

TESTING AND COUNSELING CENTER: CHARACTERISTICS OF USERS AND HIV INFECTION PREVALENCE¹

Deise Vieira Tokano*
Elma Mathias Dessunti**

ABSTRACT

The Brazilian policy on early diagnosis and prevention of HIV infection was consolidated through the establishment of Testing and Counseling Centers (TCCs). The aim of this study was to analyze the characteristics of residents of the municipality of Rolândia who sought HIV diagnosis in their own municipality and in the municipality of reference, as well as seropositivity prevalence. This is a descriptive research whose data was collected from the TCC's Information System (IS) referring to the period from 2006 to 2010. The data was tabulated and analyzed through simple and relative frequencies. In Rolândia, there were 5,502 patients, of whom 79.5% were women, 64.8% were in a stable relationship and 40.8% sought the TCC for prevention. Among the 37 patients of Londrina's TCC, 62.1% of them were single or divorced; 27.0% went to the TCC due to exposure to risk situation, and 19% presented AIDS symptoms. Among all patients tested for HIV, the positivity index stood at 0.60%. This research reiterated the importance of knowing the users who need the TCC, in addition to seroprevalence, comprising relevant information for the implementation of public policies, prevention strategies and actions aimed at promoting the population's healthcare.

Keywords: HIV infections. Serological tests. HIV serodiagnosis. Prevention & control.

INTRODUCTION

The Human Immunodeficiency Virus (HIV) infection represents a global and dynamic phenomenon whose form of occurrence is conditioned to individual and collective human behavior⁽¹⁾. Since 1980, when the first case of AIDS in the world was registered, this epidemic has been rapidly growing within vulnerable populations such as injecting drug users, sex workers, gays, transvestites and transsexuals. Over the years, there has been a gradual change in the epidemiological profile and an increasing number of cases among heterosexuals, women, low-income individuals and the elderly⁽¹⁾.

The World Health Organization (WHO) estimates that 35 million people are HIV-positive and that 1.5 million deaths occurred in 2013⁽²⁾. Even with the decline in the number of new infections in the world, the pandemic is strongly expanding, standing as a challenge with regard to the control measures of the susceptibilities linked to individual and contextual aspects of the exposure to the virus⁽³⁾.

In Brazil, the rate of new HIV infections increased by 11% between 2005 and 2013, and

the detection rate of the disease has stabilized at 20 cases per 100,000 inhabitants, which represents approximately 39,000 new cases every year. It is estimated that 750,000 people are living with HIV/AIDS, of which 123,000 are unaware of their situation⁽¹⁾.

Despite the importance of diagnosing the HIV infection early, the WHO estimates that only 0.2% of adults from low and middle-income countries get tested and seek counseling for diagnosing the HIV infection. Still, 90% of the people who want to be tested for HIV do not have access to diagnosis services⁽⁴⁾.

The Testing and Counseling Centers (TCCs) implemented in Brazil in 1989 offer free anti-HIV testing and perform actions aimed at diagnosing and preventing sexually transmitted diseases (STDs). Counseling actions seek to inform users about HIV/AIDS and guide them as to how to prevent and cope with the HIV-positive status and the disease⁽⁴⁾.

In Rolândia, a municipality located in northern Paraná, 25 km far from the municipality of Londrina, the Information System of the Testing and Counseling Center (IS-TCC) was implemented in 2006, whose objective is to register and provide information

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*Nurse. Master in Nursing. State University of Londrina, PR. E-mail: deisetok@gmail.com.br

**Nurse. PhD in Collective Health. Adjunct Professor at the Nursing Department of the State University of Londrina, PR. E-mail: elma@sercomtel.com.br

on care services offered in the TCC, to perform serological tests for HIV, as well as to obtain indicators and to plan actions⁽⁵⁾. When the results are positive, people are referred to the Reference Center for STD/AIDS located in Londrina, where they are followed up and treated. The central TCC of Londrina is located there too.

It is believed that identifying and knowing the population that seeks the TCC helps in the decision making, planning and targeting involving the actions aimed at preventing, promoting and controlling the infection in order to bring improvements to the quality of this service.

