Methods: Members of a family (n = 21) living in a rural area in the southern coastal region of Bahia, in a situation of social vulnerability, participated in the study. Epidemiological data, family relationships, and infection status for HTLV-1/2 and *S. stercoralis* were evaluated. Serum levels of cytokines IL-2, IL-4, IL-6, IL-10, TNF-α, IL-17, and total IgE were measured and compared between coinfected and non-coinfected individuals.

Results: Analysis of the results showed that transmission most likely occurred through breastfeeding, starting from the matriarch infected with HTLV-1, who had four partners. Among the cytokines measured (IL-2, IL-4, IL-6, IL-10, TNF-α, IL-17), only TNF-α and IL-17 showed differences between individuals coinfected and not coinfected with *S. stercoralis* ($p < 0.05$). These cytokines may have contributed to exacerbation of the autoinfection cycle, as evidenced by the high number of larvae in coinfected individuals. Low total IgE levels were also detected in coinfected individuals, which may have contributed to a reduced innate immune response against parasitic infection.

Conclusion: Vertical transmission through breastfeeding occurs in approximately 30% of children born to infected mothers who breastfed for more than 6 months; therefore, follow-up of pregnant women with HTLV-1 is essential to control vertical transmission. The immunological profile observed suggests that TNF-α, IL-17, and low IgE levels may play a role in susceptibility to severe strongyloidiasis in HTLV-1/2–infected individuals.

Keywords: Vertical transmission, T-lymphotropic virus, Human T-lymphotropic virus, *Strongyloides stercoralis*, Coinfection.

https://doi.org/10.1016/j.bjid.2026.104904

280

EARLY HIV TREATMENT AND CD4 AT DIAGNOSIS: DESCRIPTIVE ANALYSIS ACROSS BRAZILIAN MACRO-REGIONS, 2015–2024

Andressa Pinto Michael *, Tatiana Mezadri, Letícia Ziggiotti de Oliveira

Universidade do Vale do Itajaí (Univali), Itajaí, SC, Brazil

Introduction/Objective: The strategy of immediate initiation of antiretroviral therapy (ART) after HIV diagnosis ("test and treat") began to be recommended by the World Health Organization in 2015, given its role in reducing morbidity and mortality and interrupting viral transmission. Strategies such as expansion of rapid testing and targeted approaches to key populations are also recommended to achieve earlier diagnoses, with individuals not presenting advanced HIV disease or having CD4 counts > 350 cells/mm^3. This study aimed to describe the time from HIV diagnosis to ART initiation and the proportion of individuals with CD4 > 350 at diagnosis across the five Brazilian macro-regions between 2015 and 2024.

Methods: This was a descriptive, cross-sectional study assessing the time between HIV diagnosis and ART initiation, as well as CD4 count at diagnosis, among people living with HIV (PLHIV) newly diagnosed between 2015 and 2024 in the five Brazilian macro-regions. Data were obtained from the Integrated HIV/AIDS Care Monitoring Panel of the Ministério da Saúde.

Results: Between 2015 and 2024, an increase was observed in the number of ART prescriptions started immediately after diagnosis in four of the five Brazilian macro-regions. In the Southeast and Center-West, the proportion of people who initiated ART concomitantly with diagnosis rose from 12% to 21% and from 8% to 13%, respectively. In the South, this percentage increased from 6% to 10%, while in the Northeast it went from 11% to 13%. The exception was the North, which showed a reduction from 13% to 11% over the period. Regarding patients with CD4 > 350 at diagnosis, in the same period there was a decrease in the proportion of individuals with better immunological status in all macro-regions. In the North, the percentage dropped from 52% to 51%; in the Northeast, from 52% to 51%; in the Center-West, from 58% to 54%; in the Southeast, from 60% to 59%; and in the South, from 59% to 56%.

Conclusion: Despite efforts to expand testing, there is still a relevant proportion of individuals diagnosed late. Moreover, despite universal access to HIV treatment in Brazil, there are evident regional discrepancies in immediate ART initiation. To expand early diagnosis and overcome regional inequalities, it is crucial that health policies consider the specific characteristics of each region and promote continuous investments in infrastructure, professional training, and adherence strategies.

Keywords: HIV, CD4, Antiretroviral therapy.

https://doi.org/10.1016/j.bjid.2026.104905

281

UNIVERSAL SYPHILIS SCREENING IN PEOPLE WITH HIV (PWH) DURING HOSPITALIZATION: AN OPPORTUNITY TO EXPAND ACCESS TO TIMELY DIAGNOSIS AND TREATMENT AND STRENGTHEN COMBINED PREVENTION

Mayara Secco Torres da Silva *, Carolina Coutinho, Eduardo Mesquita Peixoto, Thiago Silva Torres, Matheus Oliveira Bastos, Isabel Cristina Ferreira Tavares, Luiz Fernando Emidio, Estevão Portela Nunes, Sandra Wagner Cardoso, Valdilea Gonçalves Veloso, Beatriz Grinsztejn

Instituto Nacional de Infectologia Evandro Chagas, Fundação Oswaldo Cruz, Fiocruz, Rio de Janeiro, RJ, Brazil

Introduction: Syphilis is a re-emerging sexually transmitted infection (STI) and a growing public health concern in Brazil. This scenario disproportionately affects sexual and

gender minorities, highlighting inequalities in access to prevention, diagnosis, and treatment. Among people with HIV (PWH), syphilis coinfection is associated with higher viral loads and increased risk of HIV transmission.

