

## PERSONS DEPRIVED OF LIBERTY: VIRAL LOAD CONTROL FOR HIV/AIDS SEROLOGY

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**Abstract:** The deprivation of liberty implies the restriction of a person's right to come and go within society. Persons deprived of liberty living with HIV/AIDS are guaranteed the same treatment as non-prisoners free of charge in the Unified Health System, as guaranteed by Law number: 9.313/96. This study was designed with the objective of knowing the viral load control for HIV/AIDS serology in people deprived of liberty. Cross-sectional study, based on the mixed method, of the nested concurrent type, in which quantitative and qualitative data are collected concomitantly. Mixed through integration (QUAN + QUAL), with equal attribution of weights to the data. Previously approved by the co-participating institutions and by the Research Ethics Committee, opinion number: 3,352,352. Cross-sectional and retrospectively, the quantitative data reveal the predominance of undetectable viral load in people deprived of liberty, especially in women. Qualitative data reveal that the specialized service provides ARV medications, but the vulnerability resulting from the socio-environmental characteristics of people deprived of liberty makes them adopt unsafe behaviors, such as not using the medication. In line with the set of data presented in this study and the subsidies already disclosed in the constitutional framework of the health area, the construction of a local service to promote actions and interventions is an urgent strategy.

**Keywords:** Viral charge; HIV infection; Serology; Antiretrovirals; prisoners.

## INTRODUCTION

The deprivation of liberty implies the restriction of a person's right to come and go within society. Such restriction can be classified as partial or total, in the first one the person is confined to a certain environment during the night. In the second, she spends

24 hours a day in social isolation, that is, she cannot circulate in an environment other than the legally determined one. Both situations result from the application of State laws, which have coercive action to inhibit individual or collective acts that violate the norms of social life. Such action by the State is regulated by the Penal Code, Decree-Law number: 2,848 of December 7, 1940, which is based on the Universal Declaration of Human Rights, which guarantees that such isolation has a regenerative purpose (BRAZIL, 2018).

This regenerative purpose is imbued with the perspective that the person deprived of liberty requires access to means of maintaining health, the educational process or professional training, among others (CUNHA; BURD, 2018). Such access has enormous limitations, since there are several studies that point to factors for non-adherence to drug treatments for infectious diseases such as AIDS, for example, low education and income of people deprived of liberty even before social isolation (COSTA; SILVA; ROCHA, 2011; SOARES FILHO; BUENO, 2016). Another factor is the established association of these characteristics with the linking of women to the trafficking of illegal chemical substances and, consequently, their imprisonment (SALDANHA et al., 2020; MATOS; SILVA; NASCIMENTO, 2019).

Such associations, when observed in view of the huge number of people deprived of liberty in BRAZIL and the rates of infection by the Acquired Immunodeficiency Virus (HIV), justify this study. Its object of investigation is viral load control for HIV/AIDS serology, particularized by the prison population already characterized as socially vulnerable in the Brazilian context and the prison system (SALDANHA et al., 2020; MATOS; SILVA; NASCIMENTO, 2019; SOARES FILHO; BUENO, 2016).

According to the report of the National Survey of Penitentiary Information -

INFOPEN, of June 2017, BRAZIL has 726,354 people deprived of liberty. The occupancy rate of prison environments is 171.62%, with a total deficit of 303,112 thousand vacancies and an imprisonment rate, 349.78%, three times higher than the occupancy rate. The State of Rio Grande do Sul (RS) ranks fourth nationally in terms of the number of people deprived of liberty, 36,174 thousand. First in the ranking is the State of São Paulo with 229,031 people deprived of liberty, consecutively, Minas Gerais, Rio de Janeiro and Paraná (MOURA, 2017).

