

**SEXUALLY TRANSMITTED INFECTIONS IN PEOPLE DEPRIVED OF LIBERTY:  
BARS AS A CONSTRAINT ON HEALTH****INFECCÕES SEXUALMENTE TRANSMISSÍVEIS EM PESSOAS PRIVADAS DE  
LIBERDADE: AS GRADES COMO LIMITANTES À SAÚDE****INFECCIONES DE TRANSMISIÓN SEXUAL EN PERSONAS PRIVADAS DE  
LIBERTAD: LAS REJAS COMO LIMITANTES A LA SALUD**

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**ABSTRACT**

**Introduction:** people deprived of liberty have higher rates of infectious diseases than those who are free. **Objective:** to estimate Sexually Transmitted Infections in prison populations in a large city in southern Brazil. **Method:** cross-sectional study, with probabilistic sampling by self-completed semi-structured questionnaire, carried out in four prison units in a large city in the south of the country, between April and August 2021, approved by the Research Ethics Committee. **Results:** 326 reports of PDL were added, with 3.4% (n=11) of Sexually Transmitted Infections, being: HIV 0.9% (n=3), Hepatitis B, Hepatitis C and Syphilis. **Considerations:** the health care of prisoners living with Sexually Transmitted Infections should be equivalent to that provided in the freed community and should be part of the routine of prison health professionals, in constant integration with public health outside the walls.

**Descriptors:** Prisoners; Sexually Transmitted Infections; Prisons; Adult Health.

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## RESUMO

**Introdução:** as pessoas privadas de liberdade apresentam índices superiores de doenças infecciosas que aqueles encontrados na comunidade. **Objetivo:** Estimar as Infecções Sexualmente Transmissíveis em populações prisionais de um município de grande porte no sul do Brasil. **Método:** estudo transversal, de amostragem probabilística, com uso de um questionário semiestruturado auto preenchível, aplicado em quatro unidades prisionais de um município de grande porte do sul do Brasil, no período de abril a agosto de 2021, aprovado pelo Comitê de Ética em Pesquisa. **Resultados:** Foram 326 PPL, com 3,4% (n=11) de relatos de Infecções Sexualmente Transmissíveis, são elas: HIV 0,9% (n=3), Hepatite B, Hepatite C e Sífilis. **Considerações finais:** Os cuidados em saúde as pessoas presas vivendo com Infecções Sexualmente Transmissíveis necessitam ser equivalente ao dispensado na comunidade e constituir-se de rotinas dos profissionais de saúde prisional e em constante integração com a saúde pública extramuros.

**Descritores:** Prisioneiros; Infecções Sexualmente Transmissíveis; Prisões; Saúde do Adulto.

## RESUMEN

**Introducción:** las personas privadas de libertad presentan índices superiores de enfermedades infecciosas que aquellas se encuentran en la comunidad. **Objetivo:** Comprender las Infecciones de Transmisión Sexual en poblaciones carcelarias en un municipio de gran porte en el sur de Brasil. **Método:** estudio transversal de muestreo probabilístico, con utilización de un cuestionario semiestructurado auto rellenable, aplicado en cuatro unidades carcelarias de un municipio de gran porte del sur de Brasil, en el período de abril a agosto de 2021, aprobado por el Comité de Ética en Investigación. **Resultados:** Fueron 326 PPL, con 3,4% (n=11) de relatos de Infecciones de Transmisión Sexual, de las cuales: VIH 0,9% (n=3), Hepatitis B, Hepatitis C e Sífilis. **Consideraciones finales:** Los cuidados en salud de las personas encarceladas que viven con Infecciones de Transmisión Sexual necesitan ser equivalentes en la comunidad y rutina de los profesionales de salud carcelaria en integración con la salud pública.

