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HIV / AIDS in a triple border region: subsidies for reflections on public policies[a]

HIV/AIDS em região de tríplice fronteira: subsídios para reflexões sobre políticas públicas

VIH / SIDA en una región triple frontera: subsidios para reflexiones sobre políticas públicas

Josiel Elisandro Werle[1]
Elen Ferraz Teston[1]
Sonia Silva Marcon[2]
Gilmara Holanda da Cunha[3]
Juliete Bispo dos Santos Mandu[1]
Marcos Antônio Ferreira Junior[1]

1. Universidade Federal de Mato Grosso do Sul. Campo Grande, MS, Brasil.

2. Universidade Estadual de Maringá. Maringá, PR, Brasil.

3. Universidade Federal do Ceará. Fortaleza, CE, Brasil.

Corresponding author:
Elen Ferraz Teston.
E-mail: elen.ferraz@ufms.br.

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ABSTRACT

Objective: Analyze the trend of HIV/AIDS cases by sex and age in the twin cities of Mato Grosso do Sul. Method: ecological study of historical series. The HIV/AIDS notification forms, from 2009 to 2018, made available by the Secretary of State for Health and analyzed according to descriptive statistics, polynomial regression and geospatialization of the cases were used. Results: 734 notifications were registered, 57.9% of them in men, and with a higher incidence in the biennium 2017-2018 in both sexes. The trend of growth of notifications shows a positive acceleration in twin cities (r2=0.91; p<0.001). The highest coefficients of determination were observed in women, in the age group 35 to 49 years (r2=0.98; p<0.001), and in men from 15 to 19 years (r2=0.96; p<0.002). Conclusion: The results challenge professionals and managers in the fight against the HIV/AIDS pandemic, requiring continuous reflection on the strategies/public policies adopted so far, especially in the border region. Implications for the practice: the nurse professional, by knowing the profile of its population and the distribution of cases, is able to draw strategies capable of reaching the public effectively and efficiently.

Keywords: HIV; Acquired Immunodeficiency Syndrome; Border Health; Nursing; Health Profile.

RESUMO

Objetivo: analisar a tendência dos casos de HIV/Aids por sexo e faixa etária nas cidades gêmeas de Mato Grosso do Sul. Método: estudo ecológico de série histórica. Foram utilizadas as fichas de notificação de HIV/Aids, do período de 2009 a 2018, disponibilizadas pela Secretaria de Estado de Saúde e analisadas segundo estatística descritiva, regressão polinomial e geoespacialização dos casos. Resultados: foram registradas 734 notificações, sendo 57,9% em homens, e com maior incidência no biênio 2017-2018 em ambos os sexos. A tendência de crescimento das notificações apresenta-se com aceleração positiva nas cidades gêmeas (r2=0,91; p<0,001). Os maiores coeficientes de determinação foram obervados em mulheres, na faixa etária de 35 a 49 anos (r2=0,98; p<0,001), e em homens de 15 a 19 anos (r2=0,96; p<0,002). Conclusão: os resultados desafiam profissionais e gestores no combate à pandemia de HIV/Aids, carecendo de reflexões contínuas diante as estratégias/políticas públicas adotadas até o momento, em especial na região de fronteira. Implicações para a prática: o profissional enfermeiro, ao conhecer o perfil da sua população e a distribuição dos casos, consegue traçar estratégias capazes de atingir o público de forma eficaz e efetiva.

Palavras-chave: HIV; Síndrome de Imunodeficiência Adquirida; Saúde na Fronteira; Enfermagem; Perfil de Saúde.