Considering that the TCC is configured as a strategic service for the production of knowledge turned to AIDS epidemic trends at different healthcare levels⁽⁴⁾, and that there is a need to formulate strategies in order to intensify and strengthen the actions of this service, this study was conducted with the purpose of analyzing sociodemographic and behavioral characteristics of Rolândia's residents seeking the TCC of their own municipality and of Londrina so they can be tested for HIV, as well as assessing the seropositivity prevalence within this population.

METHODOLOGY

A descriptive, observational study with cross-sectional design was conducted at the TCCs of the municipalities of Rolândia and Londrina, state of Paraná, Brazil.

The study population consisted of all individuals residing in Rolândia who has undergone serological testing for HIV in said municipality or in Londrina, the latter being a reference for STD/HIV/AIDS of the 17th Regional Health Department. Secondary data was collected from sheets registered in the IS-CTA with information about individuals who have undergone serological testing or a quick test for HIV from January 2006 to December 2010.

The search for these services is of spontaneous-demand type, and the assistance to users is recorded on sheets standardized by the Ministry of Health and transcribed in the IS-TCC.

The variables used in this study were: age, sex, race/color, educational attainment, marital

status, reason for the search, type of exposure, and prevention measures.

Rolândia's data was tabulated in the IS-TCC, while Londrina's was tabulated with the aid of the Statistical Package for the Social Sciences (SPSS), version 15. The data was analyzed through simple and relative frequencies.

The data was collected between January and May 2012.

The research complied with all recommendations of Resolution 196/96, being approved by the Research Ethics Committee of the State University of Londrina, on 27/10/2011, with CAAE No. 0223.0.268.268-11.

RESULTS AND DISCUSSION

The data available in the IS-TCC showed that 5,539 residents of the municipality of Rolândia have undergone anti-HIV testing during the study period, 5,502 of which did so in their own place of residence and 37 in the municipality of Londrina. The sociodemographic characteristics of these subjects are displayed in Table 1.

It is possible to observe that most of the subjects were female, justified in Rolândia's TCC by the performance of the HIV test on all pregnant women.

The search for HIV infection diagnosis prevailed among the younger population in the municipality of Rolândia (75.2% between 10 and 39 years old), with higher percentage between 20 and 29 years old. In Londrina, 78.4% of the cases belonged to the 20-49 years old age group, with higher proportion between 30 and 39 years old. This data is consonant with the notifications of AIDS cases in the country, highlighting the highest detection rates between 20 and 49 years old⁽⁶⁾. Despite the transformations observed in the AIDS epidemiological profile over the years, it is possible to see that the 20-39 years old age group has been the most affected one since the beginning of the epidemic⁽⁷⁾. In both locations there is a predominance of individuals within the most productive age groups, which may lead to socioeconomic problems when the infection is discovered at advanced stages because it compromises one's ability to work and family income. In addition, it can be inferred that these individuals are sexually active, which favors the spread of HIV if a condom is not used in all

sexual relations. Thus, this age group should be encouraged to undergo anti-HIV testing.

The predominance of the white race/color followed by afro-descendants reflects the characteristics of the population of the municipality where the TCCs are located. A

qualitative research that assessed the access of black people to HIV testing did not identify discrimination in the contact with the service assessed, pointing several factors that facilitate the access (gratuitousness, agility)⁽⁸⁾.

Table 1. Number and percentage of Rolândia's residents who have been tested for HIV in the Testing and Counseling Centers of Rolândia and Londrina, according to sociodemographic variables, 2006-2010.