**Descriptorios:** Prisioneros; Enfermedades de Transmisión Sexual; Prisiones; Salud del Adulto.

## INTRODUCTION

Health care in prisons must be equivalent to that provided in the community, including health promotion, prevention and recovery, and must be integrated with public health in general, in order to guarantee the right to health, which is also defined for prison populations in the Universal Declaration of Human Rights.<sup>1</sup>

It is worth noting that people deprived of liberty (PDL) have higher rates of physical and mental problems, as well as a higher risk of becoming seriously ill than those presented by people in the community. The rates are higher for both communicable and non-communicable diseases, and also for substance use. Thus, the health of PDL is inferior to that of citizens at liberty. Therefore,

the management of the conditions of illness in PDL will also reflect on public health in general, since they will return to society, as well as reducing health inequities.<sup>1,2</sup>

In this sense, entering prison is a unique moment for the initial assessment of the health situation of PDLs, especially in relation to infectious diseases, since this population group is at increased risk of Human Immunodeficiency Virus (HIV), Hepatitis B and C, related to their social and environmental vulnerability, use of injectable drugs and risky sexual practices, both before and during incarceration.<sup>1,3</sup>

To this end, this study aims to: estimate Sexually Transmitted Infections in prison populations in a large municipality in southern Brazil.

## **METHOD**

This is across-sectional, descriptive study, linked to a larger research entitled: “Chronic disease and health of people deprived of liberty in light of the Salutogenic Theory: a mixed methods study”. The criteria of the checklist were met of Strengthening the Reporting of Observational studies in Epidemiology (STROBE).<sup>4</sup>

The target population of the study are PDLs from four prison units of a large

municipality in southern Brazil, in the period from April to August 2021, whose prison population at the time of the study consisted of 2335 PDL, three (I, II, III) of which were males and one female (IV), all over the age of 18.<sup>5</sup>

Probabilistic sampling was used, stratified and proportional to the population of each penal unit, with a 5% error, 95% confidence level and expected frequency of the event of interest in the population of 50%, which resulted in a sample of 326 individuals. For selection in the units, a simple random draw was performed using Excel software, based on the alphabetical lists available in the prison units. The inclusion criterion used was being incarcerated in the prison units of the city targeted by the study, and the exclusion criterion was refusal to participate in the study and being illiterate.

Data collection used a self-completed semi-structured questionnaire based on the declaration of PDL, adapted from the Multiprofessional Study Group on Adult Health (GEMSA) of the Federal University of Paraná (UFPR), which consists of sociodemographic, occupational, clinical and lifestyle variables, with 19 questions, two open, nine closed and eight mixed.

For statistical analysis, all collected variables were subjected to descriptive analyses. For categorical variables, absolute (n) and relative (%) frequencies were calculated. For numerical variables, the mean, median, standard deviation, quartiles 1 and 3, which are equivalent to the 25th and 75th percentiles, respectively, and the minimum and maximum values, were calculated. All analyses were conducted using R software version 4.1.0.

The research was approved by the Human Research Ethics Committee of the Health Sciences Sector/UFPR. CAAE number:42695321.8.0000.0102 and CEP/SD-PB Opinion number:4,618,359, on March 29, 2021. The study participants were informed of

the purpose of the research and signed the Informed Consent Form (ICF), which informed them of the objectives of the research and ensured the anonymity of the participant.

## RESULTS

There were 326 PDL who composed the sample, of which 93.3% (n=314) did not report STIs and 3.4% (n=11) did. The diseases reported were: HIV 0.9% (n=3), Hepatitis B, Hepatitis C and Syphilis, Genital Herpes with 0.6% (n=2) each and Oral/Labial Herpes 0.3% (n=1) with one person having Genital Herpes and Hepatitis B co-infection. Figure 1.

**Figure 1.** Prevalence of STD/HIV in PDL, Foz do Iguaçu, Paraná, Brazil, 2021

Variable	All Units		I		II		III		IV	
	N	%	N	%	N	%	N	%	N	%
No	314	96.3%	65	98.5%	89	95.7	131	95.6	29	96.7
STD/ HIV										
Yes	11	3.4%	1	1.5%	3	3.2	6	4.4	1	3.3
Not informed	1	0.3%	-	-	1	1.1	-	-	-	-

SOURCE: research data (2021).