RESUMEN

Objetivo: analizar la tendencia de los casos de VIH/SIDA por género y grupo de edad en las ciudades gemelas de Mato Grosso do Sul. Método: estudio ecológico de series históricas. Se utilizaron formularios de notificación del VIH/SIDA de 2009 a 2018, puestos a disposición por el Departamento de Salud del Estado y analizados de acuerdo con estadísticas descriptivas, regresión polinómica y geospatialización de los casos. Resultados: se registraron 734 notificaciones, un 57,9% en hombres y una mayor incidencia en el bienio 2017-2018 en ambos sexos. La tendencia de crecimiento de las notificaciones se acelera positivamente en las ciudades gemelas (r2-0,91; p<0,001). Los coeficientes de determinación más altos se incluyeron en las mujeres de 35 a 49 años (r2-0,98; p<0,001), y en los hombres de 15 a 19 años (r2-0,96; p<0,002). Conclusión: los resultados desafían a profesionales y directivos en la lucha contra la pandemia del VIH/SIDA, carentes de reflexiones continuas frente a las estrategias/políticas públicas adoptadas hasta ahora, especialmente en la región fronteriza. Implicaciones para la práctica: el enfermero profesional, conociendo el perfil de su población y la distribución de los casos, puede diseñar estrategias capaces de llegar al público de manera efectiva y efectiva.

Palabras clave: VIH; Síndrome de Inmunodeficiencia Adquirida; Salud Fronteriza; Enfermería; Perfil de Salud.

INTRODUCTION

Acquired Immunodeficiency Syndrome (AIDS), even after three decades of its emergence, still constitutes a major challenge for the health area worldwide, since in 2016, it ranked fourth in the causes of death.[1] Estimates point to 37.9 million people living with the human immunodeficiency virus (HPV) in the world, with 27.3 million (61.47%) having access to antiretroviral treatment.[2]

In the national scenario, the mortality coefficient is 5.7/100 thousand inhabitants, with an increase in the North and Northeast regions and stable in the Center-West region.[3] In addition, the disease remains concentrated in specific groups, such as injecting drug users, men who have sex with men and sex workers, whose prevalence is higher when compared to the general population in the 15-49 age group.[4]

Faced with this scenario, the importance of public health policies is highlighted, which based on the demands and needs evidenced over time, and based on the population's health profile, have favored the development of laws, programs and strategies that contribute to the development of care actions.[5]

With this in mind, in 2015 the Ministry of Health adhered to the goal 90-90-90, which proposes that 90% of the population is aware of their serological status, 90% of patients are in treatment and 90% of patients have undetectable viral load.[2] However, some aspects related to the health and educational system have hindered the achievement of the proposed goal,[6] especially concerning the structuring of the network of assistance to PLHIV and/or with AIDS, focusing on integral care.[7] Thus, although health programs focus on strategic behavioral, biomedical and structural actions, there are gaps between the need, supply, adherence and retention to drug and non-drug treatment.[8]

Furthermore, territorial characteristics may influence the distribution, prevalence of cases and access to health services, especially in border regions, where twin cities are located - those with close political, socio-cultural and economic interaction, although located in distinct countries[9], which elucidates the need for differentiated attention, especially with regard to access to health services.[10]

It should be noted that sometimes the interaction between peoples occurs due to the migration of the population to territory with better resources. Brazil, for example, when compared to Paraguay and Bolivia, presents a public health policy of universal access, which leads to the process of Pendular Migration.[11,12] That is, individuals leave their city of residence/origin for another, in search of better conditions, either of access to health, work or education, returning in the same day or in a few days.[13]

The Bolivian National Health System, for example, is not universally accessible, care actions are fragmented and citizens need to pay for care, whether in public or private establishments. Only pregnant women, the elderly and children up to five years old have free care.[14] In Paraguay, access to the public health system is only possible by those citizens who have a signed work permit.[15]

Due to the issues experienced in border regions, the countries integrating the Southern Common Market (MERCOSUR) have entered into bilateral agreements to combat and control aggravations, influenced by social inequality, in order to promote a healthy interaction between nations. In this sense, the International Cooperation Program for HIV/AIDS Prevention and Control has established specific strategies to increase access to antiretroviral therapy in border regions,[16,17] because there is greater vulnerability to HIV infection in immigrant populations when compared to the local population, either due to difficulties in access to health services, xenophobia[18,19] or lack of knowledge of rights.[11,20]

In a study carried out at the border between Brazil, Argentina and Paraguay, the authors found an increasing incidence coefficient of reported cases of HIV/AIDS from 1988 to 2012, with higher prevalence of sexual transmission among heterosexuals, followed by injecting drug users.[21] By considering the peculiar characteristics of this region - the intense drug traffic and the free access of the foreign population to the Brazilian health service - the authors affirmed the need to modify the confrontation of the epidemic in border regions,[21] which justifies studies in this area. It is worth mentioning that there are already studies pointing out the main characteristics of the region and the population of the triple border between Brazil, Paraguay and Argentina in the state of Paraná,[21,22] but the border region between Brazil, Paraguay and Bolivia in the state of Mato Grosso do Sul (MS) still lacks such studies. Thus, the following question arises: What is the behavior of the HIV/AIDS pandemic in the triple border region in the state of Mato Grosso do Sul (MS)?

