do Elecsys® HCV Duo, estando dentro do intervalo de confiança de 95%. Essa diferança pode ser atribuida 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 ≥ 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 ≥ 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 ≤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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Background: Syphilis is a public health problem with traditional surveillance limited to clinical monitoring data; asymptomatic and low-risk populations rarely undergo diagnostic testing. Globally, the syphilis prevalence has consistently increased over the last years, worldwide. Blood donation screening can provide valuable information on syphilis trends over time and on the occurrence of undetected cases in the community. **Aims:** To evaluate the rates and the relationship between syphilis positivity in blood donors when compared against the notifications of sexually acquired syphilis, syphilis in pregnant persons, and congenital syphilis reported by the Brazilian surveillance system between 2012 and 2022. **Material and methods:** Data was compared directly to evaluate the correlations between deferral rates due to syphilis in first-time donors within the REDS-IV-P blood centers (per 100,000 donations); annual rates of syphilis reactivity among Brazilian blood donors obtained from the Hemotherapy Bulletin (HEMOPROD; per 100,000 donations); and rates of congenital syphilis (per 1,000 live births), sexually acquired syphilis (per 100,000 population), and syphilis in pregnant persons (per 1,000 live births) in Brazil extracted from official reports published by the Ministry of Health. The deferral rates in blood donations were based on the results of screening tests. **Results:** We observed an increase in syphilis detection over time by all definitions between 2012 and 2022, with a more pronounced increase in syphilis in pregnant persons (5.7x) and sexually acquired syphilis (7.0x), except for 2020, likely due to underreporting secondary to the COVID-19 pandemic. The increase in deferral rates for syphilis in blood donors in Brazil and in REDS was less sharp (1.6x and 1.4x respectively) when compared to the rates for sexually acquired syphilis and gestational syphilis. REDS-IV-P data reflected the country's deferral pattern, approximately correlating with the increase in congenital syphilis detection rates (2.5x) in the period. **Discussion:** There is a close correlation between syphilis rates in first-time blood donors and congenital syphilis rates recorded by the surveillance system between 2012 and 2022. Donors have lower syphilis rates than the overall adult population and a less pronounced increase in rates over time, probably due to sociodemographic and behavioral characteristics of the blood donor population.

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ÍNDICE DE DESCARTE SOROLÓGICO EM DOADORES DE SANGUE NA COLSAN - ASSOCIAÇÃO BENEFICENTE DE COLETA DE SANGUE NO ANO DE 2023

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Introdução: A legislação vigente para bancos de sangue determina que os serviços de hemoterapia devem realizar, em todas as doações, testes para as doenças transmitidas pelo sangue (HIV, HTLV, Hepatite C (HCV), Hepatite B (Anti-HBc e HBsAg), Sífilis e doença de Chagas). O kit utilizado nesses testes deve possuir alta sensibilidade e especificidade para aumentar a segurança transfusional e diminuir os riscos de contaminação.Objetivo: Avaliar o descarte sorológico de doadores de sangue da COLSAN no ano de 2023. **Material e métodos:** Foi realizado levantamento das informações da coleta e do descarte sorológico de 166.629 doadores triados em 2023 pelo laboratório de sorologia da COLSAN. A metodologia utilizada foi eletroquimioluminescência. Os dados foram coletados de relatórios emitidos pelo sistema informatizado utilizado na Instituição (Eblood) e analisados em indicadores mensais da Instituição.Resultados: Em 2023 foram triadas amostras de 166.629 doadores de sangue e o descarte sorológico foi de 1,78%. Os parâmetros com os maiores descartes foram Sífilis (0,94%) e Anti-HBc (0,48%), já os parâmetros com os menores descartes foram HBsAg (0,03%) e doença de Chagas (0,04%). Os demais parâmetros apresentaram valores medianos comparados com os demais, HCV (0,13%), HIV (0,12%) e HTLV (0,11%). **Discussão e conclusão:** De acordo com o relatório de Produção Hemoterápica Brasileira de 2023, disponibilizado pela Anvisa, os descartes sorológicos encontrados nesse trabalho estão todos abaixo dos valores encontrados no Brasil, possivelmente pela sensibilidade e especificidade do teste utilizado e pela regionalização dos postos de coleta. Apesar de observarmos na população um aumento da contaminação por Sífilis, a alta positividade encontrada no banco de sangue também pode estar relacionada com a cicatriz sorológica, assim como a positividade para Anti-HBc. Conhecer a positividade dos doadores é de extrema importância para o direcionamento das possíveis ações de saúde para a população, pensando na prevenção, orientação e tratamento das doenças existentes.

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