Data were organized by year, including only Brazilian adult ICUs. A descriptive analysis of temporal trends in rates by type of HAI was performed.

Results: The incidence density of CLABSI showed a continuous downward trend over the analyzed period, decreasing from 5.4 infections/1,000 catheter-days in 2013 to 2.7 in 2022. VAP also demonstrated a significant reduction, decreasing from 16.8 to 10.2 infections/1,000 ventilator-days. CAUTI, in turn, showed a decline until 2019, reaching 3.1 infections/1,000 catheter-days, but increased in 2020 and 2021, possibly related to the COVID-19 pandemic, with subsequent stabilization in 2022.

Conclusion: Between 2013 and 2022, VAP and CLABSI rates in Brazilian ICUs showed a downward trend, attributed to the implementation of preventive bundles, greater adherence to hand hygiene, and patient safety practices. In contrast, fluctuations in CAUTI during the pandemic highlighted the impact of health crises on quality of care. The study reinforces the importance of surveillance and continuous strategies for HAI control.

Keywords: HAIs, ICU, Epidemiology.

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TEMPORAL TREND OF HOSPITALIZATIONS FOR CONGENITAL SYPHILIS IN THE SOUTHERN STATES OF BRAZIL FROM 2014 TO 2023

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Introduction/Objectives: Congenital syphilis is an infection caused by *Treponema pallidum*, a spirochete bacterium, which affects multiple systems and presents important clinical outcomes when transmitted vertically. It represents one of the greatest challenges faced by public health in Brazil, due to the numerous negative repercussions on fetal and neonatal life. Among its main consequences are congenital malformations, growth and developmental delays, sensory and neurological alterations, systemic complications, and death. This study aimed to analyze the temporal trend of hospitalizations for congenital syphilis in the Southern Region of Brazil from 2014 to 2023.

Methods: An ecological time-series study was conducted using data from the Hospital Information System of the Unified Health System (SIH/SUS), recorded under ICD-10 code A50.9. Statistical analysis was performed using simple linear regression, stratified by sex, age group by sex, and state, considering statistical significance at $p < 0.05$.

Results: A total of 18,487 hospitalizations of children aged 0 to 4 years were recorded in the Southern Region involving patients of both sexes. There was an increasing trend in the overall hospitalization rate for congenital syphilis in the Southern Region ($p < 0.05$), with a mean rate of 9.39 hospitalizations per 10,000 inhabitants. The same behavior was observed in Paraná, Santa Catarina, and Rio Grande do Sul, with mean rates of 4.85, 6.42, and 16.43 hospitalizations per 10,000 inhabitants, respectively. There was an increasing trend in both sexes. Regarding age group by sex, in females there was an increase in the <1 year age group ($p < 0.05$) and stability in the 1–4 years age group ($p > 0.05$). In contrast, among males, an increase was observed in both age groups analyzed ($p < 0.05$).

Conclusions: It is concluded that there was an overall and state-level increase in the trend of hospitalizations for congenital syphilis in the Southern Region from 2014 to 2023. This growth results from multiple factors, showing the positive contribution of increased testing and prenatal care policies to a concomitant increase in diagnoses. However, prenatal follow-up and adequate treatment remain factors to be improved in order to reduce both the incidence and hospitalization rates of congenital syphilis.

Keywords: Syphilis, Congenital Syphilis, Primary Health Care, Sexually Transmitted Infection, Vertical Transmission.

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TEMPORAL TREND AND IMPACT OF THE COVID-19 PANDEMIC ON CLOSTRIDIOIDES DIFFICILE POSITIVITY IN A TEACHING HOSPITAL (2013–2024)

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Introduction: Infections caused by *Clostridioides difficile* represent an important cause of healthcare-associated diarrhea, with impact on hospital morbidity and mortality. Surveillance is essential to monitor incidence, declare outbreaks, and assess epidemiological changes associated with critical events such as the Covid-19 pandemic.

Objectives: To evaluate the monthly temporal trend of *C. difficile* positivity and the impact of the Covid-19 pandemic in a tertiary public teaching hospital between 2013 and 2024.

Methodology: A retrospective ecological study based on laboratory tests for detection of *C. difficile* antigen/toxin performed between January 2013 and December 2024. Data were

organized into monthly time series, with calculation of the proportion of positive tests per month. Trends were assessed using simple linear regression and the Mann-Kendall test. Potential interruption of the series was analyzed using an interrupted time series (ITS) model, with March 2020 as the inflection point. A Joinpoint model was also fitted to detect trend breaks.