It is important to emphasize that the continuous vigilance over the tendency of diseases in a certain region can subsidize the reorganization of the services offered, in order to attend the local specificities, through the development of actions that facilitate the access to health services and the implementation of the own actions of care.

In view of the above, this study aims to analyze the trend of HIV/AIDS cases by sex and age group in the twin cities of MS.

METHOD

Ecological study of historical series, which analyzed the trend of reported cases of HIV/AIDS in individuals from ten years of age and up, in twin cities located in the state of Mato Grosso do Sul, from 2009 to 2018. The period was determined in order to carry out a time cut of the last ten years.

This state has seven twin cities: Bela Vista, Corumbá, Coronel Sapucaia, Mundo Novo, Paranhos, Porto Murtinho and Ponta Porã. Data from the last census show an estimated population of 249,521 individuals residing in these cities.[23] Corumbá borders Puerto Quijarro in Bolivia and the other municipalities have Paraguay as their neighbor. These cities have an interaction called synapse, which favors the relationship between two or more countries, both economic and free access of foreigners to services offered on both side.[10,24,25]

After authorization from the State Secretariat and the Ethics in Research Committee, the database, containing the information related to HIV/AIDS notifications (except for identification of individuals), was sent electronically to the principal researcher in December 2019. The inclusion criterion was the notification in one of the seven twin cities, and those that presented duplicates would be counted only once.

The variables analyzed were: age, gender, exposure category, education and gross incidence coefficient. The following age groups were adopted: "10-14", "15-19", "20-34", "35-49", "50-64" and "≥65" years. This division was chosen because the under-19 age group shows a growing trend, especially the 15-19 age group,[26] which generates the need for further investigations. The other age groups were grouped every 15 years in order to make the analyses possible due to the distribution of the database. The incidence coefficients were obtained from the number of reported cases of HIV/AIDS in twin cities, by sex and age group, divided by the total population, expressed per 100,000 inhabitants. The 2010 Demographic Census data were used because the population estimates do not carry out the distribution by sex and age group.[23]

The Statistical Package for the Social Sciences (SPSS) software version 23 was used for data analysis. The trend analysis was performed using the polynomial regression model considering the incidence rates as dependent variable (Y) and the years as independent variable (X), grouped by sex and age group. In order to avoid collinearity between the terms of the regression equation, the centralized variable was used, with the year 2013.5 being the midpoint. Dispersion diagrams were constructed between the incidence rate and the years in order to verify the function that expressed the relationship between them, and thus choose the polynomial order for the analysis, and the polynomial regression model. The coefficient of determination (r2) was used as a precision measure. The trend was considered significant when the estimated model obtained $p<0.05$.

In order to define the model to be used, the following order of tests was performed: simple linear regression ($Y = \beta_0 + \beta_1 X$), and then the second degree models ($Y = \beta_0 + \beta_1 X + \beta_2 X^2$) and third degree ($Y = \beta_0 + \beta_1 X + \beta_2 X^2 + \beta_3 X^3$). In this way, the one that obtained the best statistical significance, the highest measure of precision and residue without vices was chosen. When two models were similar for the same variable, from the statistical point of view, the simplest one was chosen, given the principle of parsimony. The series were smoothed by means of a moving average centered on three successive averages.

In order to verify the spatiality of the cases and possible changes in the place of notification in relation to the place of housing, geo-spatialization was carried out. For this, the software QGIS, version 2.18, was used to make the maps through the interpolation of metrics by code of the municipality of notification and code of the municipality of residence according to the shapefile of the state of MS provided by IBGE.[27]

The study was approved by the Permanent Committee on Ethics in Research with Human Beings of the Federal University of Mato Grosso do Sul, under the ordinance. 3.789.678.