Objective: To assess the prevalence of active syphilis and associated factors in PWH hospitalized at a reference center in a state in the Southeast region, in the context of a universal screening strategy to address the HIV and STI epidemics.

Methods: This was a cross-sectional study analyzing data from PWH hospitalized at a reference center between October 2021 and April 2024. Universal syphilis screening was performed at hospital admission, and active syphilis was defined as VDRL ≥ 1:8. Sociodemographic and clinical information was collected: age, gender identity, race/skin color, education, HIV viral load (HIV VL), CD4 T-cell count (CD4), and coinfections. Characteristics were compared according to active syphilis diagnosis (yes vs. no) using chi-square/Fisher's exact test for categorical variables and Wilcoxon test for continuous variables.

Results: Among 1,881 hospitalized PWH, median age was 41 years, with a predominance of cisgender men (62%), followed by cisgender women (35%) and travestis/trans women. The most frequently self-declared race was mixed (44%), followed by white (28%) and black (26%). Regarding education, 59% had completed secondary school, 33% elementary school, and 8% higher education. The prevalence of active syphilis was 13.8%. Among cases with syphilis at admission, there was a lower median age (36 vs. 42 years), a higher proportion of cisgender men (70% vs. 61%), and higher frequency in the 25–34 and 35–44 age groups. Elevated HIV VL and hepatitis C coinfection (5% vs. 2%) were also more common.

Conclusions: Universal syphilis screening in hospitalized PWH expands access to timely diagnosis and treatment from a combined prevention perspective and is a strategy that may be evaluated in other settings, such as general hospitals and sexually active individuals regardless of serostatus.

Keywords: Syphilis, HIV, Combined prevention.

https://doi.org/10.1016/j.bjid.2026.104906

282

ALL UNDER CONTROL? PERSISTENT LOW-LEVEL VIREMIA AND EARLY FAILURE AS WARNING SIGNS IN HIV THERAPEUTIC MANAGEMENT IN A BRAZILIAN COHORT

Pietra Vivian Stanicki [a,b,*],
Karen Ingrid Tasca [a,b],
William Ryan Zimmerman [a,b],
Daniel Corrêa Ishida [a,b],
Miguel Marques Mantovani [a,b],
Gabriele Justino Paniago [a,b],
Gustavo Gramoline Pacheco da Cunha [a,b],
Lara Munhoz Mathias [a,b],
Luca Tomazinho Marques [a,b],
Pedro Moryta Lopes [a,b],
Rafael Vieira Szogyenyi [a,b],
Giovani Gomes Bello [a,b],
Alexandre Naime Barbosa [a,b]

[a] *Departamento de Infectologia, Faculdade de Medicina, Universidade Estadual Paulista (Unesp), São Paulo, SP, Brazil*
[b] *Georgetown University, Washington, USA*

Introduction: Sustained viral suppression (VL < 50 copies/mL) is the main target of ART, essential for immune restoration, prevention of transmission, and normalization of survival among people living with HIV (PLWH). However, some individuals maintain detectable VL between 50–199 copies/mL, characterizing persistent low-level viremia (LLV). Although LLV does not constitute classic virologic failure, it has been associated with systemic inflammation, cardiovascular risk, and emergence of resistance mutations. This study estimated the prevalence of LLV and early therapeutic failure (ETF), as well as possible associations with ART regimens, in a real-life cohort from a national reference center.

Methods: Longitudinal analysis of a cohort of 1,050 PLWH with ≥ 4 semiannual VL measurements between the first semester of 2023 and the second semester of 2024, with recorded ART regimen. LLV was defined as ≥ 2 consecutive VLs between 50–199 copies/mL; ETF as VL between 200–499 copies/mL. Prevalences and 95% confidence intervals (95% CI) were estimated using the Wilson method.

Results: Among the 1,050 individuals, 57 (5.43%) had persistent residual viremia. Of these, 25 met criteria for LLV (2.38%; 95% CI: 1.62–3.49) and 32 for ETF (3.05%; 95% CI: 2.17–4.27). The LLV:ETF ratio was 4:5. Among those with detectable VL, 43.9% had LLV and 56.1% ETF, suggesting a risk of early progression to sustained virologic failure. No statistically significant association was identified between occurrence of LLV/ETF and type of ART regimen, regardless of whether regimens were simplified two-drug (2D) regimens, traditional three-drug (3D) regimens, or regimens based on integrase inhibitors (INSTI) or protease inhibitors (PI).

Conclusion: The prevalence of LLV in this cohort (2.38%) was lower than that reported in large international cohorts: 3.5% in a US–Europe consortium and 9.9% in a European study defining LLV as two consecutive VLs between 51–199 copies/mL after 12 months of ART. These data reinforce the effectiveness of current regimens; however, residual viremia, even at low levels, requires close monitoring. Continuous surveillance – emphasizing adherence, pharmacokinetics, and therapeutic adjustments – is an essential component of management. Detectable VL in two consecutive semesters, even at low levels, may represent a critical window for intervention, especially in contexts of irregular adherence or inflammatory comorbidities.

Keywords: HIV, Low-level viremia, Therapeutic failure, Simplification, Viral load.

https://doi.org/10.1016/j.bjid.2026.104907