In this same perspective, the contamination of the Brazilian population by HIV is found, which in ten years, from 2007 to 2017, presented 194,217 cases. Of these, 40,275 are from the state of RS, representing the second highest rate among Brazilian states. The municipality of Uruguaiana - RS occupies the fifth place in the ranking of municipalities with the highest rates of HIV contamination. According to data from the Ministry of Health, people in situations of deprivation of liberty have a high prevalence rate of HIV/AIDS, around 1.3% in 2014 (BRAZIL, 2013). Again, the data set supports the presentation of this study, which was designed with the objective of knowing the viral load control for HIV/AIDS serology in people deprived of liberty. Since the right to health is ensured by the Penal Execution Law (LEP) number: 7.210 of July 11, 1984 (BRAZIL, 2018), and by public policies such as the National Policy for Attention to HIV/AIDS, which has objectives that guide the guidelines and strategies listing to promote the access of people with HIV infection and sexually transmitted infections (STIs) to quality care (BRAZIL, 2013).

## METHOD

This is a cross-sectional study (MINAYO, 2012), based on the mixed method, of the nested concurrent type, in which

quantitative and qualitative data are collected concomitantly. Mixed through integration (QUAN + QUAL), with equal attribution of weights to the data (OLIVEIRA; MAGALHÃES; MATSUDA, 2018). This choice was based on the understanding that in order to know the control of the viral load, records and quantitative data are needed, but also the veracity of the facts about the use of antiretroviral medication (ARV), qualitative data. Both serve a single research objective and provide complementary, qualitative information that substantiate the quantitative results (SANTOS et. al., 2017).

The prison population consists of 713 PDL, in the month of July 2019. The sample was selected for convenience, including those registered and received by the Municipal Specialized Care Service/Center for Testing and Counseling (SAE/CTA) ARV medication in July 2019. Therefore, it consisted of 36 people deprived of liberty (PPL) allocated in a state penitentiary located, in a border area, in the western region of the State of RS/BRAZIL.

Data collection was carried out in the second half of 2019, carried out in two stages: (1) quantitative research carried out using the technique of documental survey of antiretroviral treatment (ART) data in the records of the PLL of the SAE/CTA and in the prisoner report of the referred penitentiary of the Superintendence of Penitentiary Services (SUSEPE, 2019) and, (2) qualitative research carried out using the semi-structure interview technique recorded in the nursing consultation model of primary health care, in the penitentiary environment.

The nursing consultation consisted of checking vital signs and anthropometric measurements, pre-test counseling and subsequent performance of rapid tests to detect antibodies against HIV, the Hepatitis B and C Virus, and syphilis. Consecutively, information was obtained on identification

data, past health and family history, life habits and on the presence of complaints.

To carry out the tests, the methodology of immunochromatography was used to detect antibodies. Each kit is composed of rapid tests, pipettes, lancets and reagent buffer solution. The quick tests were performed immediately after the blood sample was collected and the participant was instructed to wait for the result on site, since the report was issued within 30 minutes (BRAZIL<sub>(a)</sub>, 2013).

For all PDL who had altered vital signs, complaints about the absence of continuous use medication or the presence of symptoms of acute or chronic conditions, a written referral was made to local care or to the municipal specialized service. In cases in which any of the rapid tests showed positive results, notification of the condition was carried out to enable the initiation of drug treatment, with the exception of HIV/AIDS infection. It is noteworthy that the displacement and the guarantee of access to the health service were under the responsibility of the penitentiary institution.

The set of information that make up the stages of data collection were organized in databases. Quantitative data were tabulated and entered twice in Microsoft Excel software. Descriptive statistics were applied to the variables related to the categorization of participants, whose data were presented by absolute and relative frequency and dispersion, mean and mode (DANCEY; REIDY, 2013). The qualitative data were transcribed, typed and organized in text documents, consecutively, the data were grouped by the type of information obtained according to the items in the scripts. Thematic qualitative analysis was implemented to categorize data according to specified objectives (MINAYO, 2012).

The data collection steps were first agreed with the nurse responsible for the SAE/CTA

and with the penitentiary management. With that, training was obtained for members of the project's executing team to carry out pre- and post-rapid test counseling, as well as to define the referral flow to specialized assistance. With the second, this flow was ratified and the access of researchers to the PDL was made possible, guaranteeing the precepts of institutional security. It was established two days of the week, Tuesdays and Fridays, in the morning and afternoon shifts, for carrying out the nursing consultation in two rooms of the penitentiary previously prepared for the activity by the research executing team. The displacement of the PDL to the SAE/CTA for consultation with a specialized medical professional was under the responsibility of the penitentiary, as well as carrying out other clinical follow-ups requested, via letter, by the nurse coordinating the project.

