

do Elecsys® HCV Duo, estando dentro do intervalo de confiança de 95%. Essa diferença pode ser atribuída ao número de testes realizados para o cálculo de especificidade na bula ($n = 20.634$) em comparação com o número de testes utilizados neste estudo ($n = 426$). Em relação à sensibilidade, os dados encontrados foram idênticos ao valor de 100% descrito na bula do imunoensaio Elecsys® HCV Duo. **Conclusão:** Considerando os resultados apresentados e após uma análise crítica das metodologias e parâmetros utilizados, concluímos que o Elecsys® HCV Duo demonstrou uma excelente performance. Este teste surge como uma valiosa alternativa para a triagem sorológica de doadores de sangue, uma vez que reduz a janela imunológica ao detectar simultaneamente o antígeno e os anticorpos do vírus da Hepatite C, contribuindo assim para a diminuição dos riscos de transmissão.

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SOCIODEMOGRAPHIC FACTORS ASSOCIATED WITH ACTIVE SYPHILIS AMONG BRAZILIAN BLOOD DONORS

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Background: A concerning increase in syphilis has been observed worldwide. Traditional surveillance is limited by the scarce routine testing of asymptomatic infections. Blood donation screening is an opportunity to monitor resolved and active syphilis infections, providing public health insights into transmission. **Aims:** To define syphilis prevalence, incidence and factors associated with active infection among blood donors in five Brazilian blood centers. **Material and methods:** Donations from Jan. 2020 through Feb. 2022 were screened with treponemal or nontreponemal tests according to the local routine assessment at each blood center, followed

by a confirmatory step with an alternate Enzyme-Linked Immunosorbent Assay (ELISA) and rapid plasma reagin (RPR) testing. Samples with positive or indeterminate results in the alternate ELISA were categorized as active (if RPR reactive) or resolved syphilis (nonreactive RPR). Active cases were further categorized according to RPR titers ($< 1:8$ or $\geq 1:8$). We report the prevalence of syphilis in first-time donations (FTD) and repeat donations (RD), incidence in RD, and use regression models to assess factors associated with active syphilis. **Results:** Of 862,146 donations, 10,771 (1.3%) were reactive or indeterminate on screening; 7,541 available samples underwent additional testing. Of those, 5,876 (77.9%) tested positive on the alternate ELISA; 907 (12.0%) were resolved infections, 2,980 (39.5%) were active syphilis with RPR $< 1:8$, and 1,989 (26.4%) were active syphilis with RPR $\geq 1:8$. Overall syphilis prevalence (including resolved and active cases) was 2.5% in FTD and 0.6% in RD. The prevalence of active syphilis was 1211 and 238 per 105 donations among FTD and RD, respectively. Among FTD, the prevalence rates of active syphilis with high and low RPR titers were 466 and 745/105 donations; these rates were 4.4 and 5.6 times higher than those observed in RD. Subgroups with the highest prevalence of active syphilis were black donors (946/105 donations), donors with $\leq$ primary education (788/105 donations) and replacement donors (822/105 donations). In the multivariable model, age, gender, race, education, donor type, and type of donation were significantly associated with active syphilis. The incidence of syphilis in RD was 90/105 person-years, with age (25-34 and ≥ 55 relative to ≤ 24 years), male gender, Black and Mixed race (relative to White), lower education, and replacement donation significantly associated with incident syphilis in RD. **Discussion:** We observed that both the prevalence and incidence of active syphilis are associated with male sex, black and mixed race, lower schooling, and replacement donation; compared to donors ≤ 24 years old, older donors had higher prevalence of active syphilis, whereas those aged 25-34 years old had higher incidence of syphilis. **Conclusion:** The prevalence of syphilis was below 3% among FTD and below 1% among RD including resolved and active cases. We found wide variation according to demographic characteristics, with age, gender, race, education, donor type, and type of donation associated with higher prevalence of active syphilis in the adjusted models. The results indicate sociodemographic subgroups that can be targeted in efforts to promote sexual health education and surveillance, prevention and control of sexually transmitted infections.

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MONITORING OF SYPHILIS IN BLOOD DONATIONS: CORRELATIONS WITH NOTIFIED CASES IN BRAZIL

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