Municipality	Rolândia (n=5,502)		Londrina (n=37)	
Sociodemographic profile	Nº	%	Nº	%
Sex				
Female	4,375	79.5	20	54.0
Male	1,127	20.5	17	46.0
Age group (years)				
≤ 9	125	2.3	-	-
10 to 19	1,015	18.4	02	5.4
20 to 29	2,092	38.0	09	24.4
30 to 39	1,033	18.8	12	32.4
40 to 49	498	9.0	08	21.6
50 to 59	371	6.8	05	13.5
≥ 60	368	6.7	01	2.7
Race/color				
White	3,851	70.0	23	62.2
Mixed/Black	1521	27.7	09	24.3
Yellow	28	0.5	-	-
Native	06	0.1	-	-
Ignored	93	1.7	05	13.5
Educational attainment				
None	154	2.8	01	2.7
1 to 3 years	290	5.3	05	13.5
4 to 7 years	1,023	18.6	05	13.5
8 to 11 years	3,241	58.9	16	43.2
12 and over	611	11.1	07	19.0
Ignored	183	3.3	03	8.1
Marital status				
Stable union	3,565	64.8	14	37.9
Single/divorced/widowed	1,887	34.2	23	62.1
Not informed	50	1.0	-	-
Total	5,502	100	37	100

Most of the individuals who have sought the TCC had eight or more years of study, corroborating data of a research conducted among adolescents and young adults who sought HIV testing⁽⁹⁾. It is known that education can promote access to information and, hence, the search for the exam.

Regarding marital status, most of the individuals were in stable unions among the individuals from the municipality of origin; in Londrina's TCC, those living without a partner

(single, divorced or widowed) prevailed. The TCC of the municipality of Rolândia, a reference for pregnant women, can explain better the higher number of tests among people in stable unions.

The reason for the search and the type of exposure presented in Table 2 are important data for assessing the profile of the individuals in order to guide prevention actions.

The main reason for seeking HIV testing in Rolândia was prenatal care, justified by the

reference of the TCC concerning the examination on pregnant women since 2008, a fundamental strategy to prevent the vertical transmission of the virus. The public policies recommended by the Ministry of Health for controlling vertical HIV transmission seek to

expand the number of tests among pregnant women and offer them quick tests, follow-up exams, antiretroviral drugs, as well as reference and counter-reference services for assistance to prenatal care, childbirth and postpartum period, including the care of the newborn⁽¹⁰⁾.

Table 2. Number and percentage of Rolândia's residents who have undergone HIV testing in the Testing and Counseling Centers of Rolândia and Londrina, according to the reason for the search and type of exposure, from 2006 to 2010.

Municipality	Rolândia (n=5,502)		Londrina (n=37)	
	Nº	%	Nº	%
Reason for the search				
Prenatal care	2,678	48.7	-	-
Prevention	2,244	40.8	02	5.4
To know the serological status	459	8.3	08	21.6
Exposure to risk situation	79	1.4	10	27.0
Referred by a health service	23	0.5	06	16.2
AIDS symptoms	07	0.1	07	19.0
To check previous result	-	-	04	10.8
Other	12	0.2	-	-
Type of exposure				
Sexual intercourse	5,084	92.4	27	73.0
Sexual intercourse/blood transfusion	18	0.4	-	-
Sexual intercourse/sharing of needles	09	0.2	-	-
Blood transfusion	08	0.1	-	-
Occupational/vertical transmission	07	0.1	-	-
Other	41	0.8	-	-
Not informed	335	6.0	10	27.0
Total	5,502	100.0	37	100.0

Another reason reported for the search for Rolândia's TCC was prevention, which may refer to any situation to which the individuals have been exposed. In Londrina, exposure to a risk situation and the knowledge of one's serological status were the main reasons for the search for serological screening, which shows a possible concern with some type of exposure to HIV. The reason reported as "referral by health service" was identified in the two municipalities, probably due to a suspicion of the disease.

Two individuals who confirmed the diagnosis in Londrina's TCC reported having symptoms of the disease, and the same number was found in Rolândia, which shows that they sought the diagnosis service when the infection was already at an advanced stage.

In both diagnosis centers, most of the patients reported sexual intercourse as the possible exposure to HIV, which is the main form of transmission of the virus in the country⁽⁶⁾.

The research evidences the type of partner mentioned. Most of the individuals stated that their partners were male; it was not possible to know whether such partners were homosexual, heterosexual or bisexual. It is also worth pointing out the large number of sheets without information on that.