The initial contact with the PDL occurred through public security agents who read and delivered the formal invitation prepared by the person responsible for the project in the cells. This contained the objectives and purposes of the research, the participants' rights regarding anonymity and withdrawal at any time. It also explained that they would be kept handcuffed in the attendance room, during the interview and testing, and that they would previously undergo the internal search process. After acceptance with the signature of the invitation, the PDL went through the aforementioned procedures and upon arriving at the service room, it was escorted by a public security agent and the door of the room was kept open. The researchers, who always met at least in pairs, collected the invitation and once again explained the data collection steps and ethical aspects, asking those who were interested in participating to sign the Participant's Free and Informed Consent Term, in two copies, according to Resolution of the National Security Council, number: 466/2012. It

is noteworthy that the research project is registered in the Information System for Research, Teaching and Extension Projects of the responsible researcher's Higher Education Institution, number: 20180106112822 and approved in 2019 by the Research Ethics Committee, opinion number: 3.352.352.

## RESULTS

In the month of July 2019, 713 people were experiencing a situation of deprivation of liberty, in the research scenario, according to the report of prisoners of a state penitentiary located, in a border area, in the western region of the State of RS/BRAZIL. Of these, 37 were

registered with the SAE/CTA. And, only one woman was in a situation of abandonment.

Of the 36 PPL that the SAE/CTA released the ARV medication, in July 2019; 32 PDL are male and four are female. Among the latter, all had a viral load at the minimum limit, less than 50 copies/ml of HIV circulating in the body (<.L.Min.) or undetectable. Of the 88.9% men, eight (25%) had a detectable viral load (>.L.Min.).

The analysis of the viral load of the 36 PDL registered in the SAE/CTA records, since the beginning of ART, reveals that 13 (36.1%) of them still do not present a reduction in the viral load, as shown in figure 1.

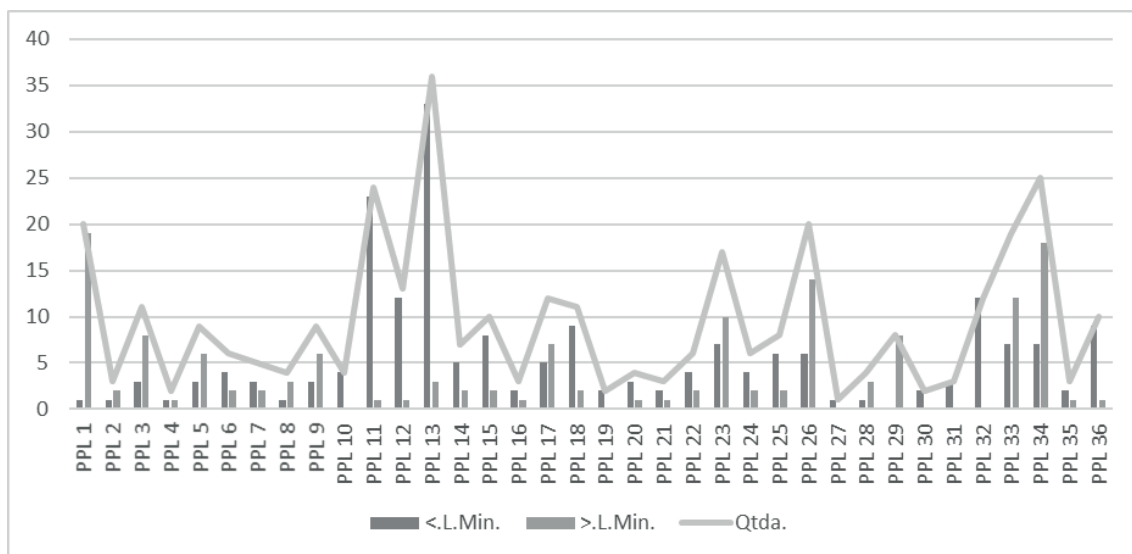


Figure 1 – Viral load for HIV/AIDS serology of PDL in TARV, Uruguaiiana, RS-BR, 2019.

Source: Authors.