The PDL diagnosed with STI were predominantly male (90.9% (n=10), compared to 9.1% (n=1) female. However, it is important to note that the proportion of women in prison in the municipality targeted by the study is lower than the proportion of men (296 or 90.8% versus 30 or 9.2%). The average age of the PDL was 33.4 years ( $\pm 9.7$ ), with a minimum age of 24 and a maximum of 57 years. Predominantly married (54.4% (n=6), parents of 1-3 children (63.3% (n=7), deprived of liberty for between 1-5 years (45.4% (n=5) and more than 5 years (36.4% (n=4).

Regarding education, less than 12 years of study prevailed, 63.6% (n=7), followed by more than 12 years with 36.4% (n=4). Despite the low level of education, no illiterate person was part of the sample. Regarding income, 63.3% (n=7) received between 1 and 2 minimum wages before imprisonment, 18.2% (n=2) received less than 1 minimum wage and more than 2 minimum wages.

Regarding drug treatment, 54.4% (n=6) reported not undergoing treatment, compared to 45.4% (n=5) who did. All PDL diagnosed with HIV are using antiretroviral therapy. Regarding the place of diagnosis, all were performed in the public health network, of

which 72.7% (n=8) were performed in the penal unit and 27.3% (n=3) outside the prison.

## DISCUSSION

The population included in this study was predominantly male, young, married, with low levels of education and income. This is similar to a study carried out in the United States of America with 199 PDLs, in which males were also prevalent, and differing from that study in terms of marital status, which for that study were mostly single.<sup>6</sup>

Prisons are environments with a high risk of spreading infectious diseases, related to the prior marginalization of PDLs, as well as the performance of tattoos without sterilized materials, unprotected sexual practices, use of injectable drugs, and the risk of which is greater for people who use injectable drugs. The prevalence of HIV/STI is several times higher in the prison system than in the community in general, especially in regions with a high prevalence of injectable drug use and where drug use is criminalized. These diseases can also increase within the prison environment and also in the community, when these PDLs are released, related to inadequate prevention and treatment.<sup>3,7-8</sup>

Our sample showed an STI rate of 3.4%, which may be related to low testing -

the possibility that the prevalence is underestimated due to lack of diagnosis - and/or to low real levels in this population. It is worth noting that statistical data from the Penitentiary Department (SISDEPEN) from 2021 indicate that in the Brazilian prison population the rates are 25.76% for HIV in men and 36.8% in women; Syphilis 19.66% and 42.14%; Hepatitis 6.52% and 6.27%, others 21.55% and 6.15%, respectively.<sup>9</sup>

A study with female prisoners in northeastern Brazil found high rates of STIs (51.02%)<sup>10</sup>, which does not corroborate our findings. A study with 271 female prisoners in Canada found rates that also diverge from our findings (3.4% versus 19.0%).<sup>11</sup> Trotter et al.<sup>6</sup> when studying 199 US prisoners found rates of 2.5% for Hepatitis B, 7.0% for Hepatitis C and 2.5% for HIV. Another analysis carried out in the Brazilian Midwest with 3368 prisoners found Hepatitis B rates of 9.8%, also much higher than the 0.6% of the sample we studied.<sup>12</sup> A study carried out in northeastern Brazil with 113 female prisoners found syphilis rates of 22.1%, rates much higher than our sample of 0.6%.<sup>13</sup>

Although the sample presents lower rates than those found in the national penal system as a whole, it is higher than the community data of 0.8% prevalence of STIs,

explained by the Modules of the 2019 National Health Survey.<sup>14</sup> It should be noted that most diagnoses occurred in the prison environment. Ahmadi Gharaei and collaborators point out in a systematic review the increase in the prevalence of these infections in PDL in recent decades, signaling the need for better screening and treatment programs aimed at this vulnerable population group. However, this context can offer valuable opportunities in accessing diagnostic, control and treatment programs for this group of high-risk individuals that were not previously offered.<sup>15</sup>