RESULTS

In the period 2009 to 2018, 734 notifications of HIV/AIDS were registered in the twin cities. There were no duplicate notifications in the period. Of these, 425 (57.9%) were in males. Of the total notifications, 37 corresponded to individuals residing in Paraguay or Bolivia, without identification of the specific city, and one of them had no information about the place of residence.

In relation to the municipalities where the notification occurred there was the following behavior: Ponta Porã, with 354 (48.22%), followed by Corumbá, with 292 (39.78%), Mundo Novo, with 31 (4.22%), Bela Vista, with 25 (3.40%), Porto Murtinho, with 15 (2.04%), Coronel Sapucaia, with 13 (1.77%) and Paranhos, with four (0.54%).

The process of commuting migration is observed in the comparison between the maps, Figure 1 and Figure 2, whose population transition occurs between the neighboring municipalities, and between the neighboring countries, when identifying the places of residence. Over the years, it is possible to verify the behavior of notifications (Figure 1), and in 2009 cases of AIDS were notified in Corumbá and Ponta Porã, however, in the course of time there was the process of internalization, and in 2018, all cities had cases notified.

Figure 2 shows that the place of residence of the notified individuals shows a behavior similar to the chronology of the place of notification, with concentration in the Center-South region of the state and predominance of small municipalities, except Ponta Porã (medium size).

Until 2013, only AIDS cases were reported, and the accumulated incidence from 2009 to 2013 was 92.58 cases/100 thousand inhabitants. As of 2014, PLHIV were included in the notification, and the accumulated incidence from 2014 to 2018 was 201.59 cases/100 thousand inhabitants in twin cities.

During the study period, the heterosexual exposure category was more frequent, with 257 cases (35.01%) in females and 205 (27.92%) in males. The homosexual exposure category accumulated 105 (14.30%) cases. It should be noted that in 167 (22.75%) notifications the exposure category was not specified, being listed as ignored. It should be noted that in 167 (22.75%) notifications the exposure category was not specified, being listed as ignored. Table 1 shows the incidence coefficient distributed by gender and age group by biennium.

In the trend analysis, it was observed that the highest average coefficients of the period (β0) prevailed in individuals aged between 20 and 64 years for both sexes, with an increasing tendency and positive acceleration, with the exception of the female population aged between 50-64 years which remained stable. The highest annual increase in the incidence in the 15-19 age group for females is evident (β_1) and 35-49 for men (β_3). There was no decrease in cases in any age range, as shown in Table 2.