Among the 13 PPL (1, 2, 3, 5, 8, 9, 17, 23, 26, 28, 29, 33, 34) identified with a detectable viral load, only PPL 29, according to the eight tests registered in their medical records in the SAE/CTA did not manage to reduce the viral load of the HIV/AIDS serology at any time. The time difference between the diagnosis and the start of providing ARV medication did not exceed one year, as she has been receiving the medication since 2011 and the diagnosis occurred in 2010.

Regarding the number of tests performed and recorded in the SAE/CTA records, there is a minimum value of 2 and a maximum of 25 times, the mode 20 times and an average of 9 times. Of the 13 PDL identified with detectable viral load in figure 1, four (PPL 5, 8, 9, 28) were included in this group in the interval of 3 to 5 years of deprivation of liberty.

In her nursing consultation, PPL 29 complained of insomnia, high heart rate, 122 bpm, tachyphymia, rapid reagent tests

for syphilis and HIV. During counseling, he reported:

(...) I have HIV, but I don't use medication. They [penitentiary agents] give me the medication. At first I took it, but we [PPL on ARV medication] get silly [dizzy], vulnerable to others and here [prison] you can't fool around, you have to be attentive (...). {PPL 29}

In this perspective, it is observed that PDL 1, 2, 8, 27, 28 initially, for approximately one year, perform the correct ART. However, after this first year, they do not continue the use and start to present a detectable viral load for HIV serology or present reinfections, since even knowing their diagnosis, some PDL have unprotected sexual intercourse and/or use injectable chemical substances.

It is noteworthy that PPL 4 already reveals an increase in the number of copies in its second test and PPL 27, which was only tested once, may be at risk for changing the viral load from undetectable to detectable.

In general, the nursing consultations revealed that of the 36 PDL, 28 (77.8%) had only incomplete primary education; 12 (33.3%) declared to be single and 13 (36.1%) to have a sexual partner. The minimum and maximum values, respectively, corresponding to the age of PDL were 24 and 64 years old, whose mode was 37 years old. Of those with a sexual partner, eight (22.2%) do not use condoms, of which four (11.1%) are serodiscordant. Already 12 (33.3%) have some other STI, of which seven (19.5%) acquired syphilis and five (13.9%) hepatitis C.

Regarding the use of chemical substances, 33 (91.7%) PDL reported using them and eight (22.2%) used the intravenous route for administration, of which all reported sharing administration materials. Read the story: "(...) *we used it, we inject ourselves and we passed it to the other (...) on the side (...) we know that [contamination] but we always did and it doesn't work (...)*". {PPL 28}

## DISCUSSION

Data from July 2019 reveal that women deprived of liberty and diagnosed with HIV/AIDS promote their self-care by making continuous and adequate use of ARV medication and adopting safe behaviors.

From the perspective of female self-care, in terms of health issues, studies show that women are more in demand for health services, in addition to constituting the majority of the Brazilian population (NOGUERIA; PACHÚ, 2021; BRAZIL, 2020). This becomes evident in the different ministerial programs implemented at the level of primary health care, such as groups for pregnant women, child care and family planning (BRAZIL, 201; BRAZIL<sup>(b)</sup>, 2013). In addition to these, there are other groups such as those of artisans who, when meeting with health professionals, produce income for family complementation and use these work meetings to promote mental health (CEZAR-VZ; PIEXAK; BONOW; CARDOSO; ROCHA; ALMEIDA, 2014). Alongside these entrepreneurial women there are many others who promote male articulation with health services, such as fishing workers (CARDOSO; CEZAR-VAZ; COSTA; SOARES; SILVA, 2014; BONOW; CEZAR-VAZ; SANT' ANNA; CARDOSO; SILVA, 2010).

In this sense, the concept of self-care disclosed by the World Health Organization is reinforced as a set of actions carried out individually by people to maintain or achieve the best possible level of health (WHO, 2022). To this end, they seek to reduce signs and symptoms of injuries and expand conditions that promote well-being in different environments (CEZAR-VAZ et. al., 2022).

The retrospective longitudinal analysis of the records of the SAE/CTA medical records indicates that the majority of people deprived of liberty, until July 2019, had a viral load for HIV/AIDS serology lower than 50 copies/ml

of HIV circulating in the organism (<. L.Min.).