When it comes to prevention, Table 3 shows the patients who shared needles and/or did not use condoms. It is possible to notice the inconsistency of some pieces of data, probably due to the inadequate filling of the sheet or a failed data transfer to the IS-TCC. In this way, the analysis of the "Reason for not using condoms with a casual partner" variable was impaired, since the number of justifications falls short of the number of individuals who indicated "no condom use with casual partner". The high number of answers like "not informed" and "does not apply" in all variables is noteworthy. Some studies have pointed flaws in the IS-TCC, highlighting difficulties, divergences and lack of

standardization in the filling among the professionals working in the TCCs, as well as in the understanding of users about some terminologies adopted on the sheet^(5,11).

Table 3. Number and percentage of Rolândia's residents who have undergone HIV testing in the Testing and Counseling Centers of Rolândia and Londrina, according to reports on prevention measures, from 2006 to 2010.

Municipality	Rolândia (n=5,502)		Londrina (n=37)	
Prevention measures	Nº	%	Nº	%
Sharing of needles				
Yes	54	1.0	01	2.7
No	2,090	38.0	11	29.7
Does not apply	56	1.0	16	43.3
Does not remember	55	1.0	-	-
Not informed	3,247	59.0	09	24.3
Use of condom with steady partner				
Yes	472	8.5	05	13.5
No	1,714	31.1	18	48.6
Does not apply	944	17.3	06	16.2
Not informed	2,372	43.1	08	21.7
Reason for not using condoms with steady partner				
Does not like it	559	10.1	07	18.9
Trusts in his/her partner	1,017	18.3	09	24.3
Does not apply	3,492	63.7	19	51.3
Wants to have kids	138	2.5	-	-
Other	296	5.4	02	5.5
Use of condoms with casual partner				
Yes	422	4.2	8	21.6
No	1,254	30.0	15	40.5
Does not apply	2,083	37.8	5	13.5
Not informed	1,543	28.0	9	24.4
Reason for not using condoms with casual partner				
Does not like it	303	5.5	10	27.2
Trusts in his/her partner	147	2.7	8	21.6
Does not apply	4,938	89.7	15	40.5
Wants to have kids	18	0.4	-	-
Other	96	1.7	4	10.7

It is possible to observe that just a few individuals claimed to be injecting drug users (IDUs), but they should be considered due to the high risk of HIV infection within this group. A study conducted with 548 IDUs in Tehran showed an HIV infection prevalence of 26.6%⁽¹²⁾. In Brazil, the detection rate within this group was 18.2% among men and 6.7% among

women from 1980 to June 2014⁽⁶⁾, evidencing the need to work specifically with this group in order to reduce HIV transmission. This purpose was achieved in a randomized study that applied prevention strategies at an individual, family and community level, obtaining significant reduction in risk behaviors and HIV incidence rates after 24 months of follow-up⁽¹³⁾.

Just a few patients reported having used condoms with either steady or casual partners. A study conducted with 408 assisted by the TCC, who had more than one sexual partner, identified a condom use prevalence of 35.29%, and a third of them reported never using it⁽¹⁴⁾. The AIDS epidemic appears to remain in people's minds as something belonging to "somebody else", as it has been identified in a qualitative research conducted with users of a TCC, in which "risk groups" are still cited and commonly associated with sex workers, drug users and others, which contributes to the perception of invulnerability

Table 4. Number and percentage of Rolândia's residents who have undergone HIV testing in the Testing and Counseling Centers of Rolândia and Londrina, according to referred population scope, from 2006 to 2010.

Municipality	Rolândia (n=5.502)		Londrina (n=37)	
Population scope	No	%	No	%
General population	2,021	36.7	21	56.7
Confined population	139	2.5	02	5.4
Sex workers	11	0.2	02	5.4
Drug users	34	0.6	-	-
Individuals with hepatitis B/C	71	1.3	-	-
Other	31	0.5	05	13.5
Not filled	3,195	58.2	07	19.0

The population scope that prevailed in this study was the general population, which does not allow identifying the most vulnerable groups. The concept of vulnerability takes prevention away from the individual level and considers it from a collective perspective, analyzing the government's attitude towards the AIDS epidemic (programmatic vulnerability), situating the individual in his/her economic and cultural structure (social vulnerability), and analyzing each one's prevention action before a risk situation (individual vulnerability)⁽¹⁶⁾. In this way, further studies approaching these constant variables on the IS-TCC sheets are needed in order to show the real vulnerability of certain population groups.