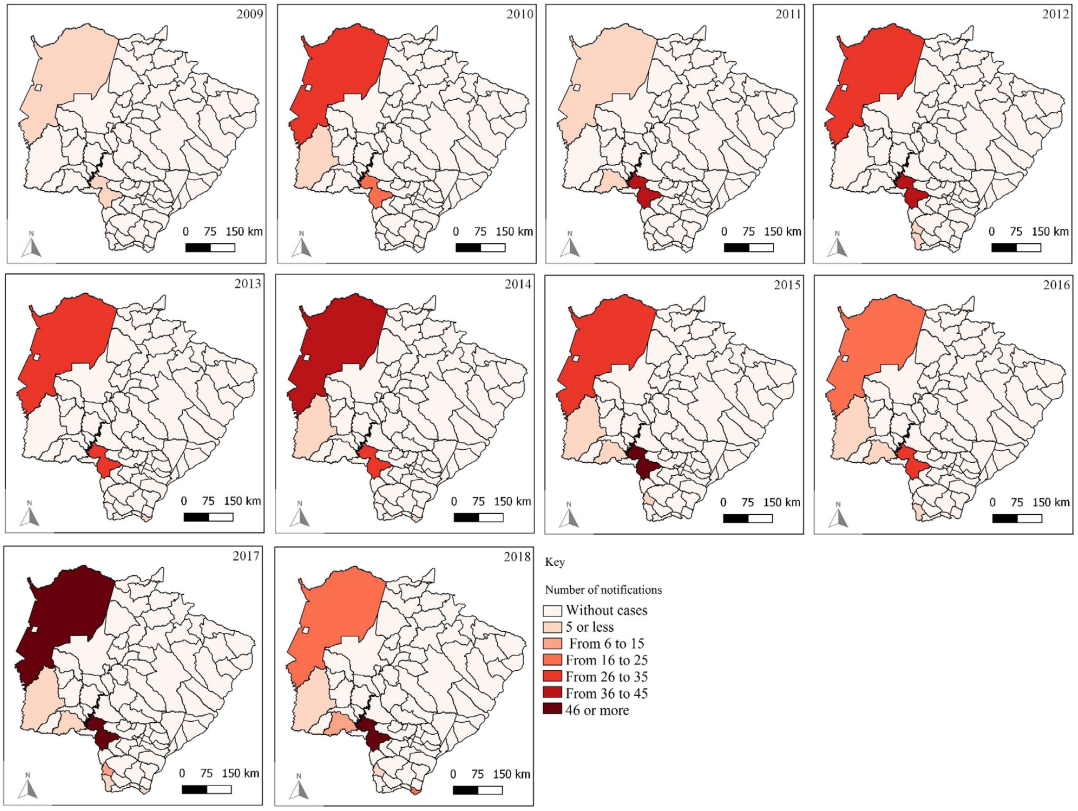

Figure 1. Total HIV/AIDS notifications, according to municipality of notification per year, Mato Grosso do Sul, 2009 2018. (n=734).

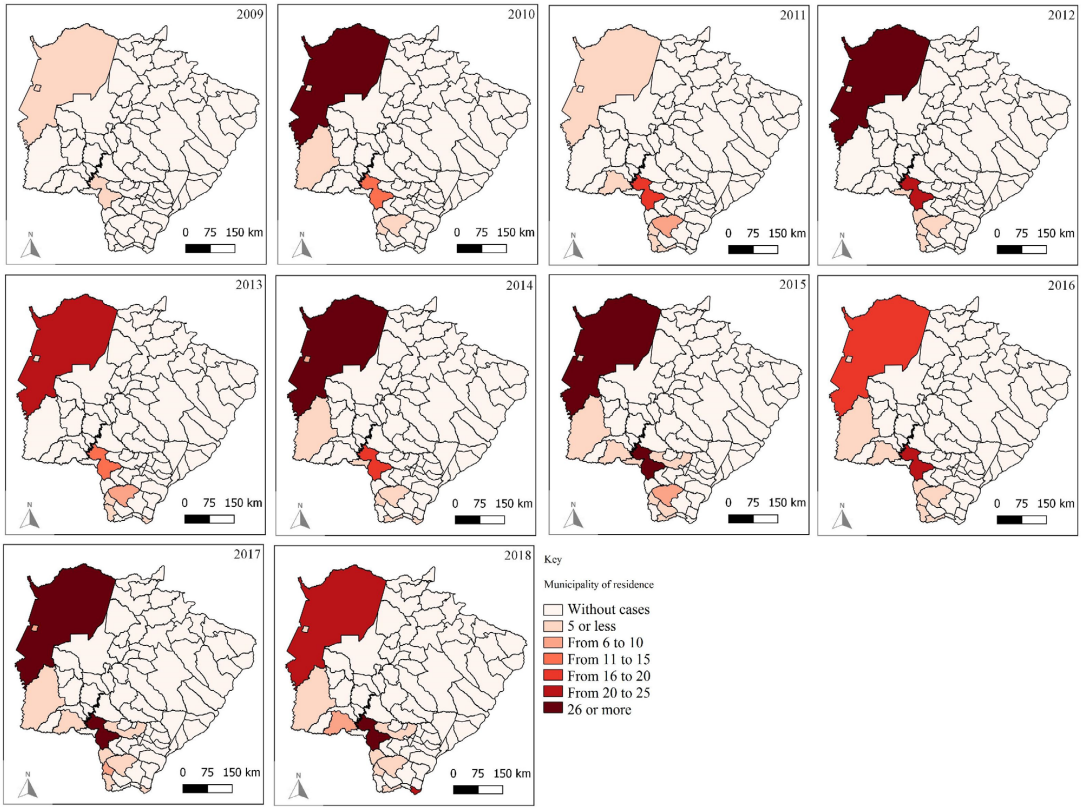

Figure 2. Total HIV/AIDS notifications, according to municipality of residence per year, Mato Grosso do Sul, 2009-2018. (n=697).