However, it should be noted that while prisons may provide the only access to healthcare for many prisoners, they may often lack the necessary training to conduct non-coercive testing while respecting consent and confidentiality, and to maintain adequate records. It is therefore essential that prison healthcare teams are properly trained and act in accordance with patients' rights and professional ethics; and that institutions are able to ensure adequate nutrition, hygiene and cleanliness.<sup>16</sup>

In the prison context, barriers such as insufficient resources for treatment, failures in the provision of medication, as well as health compromised by poor nutrition, precarious

conditions and violence continue to limit health. It is common for prisoners to be unaware of their health problems and for these to remain undiagnosed in prison. Discrimination from other inmates and prison staff can also have an impact on medication adherence. The naturalization of lack of health care in prison is prevalent in society, not limiting the sentence to deprivation of liberty, but extending the deprivation of the right to health, adequate food and access to healthy environments.<sup>16</sup>

Routine initial screening of prisoners for HIV/STI at the entrance to prisons, as well as appropriate management and access to treatment in accordance with the 2016 World Health Organization guidelines in this context, are essential for quality care. However, in many prisons, especially in low- and middle-income countries, this care remains suboptimal.<sup>3,8</sup> Initial screening should be conducted by a health professional in order to map the needs of prisoners, existing diseases and care demands, directing them to treatment if necessary and constituting a unique moment for the connection between prisoners and health professionals, which may favor possible adherence to treatment and preventive measures.<sup>16</sup>

In this perspective, a Thai study demonstrated that a universal testing and treatment approach for Hepatitis C led by prison health professionals was highly effective and well accepted by prisoners<sup>17</sup>, which can also be understood as extending to the approach for other STIs/AIDS. The link between the user/prisoner and the health team is also essential for care in prisons, as it can facilitate adherence to the therapeutic plan and changes in behavior patterns, and consequently improve living conditions.<sup>18</sup>

The implementation of preventive measures, such as harm reduction, such as access to clean needles; Hepatitis B immunizations for those not infected; access to condoms; health promotion actions with individual and collective health education activities that address the theme of STI/AIDS; human rights; equity and ethics are essential practices to be implemented in penal units.<sup>15</sup>

A tool that can facilitate and expand access to quality care for PDL, and which can be an adjunct in the treatment of STIs/AIDS, is care mediated by Information and Communication Technologies, via Telehealth, which allows overcoming physical and geographical barriers, especially in the care of specialized areas. The possibility of benefits such as: reducing transportation costs;

improving safety for the community, health workers and security staff (avoiding escapes), avoiding transportation between health services, increasing patient satisfaction, staff qualification, easier access to specialists and overcoming difficulties in hiring professionals.<sup>19-20</sup>

It is important to highlight, however, that measures for the control and treatment of HIV/STI cannot focus solely on the prison context, but rather require considering the post-release context of PDLs, who are involved in a cyclical context of marginalization, recidivism, imprisonment and poor health. Thus, the transition from the penal unit to the community is challenging and essential for the continuity of care.<sup>2</sup>

## **FINAL CONSIDERATIONS**

It is understood that the prison population studied presented STI rates lower than those found in the national prison population, but higher than those presented by the community. The PDL with STI are predominantly men, young, married, with low education and income.

Health care for PDL living with and/or diagnosed with STI/HIV in prisons presupposes understanding them as subjects with rights equivalent to those in the

community, that is, comprehensive and quality health. Actions for the promotion, prevention and treatment of STI/HIV should be routine for prison health professionals, including nurses, who constitute the largest category of professionals in penal units. They must be qualified and act to improve the quality of life of PDL.

The prison health unit must be integrated with extramural health services so that they act in harmony and ensure continuity of health care upon the release of PDL from prison, with links to pre-release referral services.

Knowing the epidemiological profile of the prison population with regard to STIs can contribute to health promotion actions, prevention and control, and timely treatment of illnesses, focused on the specific needs of PDL.

The descriptive study is considered to be the limit of this investigation, as it presents a “portrait” of the health situation of PDLs regarding STIs, but without making inferences about the health behavior of the group studied.

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### Conflict of interest

We declare that there is no conflict of interest.

### Thanks

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