A research conducted in ten Brazilian cities showed the HIV and syphilis vulnerability within the population of men who have sex with men (MSM) in the individual, social and programmatic context⁽¹⁷⁾. The authors justify the urgent need for STD intervention and prevention aimed at this group.

It can be observed that the confined or incarcerated population was present in the population scope of both TCCs analyzed. A

of these individuals⁽¹¹⁾.

This perception was also observed in a study conducted with students from the health field, which showed that the knowledge acquired and the experiences lived during the course seem to not have been enough to improve the compliance with the use of condoms among senior students. The authors consider that the fact that this group has been in more stable relationships compared to freshmen students have probably contributed to establishing a stronger bond of trust among them⁽¹⁵⁾.

qualitative research conducted with prisoners showed that, although they acknowledge the importance of prevention, the male condom is used only during the first sexual intercourse or is not used at all, emphasizing the lack of guidance regarding the prevention of STD/AIDS and poor healthcare⁽¹⁸⁾.

Table 4 shows that just a few individuals claimed to be sex workers and drug users. However, these groups should be a priority for the performance of diagnostic tests, as they show high incidence rates^(6,19). Studies point that the vulnerability of sex workers is associated with not using condoms, misinformation, consumption of licit and illicit drugs, working on the streets, lower socioeconomic level and small Pap smear coverage⁽¹⁹⁻²⁰⁾.

The WHO, concerned with the high incidence of HIV infection within some groups, has recently published the "Consolidated guidelines on HIV prevention, diagnosis, treatment and care for key Populations". "Key populations" are those groups that, due to specific behaviors of higher risk, are more likely to be infected by the HIV, regardless of the type of epidemic or local context, many of them having legal and social

issues related to their behavior, which increases their vulnerability to the infection. It presents actions targeted specifically at each group: MSM, drug users, people in prisons and other closed institutions, sex workers and transgenders(21).

A study that analyzed the trend of AIDS cases in Londrina showed a sharp decline in HIV incidence rates among IDUs and, in 2006, this group was overcome by MSM⁽²²⁾.

In this study, 71 (1.3%) individuals who sought HIV testing in the TCC reported having Hepatitis B and/or C. The combination of these infections with the HIV is worrying because co-infected individuals tend to have a worse response to the antiretroviral therapy and are more likely to go through complications and worsening of their liver disease to a chronic point⁽²³⁾. A study conducted with 1,291 HIV-positive individuals showed high incidence rates of hepatitis B and C, as well as reference to multiple sexual partners and intravenous drug use, pondering the need for facilitating the patient's access to a quick and early diagnosis of viral hepatitis, aiming at an adequate clinical management and a reduction in the spread of these infections⁽²³⁾.

It is known that AIDS is considered a concentrated epidemic, evidenced by the greater vulnerability of some specific groups. Thus, one should assess whether the users of the TCC are in fact those who should be assisted by the service so that there is effectiveness in the actions and in the results.

With regard to seropositivity, it was found that the overall rate was 0.60%, equivalent to that estimated for the country⁽²⁴⁾ and much lower than that observed in Bahia's TCC (2.7%)⁽⁹⁾. In the municipality of Rolândia it stood at 0.35%, and in the municipality of Londrina at 37.8%. It is assumed that many of the patients that sought Londrina's TCC presented a higher chance of positive results, considering the reasons

mentioned for the test (Table 2). This fact can also evidence the existence of the fear of being tested in the municipality of origin, especially because of the matter of secrecy in a place where many people know each other.

CONCLUSIONS

The largest HIV testing coverage was found among the female population, among people in stable relationships, with eight or more years of study, who were white and aged between 20 and 39 years old.

The main reason reported for HIV testing was prenatal care, followed by prevention. Few individuals reported sharing needles, as well as making use of condoms with both steady and casual partners. About population scope, the general population prevailed.

The HIV infection prevalence rate in the population of Rolândia that has gone to the TCCs to be tested was 0.60%.