Table 1. Absolute frequency and incidence coefficient per 100 thousand inhabitants of HIV/AIDS notifications in twin cities, according to sex and range, per biennium. Mato Grosso do Sul, 2009-2018. (n=734).

Age group	2009-2010		2011-2012		2013-2014		2015-2016		2017-2018	
	Male (n=425)									
	n	inc*	n	inc	n	inc	n	inc	n	inc
10-14	-	-	1	7.04	1	7.04	-	-	-	-
15-19	-	-	-	-	-	-	4	29.77	8	59.55
20-34	14	43.34	24	74.30	35	108.36	36	111.45	84	260.05
35-49	7	28.19	35	140.94	22	88.59	28	112.75	52	209.40
50-64	5	34.07	8	54.51	9	61.32	15	102.20	28	190.77
>65	-	-	-	-	1	12.41	3	37.24	5	62.07
Total	26	24.18	68	63.25	68	63.25	86	79.99	177	164.63
Age group	**Female (n=309)**									
	n	inc	n	inc	n	inc	n	inc	n	inc
10-14	-	-	-	-	1	7.50	-	-	2	15.00
15-19	1	7.80	4	31.20	2	15.60	9	70.20	10	78.00
20-34	20	62.15	24	74.58	23	71.47	37	114.97	42	130.51
35-49	7	28.32	17	68.78	23	93.05	21	84.96	43	173.97
50-64	3	20.02	4	26.70	6	40.04	1	6.67	4	26.70
>65	-	-	1	11.48	2	22.96	-	-	2	22.96
Total	31	29.04	50	46.84	57	53.4	68	63.7	103	96.49

Source: Database provided by Secretaria do Estado de Saúde de Mato Grosso do Sul, 2009-2018.[28]; * inc= Incidence coefficient.

Table 2. Trend analysis of HIV / AIDS notification rates, according to sex and age group, Mato Grosso do Sul, 2009-2018. (n=734)

Age group	Sex	β_0	β_1	β_2	β_3	p-value	r^{2*}	Tendency
10-14	Male	3.22	-0.39	-0.65		0.07	0.42	Stable
	Female	1.48	0.09	0.01	0.04	0.39	0.49	Stable
15-19	Male	2.40	0.87	0.44		0.002	0.96	Growing
	Female	20.80	5.01			<0.001	0.86	Growing
20-34	Male	46.03	0.80	0.24		0.04	0.58	Growing
	Female	44.92	2.94			0.005	0.71	Growing
35-49	Male	57.03	-0.60	0.06	1.48	0.015	0.84	Growing
	Female	43.65	2.07	0.03	0.46	<0.001	0.98	Growing
50-64	Male	42.59	0.91			0.002	0.80	Growing
	Female	15.98	-0.53	-0.60		0.07	0.63	Stable
>65	Male	9.82	0.96			<0.001	0.92	Growing
	Female	6.45	-2.59	-0.13	0.27	0.33	0.53	Stable
Total	Both	3.95	0.96			<0.001	0.91	Growing

Source: Database provided by Secretaria do Estado de Saúde de Mato Grosso do Sul, 2009-2018.[28]; * r2= Coefficient of determination. p-value = 0.05

DISCUSSION

In this study, there was a total upward trend, with positive acceleration of HIV/AIDS cases in the border region over the years, with dispersion among municipalities, which elucidates the need for reflection on surveillance actions developed and the inclusion of particularities of each specific context, for example, in relation to the concentration of sex and age group. However, it is reiterated that the change in the notification criteria, as of 2014, may have influenced these results, since there was an increase in the cumulative incidence of cases.

