

## 01 - EPIDEMIOLOGICAL AND SOCIAL ASPECTS OF CASES OF AIDS WHO DIED IN THE STATE OF RIO GRANDE DO NORTE

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### INTRODUCTION

AIDS (Acquired Immunodeficiency Syndrome) is still incurable, emerging disease that presents as a serious public health problem in terms of its severity and character pandemic, world performing in different forms, ranging from the culture of each locale. In Brazil, it is considered a disease endowed several epidemiological profiles, which impose health systems need to create new strategies to confront and control (SOUSA, 2011).

The disease has become the worst epidemic faced by humanity, bringing human suffering, political, demographic, economic, social, and cultural impacts (SZWARCOWALD et al, 2006).

According to the epidemiological bulletin of HIV and AIDS in the Ministry of Health (2013), considering the cumulative 1980 to June 2012 in Brazil data, a total of 656 701 AIDS cases were reported, of which 426 459 (64.9%) were males and 230 161 (35.1%) were female. Of the total cases reported between 1980 and June 2012, 367 540 (56%) occurred in the Southeast; 130 942 (19.9%) in the South; 88 830 (13.5%) in the Northeast; 37 244 (5.7%) in the Midwest region; and 32 140 (4.9%) in the Northern Region.

The profile of the epidemic in Brazil has undergone significant changes over the course of nearly three decades and the internalization of the transmission of AIDS in the country brought about some stability in the number of new cases reported in major cities, and an increase in cases in the cities of medium and small (LOPES, 2004). Given this context, the aim of this descriptive study was to analyze the epidemiological and social aspects (gender, age, place of residence) of AIDS cases reported who died in the Information System on Mortality (ISM), the Department of Health public of the State of Rio Grande do Norte, in the period 2000-2013

### MATERIALS AND METHODS

The study of character descriptive, retrospective aims to characterize the epidemiological and social aspects of 910 cases of AIDS. For the analysis of information on morbidity and mortality, all AIDS cases that died in the period 2000-2013, registered in the Information System on Mortality (ISM), the Public Health Secretariat of Rio Grande do Norte were being included excluded cases in which the chips had incomplete data or analysis unfeasible. The main instruments for data collection were the Individual Notification Cards and MIS Death Certificate (DC) of the Ministry of Health, collected directly from the MIS records and compiled in Excel spreadsheets, the Public Health Secretariat of Rio Grande do Norte. The data were analyzed in software Statistical Package for Social Sciences (SPSS) for Windows, version 20.0 using descriptive statistics, showing the absolute and relative (frequencies and percentages) data. The procedure for statistical inference, in turn, was conducted by the chi-square ( $X^2$ ). A confidence interval of 95% and a significance level of 5% ( $p < 0.05$ ) was adopted. The project was approved by the Ethics Committee in Research of UERN under Opinion No 454 026, after approval, was referred to the Public Health Secretariat of Rio Grande do Norte to the letter of Consent for it to authorize the search.

### RESULTS AND DISCUSSION

Table 01. Data related to the year of death and age at time periods in both sexes.

YEAR OF DEATH	AGE	Sex			
		Male	Female		
		n	%	n	%
2000-2004	11-19 years	2	66,7	1	33,3
	20-64 years	140	70,4	59	29,6
	65-98 years	0	0,0	2	100,0
2005-2009	11-19 years	3	50,0	3	50,0
	20-64 years	178	66,4	90	33,6
	65-98 years	14	73,7	5	26,3
2010-2013	11-19 years	1	100,0	0	0,0
	20-64 years	278	71,6	110	28,4
	65-98 years	17	70,8	7	29,2

The data presented in Table 01 show that between 2005 to 2009 were recorded 178 (66.4%) deaths in males in adulthood, the next four years 2010-2013 there was an increase of 100 deaths in the records while among women in this same period there was an increase of only 20, no significant difference was found between sexes.

Studies by Pompeu (2014) corroborate our results and suggest that males are approximately three times more likely to progress to death from AIDS than female patients. However Gonçalves (2012) shows that this difference is decreasing over time. In 2009, the sex ratio reached 1.6 cases in men for every case among women, in his studies he also did not observe significant differences between the death rates of males and females (23.8% versus 19.1% -  $p = 0.25$ ).

In studies of Alves (2012) the proportion of female deaths doubled between the last two decades reaching 34%. But even so, died in total almost 100 thousand men more than women, leading us to a ratio of 2 males to every female.

According to the results, there is no significant difference between the sexes in any of the meso. What is observed is that the greater number of cases is located in the Eastern Region which includes the state capital and the metropolitan area and is located where the largest hospital of infectious diseases in the state, followed by the western region where is located the second largest city state and also has a referral hospital

Table 02. Related to the number of deaths by sex in regions location data

Mesoregions	YEAR OF DEATH	SEX		n	%	n	%	Valeu X <sup>2</sup>
		MALE	FEMALE					
CENTRAL	2000-2004	4	50,0	4	50,0	1,26 (p=0,53)		
	2005-2009	14	63,6	8	36,4			
	2010-2013	26	70,3	11	29,7			
WEST	2000-2004	25	73,5	9	26,5	0,53 (p=0,77)		
	2005-2009	50	68,5	23	31,5			
	2010-2013	56	66,7	28	33,3			
AGRESTE	2000-2004	7	58,3	5	41,7	0,86 (p=0,65)		
	2005-2009	16	61,5	10	38,5			
	2010-2013	22	71,0	9	29,0			
EAST	2000-2004	106	70,7	44	29,3	2,26 (p=0,32)		
	2005-2009	115	66,9	57	33,1			
	2010-2013	192	73,6	69	26,4			

In eastern meso, where there was the largest increase in 14 years, this number has increased by 86 deaths for males and 25 for females. The rugged region in turn remained the meso with lower death records, and an additional 15 for males and 9 females for sex.