The TCCs are essential in providing information and timely access to HIV diagnosis, enabling actions to prevent the spread of HIV, prophylaxis of opportunistic infections and improvement in the quality of life of seroprevalent individuals.

It is worth pointing out that this study has some limitations, which are mainly related to the use of secondary data, with some variables improperly filled or unfilled, which indicates the need for the continuous training of professionals.

The study showed that, through the actions of the TCC, it is possible to monitor the serological status, the sociodemographic profile and the behavior of individuals that seek HIV/AIDS diagnosis. This contributes to the achievement of goals related to the prevention and control of the infection, providing the manager with conditions to assess the weaknesses and plan activities with efficiency and problem-solving capacity.

CENTRO DE TESTAGEM E ACONSELHAMENTO: CARACTERÍSTICAS DOS USUÁRIOS E PREVALÊNCIA DE INFECÇÃO PELO HIV

RESUMO

A política brasileira de diagnóstico precoce e prevenção da infecção pelo HIV fortaleceu-se a partir dos Centros de Testagem e Aconselhamento (CTA). O objetivo deste estudo foi analisar as características de residentes do município de Rolândia que procuraram pelo diagnóstico de HIV no próprio município e no município de referência, assim como a prevalência de soropositividade. Trata-se de uma pesquisa descritiva, cujos dados foram levantados do Sistema de Informação (SI) do CTA referentes ao período de 2006 a 2010. Os dados foram tabulados e analisados por meio de frequências simples e relativas. Em Rolândia, foram 5.502 pacientes, sendo

79,5% mulheres, 64,8% apresentavam união estável, e 40,8% procuraram o CTA alegando prevenção. Dos 37 pacientes que estiveram no CTA de Londrina, 62,1% eram solteiros ou separados, 27,0% compareceram devido à exposição a situação de risco, e 19% apresentavam sintomas da aids. Dentre todos os pacientes que realizaram o exame anti-HIV, o índice de positividade foi de 0,60%. Esta pesquisa reiterou a importância de conhecer os usuários que demandam os CTA e a soroprevalência, constituindo informações relevantes para elaboração de políticas públicas, implantação de estratégias de prevenção e ações de assistência e promoção à saúde da população.

Palavras-chave: Infecções por HIV. Testes sorológicos. Sorodiagnóstico do HIV. Prevenção & controle.

CENTRO DE PRUEBA Y ASESORAMIENTO: CARACTERÍSTICAS DE LOS USUARIOS Y PREVALENCIA DE INFECCIÓN POR EL VIH

RESUMEN

La política brasileña de diagnóstico precoz y prevención de la infección por el VIH se fortaleció a partir de los Centros de Prueba y Asesoramiento (CPA). El objetivo de este estudio fue analizar las características de residentes del municipio de Rolândia que buscaron por el diagnóstico de VIH en el propio municipio y en el municipio de referencia, así como la prevalencia de seropositividad. Se trata de una investigación descriptiva, cuyos datos fueron recogidos del Sistema de Información (SI) del CPA referentes al período de 2006 a 2010. Los datos fueron tabulados y analizados por medio de frecuencias simples y relativas. En Rolândia, fueron 5.502 pacientes, siendo 79,5% mujeres, 64,8% presentaban unión estable, y 40,8% buscaron el CPA alegando prevención. De los 37 pacientes que estuvieron en el CPA de Londrina, 62,1% eran solteros o separados, 27,0% comparecieron debido a la exposición a la situación de riesgo, y 19% presentaban síntomas del SIDA. Entre todos los pacientes que realizaron el examen anti-VIH, el índice de positividad fue de 0,60%. Esta investigación reiteró la importancia de conocer a los usuarios que demandan los CPA y la seroprevalencia, constituyendo informaciones relevantes para la elaboración de políticas públicas, implantación de estrategias de prevención y acciones de asesoramiento y promoción a la salud de la población.

Palabras clave: Infecciones por VIH. Pruebas serológicas. Serodiagnóstico del VIH. Prevención & control.

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Corresponding author: Deise Vieira Tokano. Rua Caracas, 1200. Santa Rosa. Londrina, PR, Brasil. CEP 86050-070. E-mail: deisetok@gmail.com.

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