Many studies point to the vulnerability of this population, which indicate the low level of education and income of people who become deprived of liberty and repeat criminality (PEREIRA et. al., 2018; SOARES FILHO; BUENO, 2016; COSTA; SILVA; ROCHA, 2011). And many others reveal the institutionalized social prejudice that goes against the grain of public policies to guarantee human rights and is present not only in health services, but also in the very work process of security services (CARDOSO; PEDROSO; TARRAGÓ; ESPADIM; AMBRÓS; ESCOBAR, 2022; SALDANHA et. al., 2020; TARRAGÓ et. al., 2021).

In addition to social prejudice, there are also many studies indicating structural absences in work environments, which together with gaps in permanent education regarding care for people living with HIV/AIDS. Together, the aforementioned absences and gaps produce insecurity in health professionals to provide care to the population living with HIV/AIDS (FIALHO; PRATES; OLIVEIRA; GOMES; ESCOBAL; CARDOSO, 2020).

The maintenance of viral load detection for HIV/AIDS serology verified and reported by the PPL 29 suggests a gap in the approach to medication administration in the prison environment in question. At the same time, it reveals the lack of access to information for this population. Against these data, it must be noted that there is already scientific evidence and public policies that indicate the treatment of side effects resulting from ART, in order to strengthen adherence (CARDOSO; PEDROSO; TARRAGÓ; ESPADIM; AMBRÓS; ESCOBAR, 2022; TARRAGÓ et. al., 2021; BRAZIL(b), 2020), as well as the need for population guidance regarding the impacts of unsafe behaviors on viral load control for HIV/AIDS serology and other STIs (ESPADIM; PAVANATO ; PEDROSO;

CARDOSO, 2020; BRAZIL(b), 2020). Among these, syphilis has shown high incidence rates and despite its rapid treatment, few people diagnosed have it (FUMADO et. al., 2017). In line with this, it is noteworthy that the complications arising from the permanence of the bacterium *Treponema pallidum* in the bloodstream can result in serious injuries that cause the non-functionality of organs and systems, producing sequelae that can make the maintenance of life unfeasible. (BRAZIL<sup>(a)</sup>, 2019; BRAZIL<sup>(b)</sup>, 2019).

It is understood that the data from the nursing consultations of the PDLs in this study reveal the urgency of constant actions and interventions in terms of health promotion and self-care. In this sense, the creation of a primary health care service becomes an urgent strategy and has already been indicated in public policies and in other studies as a mechanism for modifying unsafe behavior, STI rates and general morbidity and mortality. Since these PDL receive intimate visits from other people who are not in deprivation of liberty, often the affective relationships end up not lasting the entire period of serving the sentence of one of those involved in the affective relationship and, thus, new relationships are initiated. and the serological condition is not shared (TARRAGÓ et. al., 2021; ESPADIM; PAVANATO; PEDROSO; CARDOSO, 2020).

It is understood that the limit of this study may lie in the transversality of the information collected through the nursing consultation. However, the documentary survey allowed a longitudinal look at the set of PDL imprisoned in July 2019. On the other hand, the method selected for data collection and analysis avoided the suppression of missing in the generalization of the results. Contributing consecutively to highlight the possible differential in health care for this population through the guarantee of the Penal Execution

Law, that is, the structuring of teams/primary care units in the prison system.

## CONCLUSION

Viral load control for HIV/AIDS serology is provided to the PDL by the SAE/CTA, along with the ARV medication, according to the records in the medical records. This is waived monthly for the responsible insurance professional.

The administration of ART medications is under the responsibility of the PPL itself, which, due to the lack of knowledge of its right to comprehensive health care, ends up not using it due to the side effects.

In view of all the above, more than articulating sectors of society to seek the promotion of PDL health, it is urgent that a health service be structured and instituted in the ambience of this state penitentiary located, in a border area, in the region west of the State of RS/Brazil. This will really allow control over the supply, administration and side effects of ART, as well as other infectious diseases. Glimpsing from this, a long-term reduction of unsafe behavior by the PDL and consecutively the reduction of STI rates.

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