Studies Bastiani (2012) draw a similar profile found in our results. He shows that in the Florianópolis, capital of Santa Catarina there is the highest incidence of AIDS in the state with mostly males aged between 20 and 40 variants, residents of large urban centers located in the coastal area.

According to Martins (2014), there is a tendency to internalize the virus, but most cases remain concentrated in large urban centers. Brazilian population count with up to 50 000 inhabitants cities add up to only 11% of all cases in the country, while 1% of Brazilian municipalities with over 500 thousand inhabitants record 51.5% of all AIDS cases.

### CONCLUSION

Although no significant differences between the social aspects (age, gender, region of location), we conclude that cases of AIDS have evolved deaths are concentrated in large centers (Natal and Mossoró), mostly men age adult.

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### EPIDEMIOLOGICAL AND SOCIAL ASPECTS OF CASES OF AIDS WHO DIED IN THE STATE OF RIO GRANDE DO NORTE

#### ABSTRACT

The study aimed to analyze the epidemiological and social aspects of AIDS cases that died in the state of Rio Grande do Norte, in the period 2000 to 2013. This is a descriptive, retrospective study using Database Information System on Mortality (ISM), Brazilian Institute of Geography and Statistics (IBGE). The information has been compiled for Excel and SPSS 20.0 software. The results showed that 66.4% of deaths were males in adulthood, and the largest number of cases is located in the Eastern Region which includes the state capital and the metropolitan area, and also in the western region, which is situated second largest city in the state, but no significant differences were found between the variables. Given the results, it was concluded that cases of AIDS have evolved deaths are concentrated in large centers (Natal and Mossoró), with a predominance of adult males.

**KEYWORDS:** Acquired Immunodeficiency Syndrome; Morbidity and mortality.

### LES ASPECTS ÉPIDÉMIOLOGIQUES ET SOCIAUX DE CAS DE SIDA QUI SONT MORTS DANS L'ÉTAT DE RIO GRANDE DO NORTE

#### RÉSUMÉ

L'étude visait à analyser les aspects épidémiologiques et sociales de cas de SIDA qui sont morts dans l'Etat de Rio Grande do Norte, dans la période de 2000 à 2013. Ceci est, une étude rétrospective descriptive en utilisant le base de données de le système de informations sur la mortalité (SIM), l'Institut brésilien de géographie et de statistique (IBGE). Ces informations ont été compilées pour les logiciels Excel et SPSS 20.0. Les résultats ont montré que 66,4% des décès étaient des hommes à l'âge adulte, et le plus grand nombre de cas est situé dans la région de l'Est, qui comprend la capitale de l'Etat et la région métropolitaine, et aussi dans la région de l'Ouest, qui se trouve deuxième plus grande ville de l'État, mais aucune différence

significative n'a été trouvée entre les variables. Compte tenu des résultats, il a été conclu que les cas de sida ont évolué décès sont concentrés dans les grands centres (Natal et Mossoró), avec une prédominance des mâles adultes.

**MOTS-CLÉS:** syndrome d'immunodéficience acquise; La morbidité et la mortalité.

#### **EPIDEMIOLÓGICO Y SOCIAL ASPECTOS DE CASOS DE SIDA QUE MURIERON EN EL ESTADO DE RIO GRANDE DO NORTE**

##### **RESUMEN**

El estudio tuvo como objetivo analizar los aspectos epidemiológicos y sociales de los casos de SIDA que murieron en el estado de Rio Grande do Norte, en el período de 2000 a 2013. Se trata de un estudio descriptivo, retrospectivo, utilizando en la base de datos del sistema Información sobre mortalidad (SIM), el Instituto brasileño de Geografía y Estadística (IBGE). La información ha sido compilada para el software Excel y SPSS 20.0. Los resultados mostraron que el 66,4% de las muertes eran hombres en edad adulta, y el mayor número de casos se encuentra en la Región Oriental, que incluye la capital del estado y el área metropolitana, y también en la región occidental, que se encuentra la segunda ciudad más grande del estado, pero no se encontraron diferencias significativas entre las variables. Dados los resultados, se concluyó que los casos de SIDA han evolucionado las muertes se concentran en los grandes centros (Natal y Mossoró), con un predominio de los varones adultos.

**PALABRAS CLAVE:** Síndrome de Inmunodeficiencia Adquirida; La morbilidad y la mortalidad.

#### **ASPECTOS EPIDEMIOLÓGICOS E SOCIAIS DOS CASOS DE AIDS QUE EVOLUÍRAM PARA ÓBITO NO ESTADO DO RIO GRANDE DO NORTE**

##### **RESUMO**

O estudo objetivou analisar os aspectos epidemiológicos e sociais dos casos de AIDS que evoluíram para óbito no Estado do Rio Grande do Norte, no período de 2000 a 2013. Trata-se de um estudo descritivo, retrospectivo, utilizando-se banco de dados do Sistema de Informação sobre Mortalidade (SIM), Instituto Brasileiro de Geografia e Estatística (IBGE). As informações foram compiladas para os programas Excel e SPSS 20.0. Os resultados apontaram que 66,4% de óbitos foram do sexo masculino na idade adulta, e o maior número de casos está localizado na Região Leste que compreende a capital do estado e a região metropolitana, e também na região oeste, onde está situada a segunda maior cidade do estado, porém não foram encontradas diferenças significativas entre as variáveis. Diante dos resultados apresentados, conclui-se que os casos de AIDS que evoluíram a óbitos concentram-se nos grandes centros (Natal e Mossoró), com predomínio de homens adultos.

**PALAVRAS-CHAVE:** Síndrome da Imunodeficiência Adquirida; Morbidade, mortalidade.