Results: A total of 5,413 laboratory tests for detection of *C. difficile* antigen/toxin were included, of which 951 were positive (17.6%). Monthly positivity progressively ranged from 0% to 65%. Linear regression identified a significant increasing trend over the period ($\beta = 0.0014$; $p < 0.001$; $R^2 = 0.51$). The Mann-Kendall test confirmed an ascending monotonic trend (tau = 0.5377; $p < 0.001$). The ITS model indicated an increased trend after the onset of the pandemic (β before = 0.0014; β after = 0.0044; $p < 0.001$), although the immediate change was not statistically significant. The Joinpoint model identified an inflection point in November 2022, with a marked change in the slope of the curve ($\beta_1 = 0.0014$ before; increase of +0.0083 after the point).

Conclusion: The increase in *Clostridioides difficile* infections in the hospital environment occurred progressively and significantly, with an increase and accentuation of the trend after the pandemic. The role of the healthcare-associated infection control committee became essential to identify clinical suspicion of infections in the context of a potential change in the profile of hospitalized patients after the natural event of the Covid-19 pandemic.

Keywords: *Clostridioides difficile*, Hospital Infection, Covid-19, Interrupted Time Series Analysis.

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EPIDEMIOLOGICAL TRANSITION OF INFECTIVE ENDOCARDITIS: A STUDY FROM A SUS CENTER, BRAZIL

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Introduction: Infective endocarditis (IE) is a severe infection that affects the endocardium. Its incidence has increased worldwide due to increased life expectancy, improved access to healthcare, and greater use of implantable cardiac devices. The objective of this study was to compare epidemiological, clinical, microbiological, echocardiographic characteristics, complications, and outcomes across two periods of an 18-year cohort in a Brazilian tertiary hospital.

Methods: Definite IE cases according to Duke criteria in adults were prospectively included. The periods 2006–2014 and 2015–2023 were compared. Comparisons between proportions were performed using Chi-square and Fisher's exact tests, when applicable. Statistical analyses were conducted using Jamovi®, version 1.2.2. Statistical significance was set at $p < 0.05$.

Results: Selected variables were compared between two periods: 2006–2014 and 2015–2023. The number of IE episodes was 220 and 282, respectively, representing a 28% increase in absolute numbers. In the 2015–2023 period, there were more episodes in patients over 60 years of age (24.5% vs 33.7%, p = 0.0261; OR 1.562, CI [1.053–2.316]), more patients on hemodialysis (7.3% vs 13.5%, p = 0.0252; OR 1.994, CI [1.080–3.681]), more intracardiac defibrillators (0% vs 3.9%, p = 0.0302), more patients with previous cardiac surgery (34.4% vs 45.4%, p = 0.0131; OR 1.585, CI [1.100–2.282]), and more late prosthetic valve IE (13.2% vs 24.8%, p = 0.0011; OR 2.175, CI [1.352–3.497]). There was less rheumatic valvular disease (40.6% vs 23.2%, $p < 0.0001$; OR 0.443, CI [0.300–0.654]) and more congenital heart disease (7.8% vs 18.1%, p = 0.0009; OR 2.610, CI [1.461–4.465]). Regarding the etiologic agent, a higher proportion of coagulase-negative staphylococci (CoNS) was observed (6.8% vs 13.5%, p = 0.0160; OR 2.128, CI [1.138–3.980]).

Conclusion: In the 2015–2023 period, the IE profile was more strongly associated with healthcare-associated and nosocomial IE, as well as IE related to prostheses and devices; the higher proportion of CoNS is likely related to this fact. The lower proportion of rheumatic valvular disease follows a global trend, as does the higher proportion of congenital heart disease, which may be explained by improved survival of these patients into adulthood and better follow-up with screening for complications.

Keywords: Endocarditis, Epidemiological Transition, Hospital Infection, Community-Acquired Infections.

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TREATMENT OF VASCULAR PROSTHESIS INFECTIONS WITH CEFTAZIDIME-AVIBACTAM AFTER FAILURE OF INITIAL THERAPY WITH POLYMYXIN B AND TIGECYCLINE: REPORT OF TWO CASES

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