The heterogeneity of health services available in South America contributes to the disparities in the assistance provided, which sometimes presents itself in a segregated manner, forcing some individuals to seek assistance in other localities. In the cases of Bolivia and Paraguay, the offer of the health system moves towards integral and universal care. In Brazil, the Unified Health System offers free assistance to any citizen, although it has different assistance characteristics in each region.[29]

The existence of the migratory process can lead to difficulties in identifying the population's characteristics, as well as the dissemination of different health problems. A study conducted in the border region of China from 2010 to 2014 identified a higher prevalence of Sexually Transmitted Infections (STIs) in immigrant sex workers from the neighboring country, Vietnam. He also pointed out that factors present in the region - drug trafficking, sexual exploitation, cheap labor and barriers to access to health services - may be associated with the prevalence of STIs.[30]

This reality is not far from the context of Mato Grosso do Sul, where the border region is marked by intense conflict due to drug trafficking, sex tourism, and economic difficulties of the municipalities. In a study conducted in the same region, the authors identified other neglected diseases linked to low socioeconomic conditions and barriers to access to health services, such as leprosy, in addition to the large flow of people seeking health services in the Brazilian territory.[31]

It should be noted that the bilateral cooperation agreement[17] allows the access of individuals from neighboring countries to the Brazilian health system. In this context, professionals who assist this population need to recognize this demand and its specificities, in order to seek health education strategies, aiming at reducing cases of new infections.

However, some barriers may occur, such as language, culture, socioeconomic conditions and the immigrant's access to the Brazilian health system, through the use of illegal means - for example, the use of a fake address - or late search for the health service with a worsening of the health picture.[32] In view of this, the health professional, especially the nurse, who sometimes exercises leadership in front of the multi-professional team, needs to constantly reflect on the characteristics of the context in which he/she is inserted, in order to plan care actions that meet the specificities of the different territories and individuals.

The comparison between the maps showed the displacement of individuals, including within the national territory, because the notification did not always occur in the municipality of residence. This migration process may be associated with personal and health system infrastructure difficulties.[19] It should be noted that both aspects can directly and indirectly influence the link with the service and adherence to treatment. Therefore, the demand for assistance in other municipalities should not be restrained, but it is important that it be known by managers, because it interferes in the planning of assistance, health surveillance and actions to be developed.[11]

It is worth mentioning that small municipalities still have a stigmatized view regarding HIV infection. A study developed in the countryside of Paraíba, with individuals from rural areas, whose objective was to understand social representations in relation to AIDS, pointed out discriminatory and negative statements, and reports of non-use of condoms by most interviewees (474/789).[33] The way to face this kind of situation should occur still in childhood/adolescence through health education actions.

When observing the age range in the notifications, the cases of diagnosis in young people from ten to 14 years of age are highlighted, which although they present a stable tendency in both sexes, demonstrate early sexual initiation. At the national level, in the same age group, there were 211 notifications in the period of 2007-2018.[26] This occurrence was also observed in the border region between Brazil, Paraguay and Argentina, where sexual initiation occurred before the age of 14, mainly in males. It should be noted that, in this study, the young men reported not using condoms in all sexual relations, even though they received guidance about their importance.[34]

The above mentioned fact deserves the attention of the scholars of this subject, because this behavior can have important reflexes in the present and future health of these young people. It is important to find strategies that reach these young people, who sometimes do not respond in the same way as adults. In this direction, a study conducted in Africa, for example, identified low adherence to condom use by the migrant population, but found that those who participated in educational actions about safe sexual practice, increased the chance of use by five times.[18]

In this context, the actions for the prevention of Sexually Transmitted Infections (STIs) developed by health professionals, in partnership with schools, through different approaches, constitute a protective factor for the early initiation of unsafe sexual activity,[35] demonstrating the need to strengthen intersectoral actions (health - education) aimed at promoting safe sexual practices.[36]

These approaches include the use of alternative methods of access and awareness of the population, whether through the use of social media or audiovisual resources, the identification of those with the greatest vulnerability and the provision of combined prevention measures, with the aim of the individual adhering to the one that best fits his/her life context. In the case of young people, there is a need for actions to stimulate the

search for tests for early detection, because many believe it is unlikely to have HIV infection.[37] In addition, the behavior of the population in this age group, besides increasing the risks for STI, also increases the chances of occurrence of other public health problems - unwanted pregnancy and unsafe induced abortion.[38]

In turn, the population between 15 and 19 years of age also deserves to be highlighted, as the temporal trend of HIV/AIDS infection in this region has been growing for both sexes. In the national scenario, for the population of this age group, in 2007-2018, there were 8,813 notifications, with significant reduction between 2017 and 2018, ranging from 1,724 to 653 notifications.[26] It should be noted that continuous surveillance of cases in border regions can contribute to access to diagnosis and especially treatment, which directly influences the maintenance of undetectable viral load and positive impact on quality of life.[39]

