosexual relationships. Death related to this syndrome declined over the course of a decade, occurring mainly among men.

Worldwide, 77.3 million people were infected with HIV and 35.4 million people died of AIDS-related diseases by 2018. That same year in Latin America, it is estimated that 100,000 people acquired HIV and approximately Half of the countries in the region increased their incidence from 2010 to 2018, with the largest increases occurring in Chile (34%), Plurinational State of Bolivia (22%), Brazil (21%) and Costa Rica (21%).[7]

In Brazil, from 1980 until June 2018, there were 606,936 (65.5%) cases of AIDS in men and 319,682 (34.5%) in women. Since 2009, there has been a gradual reduction in AIDS cases in women and an increase in cases in men, and the sex ratio (ratio between the number of AIDS cases in men and women) in the regions North and Northeast, in 2017, it was 22 cases in men for every 10 cases in women.[2]

At the state level from 2007 to 2017, 2,507 AIDS cases in Piauí were registered in SINAN among people aged 15 to 34 years. Observing the data obtained regarding the sex of the notified person, there is a greater predominance of the number of cases in males. Corroborating this research, similar studies conducted in the North and South and Southeast regions of Brazil highlight 66.6% and 64.9% of reported cases for the male population.[8-9]

The higher rate of involvement in males reflects a possible absence of early detection and less adherence to treatment. The syndrome caused by the HIV virus affects the various states and capitals and are distributed in the Southeast with 52.3%, South with 20, 1%, Northeast with 15, 4%, North with 6, 1% and Midwest with 6 % .[10]

According to results obtained in the present study regarding the year of notification, a higher incidence rate of the disease was evidenced in 2017, with a total of 404 notifications, it was possible to observe a heterogeneous increase of reported cases over the historical series. In the same vein, an international study conducted in 31 regions in China also identified an increase in AIDS cases over the years, in 2004 had 3,054 cases and in 2016 had a total of 54,360 notifications.[11]

A national study in southeastern Brazil also identified an increased incidence of AIDS and the highest rates occurred among young adults. Authors draw attention to the vulnerability of young people to AIDS infection and WHO points out that 45% of new infections mainly affect young people aged 15-24.[12-13]

Although the outlook for this infection has changed over the years with the emergence of new medications, increased patient life expectancy and improved quality of life, HIV / AIDS-related problems are still a serious problem to public health, and the consequences of this reality are the number of people who get the syndrome despite the various intervention options.[14]

The diverse treatment possibilities provide new perspectives for people living with HIV / AIDS, patients with undetectable viral load and adherence to treatment have an extremely low possibility of HIV virus transmission with over 90% reduction, In addition to providing positive health repercussions, people still have the possibility to rebuild their life projects, have a sexual partner and perform reproductive planning.[15]

On the other hand, what is observed is a resurgence of this infection and the development of AIDS at a time when scientific advances in relation to this infection present promising possibilities to mitigate this impasse, the development of the syndrome among people living with HIV should be a rare possibility.

After the implementation of rapid diagnosis, early and universal treatment, led scientists to point out a possibility of eliminating the occurrence of new infections, so the United Nations launched the goal 90-90-90 that was intended to diagnose 90% of people living treat 90% of them and keep 90% of these patients treated with undetectable viral load in the ambitious intention to eliminate the world's infection by 2030.[16-17]

However, the epidemiology of HIV / AIDS infection has reached great proportions in different Brazilian scenarios, the incidence reaches young adults with active sex life and working age. Therefore, to curb this growth, health services must act assiduously in preventing transmission, early detection and adherence to treatment, especially when moving away from large centers where limitations on access to health are greatest.

Regarding the notifications related to race / color, it was observed a greater predominance in brown people, authors point out that the predominance of brown color in Brazil is characteristic because the color is self-declared and in the northeast there is a predominance of this ethnicity over all others, mainly due to the strong miscegenation.[14]

A study conducted in Maranhão corroborates the data of this research, since it showed that 56.1% of the people affected were brown. The predominance of AIDS cases in the brown population is due to the fact that the Piaui population is mainly composed of self-declared brown people.[18]

Regarding the category of exposure, it was observed that in most cases there was exposure by heterosexual relationship, these results corroborate with the panorama in Brazil2. Exposure to HIV due to sexual intercourse still predominates, a study conducted in northeastern Brazil, Caxias-MA, identifies similar results where 72.5% of the population acquired heterosexual contact infection.[18]

With respect to death from HIV / AIDS were reported in Brazil from 1980 until December 31, 2017, 327,655 cases. The highest percentages were in the Southeast (58.9%), followed by the South (17.7%) and Northeast (13.3%) regions, with a 14.8% drop in the mortality coefficient between 2007 and 2017, which went from 5.6 to 4.8 deaths per 100 thousand inhabitants.[2]

Regarding the number of deaths in the period evaluated in this study, there were 1002 notifications and, considering the age group from 15 to 39, this obtained 40% of the total number of deaths. The years 2009, 2013 and 2013 showed the highest increase, respectively, of 11.9%, 10.4% and 10.1%. Regarding gender, there was a significant increase in 2009 (25%), 2012 (28%) and 2015 (31%) for males and 2009 and 2012 (13% each) for females.

In 2017, there were approximately 940,000 AIDS-related deaths worldwide[19]. The higher incidence of AIDS among men is relevant when looking at the number of AIDS deaths in the world. In most countries, men have higher mortality rates compared to women, as evidenced by studies in China, Zimbabwe, and Eastern Mediterranean countries, including Brazil.[20-23, 2]

Referring to the mortality coefficient in the young age group, from 15 to 19 years old, there was a tendency to

increase, especially among women, whereas among men, the trend is linear, but always higher when compared to women. In males aged 20 to 24 years the mortality rate goes from 2.5 deaths per 100 thousand inhabitants in 2007 to 4.0 deaths per 100 thousand inhabitants in 2017.[2]

There are several reasons that may justify higher mortality in men than in women as the larger number of people infected with HIV are male; high-risk sexual behavior (inconsistent condom use, multiple sexual partners, drug abuse); poor adherence to treatment when comparing women; differences attributed to genes that appear to favor female gender (better immune response); and early diagnosis of women (prenatal HIV testing and gynecological services provide).

The present study brings relevant information to the AIDS scenario in Brazil, even presenting particular results to a region, it is important to highlight that, when it comes to AIDS, the intervention strategies must be as specific as possible for each region, in order to provide significant impact. Another relevant point to be highlighted is the age group analyzed here (15 to 39 years old), this range includes adolescents and young adults and as regards adolescents there are few studies on HIV / AIDS, however, the impact of this epidemic on this age group is not can be underestimated.

CONCLUSION

The epidemiological profile of AIDS infection among 15-34 year olds presents a considerable increase in the number of cases over the historical series. The infection affects men and women differently, with higher prevalence in the male population. Regional characteristics, such as brown skin color, prevalence of heterosexuals in the exposure category are present in the profile, and should be considered when proposing prevention, control and follow-up measures. Regarding the outlook for deaths, the range from 15 to 39 represented 40% of the total number of deaths and showed different gender behaviors during the historical series with significant increase in the years 2009, 2012 and 2015 for male sex and 2009 and 2012 for the female.

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Received in: 28/09/2019
Required revisions: 14/10/2019
Approved in: 16/10/2019
Published in: 20/04/2021

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Disclaimer: The authors claim to have no conflict of interest.