Regarding the behavior of the notifications, the results of the present study corroborate the research also carried out in a border region, which pointed out the predominance of HIV cases in heterosexuals.[14] In addition, the largest contingent of cases is among males (homosexual and heterosexual), which may be associated with the existence of multiple sexual partnerships and non-use of condoms, in addition to the absence and/or disability in the search for health services.[20] Thus, the greatest annual increase observed in the 35-49 age group in men highlights particularities in the active search for both preventive and early detection actions.

The growing trend and the higher average coefficients in the 20 to 64 age group reiterate HIV/AIDS as a public health problem. The identification of a rising profile among women demonstrates the feminization of HIV, however, this increase may be associated with higher demand for health services, and also the higher occurrence of pregnancy in the 20 to 40 age group.[40]

It is also worth considering that the adult and elderly population sometimes presents a higher prevalence of chronic comorbidities not related to HIV/AIDS infection, which leads to higher rates of early mortality.[41] In this sense, the importance of an additional characterization of the epidemiology of chronic diseases among the adult and elderly population living with HIV/AIDS is highlighted, in order to optimize clinical care and plan effective strategies for screening.

It is emphasized that the modification of this scenario goes beyond the direct action of health professionals and crosses the levels of municipal, state and federal management. Bilateral cooperation agreements may constitute better ways to reconcile care for the population of different countries.[42] Professionals, through health education activities developed in partnership with entities and local representations, can expand the strategies of care and access to services.

Regarding the limitations of this study, it is important to point out the incompleteness in the completion of some data in the notification form, such as place of residence, schooling and exposure category. However, the importance of the results found should be emphasized, as they can provide reflections from existing public policies and direct care actions that meet the specificities of border regions. It is important to highlight the need for future studies to elucidate the profile of notifications in the state and allow for comparisons with border regions.

CONCLUSION AND IMPLICATIONS FOR THE PRACTICE

The total trend of HIV/AIDS cases, by sex and age group, in a triple border region was increasing. The results challenge health professionals and managers to fight the HIV/AIDS pandemic, requiring continuous reflection on the strategies/public policies adopted so far, especially in the border region.

The need for occupation of different social spaces by nursing professionals is highlighted, aiming at the dissemination of epidemiological surveys like this one, in order to subsidize actions and strategies to confront.

Thus, it is expected that the results may guide ways of acting in specific groups, and stimulate new studies that address the behavior of individuals in the border region, the access to health services by the foreign population, the perspectives of health professionals in the region and the impacts on Brazilian health.

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AUTHOR'S CONTRIBUTIONS

Study design. Josiel Elisandro Werle. Elen Ferraz Teston.

Data collection or production. Josiel Elisandro Werle. Elen Ferraz Teston

Data analsys. Josiel Elisandro Werle. Elen Ferraz Teston. Sonia Silva Marcon. Gilmara Holanda da Cunha. Juliete Bispo dos Santos Mandu. Marcos Antonio Ferreira Junior

Interpretation of results. Josiel Elisandro Werle. Elen Ferraz Teston. Sonia Silva Marcon. Gilmara Holanda da Cunha. Juliete Bispo dos Santos Mandu. Marcos Antonio Ferreira Junior

Writing and critical revision of the manuscript. Josiel Elisandro Werle. Elen Ferraz Teston. Sonia Silva Marcon. Gilmara Holanda da Cunha. Juliete Bispo dos Santos Mandu. Marcos Antonio Ferreira Junior

Approval of the final version of the article. Josiel Elisandro Werle. Elen Ferraz Teston. Sonia Silva Marcon. Gilmara Holanda da Cunha. Juliete Bispo dos Santos Mandu. Marcos Antonio Ferreira Junior

Responsibility for all aspects of the content and integrity of the article published. Josiel Elisandro Werle. Elen Ferraz Teston. Sonia Silva Marcon. Gilmara Holanda da Cunha. Juliete Bispo dos Santos Mandu. Marcos Antonio Ferreira Junior

ASSOCIATE EDITOR

Gerson Luiz Marinho

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