PrEP use may lead to changes in sexual behaviors, such as reduced condom use, which could favor the spread of other sexually transmitted infections (STIs).

Objective: To examine, using statistical methods, the relationship between PrEP dissemination and acquired syphilis incidence, using data extracted from the Notifiable Diseases Information System (SINAN) and from the Department of HIV/AIDS, Tuberculosis, Viral Hepatitis and STIs (DATHI), covering 2010 to 2023.

Methodology: Time series of acquired syphilis notifications and the number of PrEP users were analyzed across the country's macroregions. Statistical analyses included linear regressions to identify trends (Excel) and correlation tests according to data distribution assessed by the Shapiro–Wilk test, using the JASP analysis tool.

Results: The results showed an increase confirmed by upward linear regression trends in both the number of PrEP users and syphilis incidence for each Brazilian region. Only the Northeast macroregion had a non-normal distribution; therefore, Spearman's correlation test was applied. For regions with normally distributed data, Pearson's correlation test was used. All historical series were statistically significant ($p < 0.001$) with high correlation coefficients: South ($r = 0.779$), Southeast ($r = 0.840$), Central-West ($r = 0.851$), Northeast ($\rho = 0.879$), and North ($r = 0.898$). According to the Ramsay scale, all correlations were strong.

Conclusion: The statistical analyses indicated a strong correlation between the growth of PrEP use and the increase in syphilis cases in Brazil. Nevertheless, a direct cause-and-effect relationship cannot be established. Factors such as user profiles, behavioral changes, and more frequent testing may explain the findings. The study suggests the need for further research to clarify this potential causal relationship.

Keywords: Epidemiology, Infection, Syphilis, PrEP, Correlation.

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ANALYSIS OF THE IMPACT OF THE COVID-19 PANDEMIC ON THE EPIDEMIOLOGICAL PROFILE OF ACINETOBACTER SPP INFECTIONS IN PATIENTS HOSPITALIZED IN INTENSIVE CARE UNITS OF A TERTIARY HOSPITAL IN RECIFE, PE

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Introduction/Objectives: Health care–associated infections are considered the most recurrent adverse effect in many hospitals worldwide, especially in ICUs. Infections caused by Acinetobacter spp (ACINSPE), in particular, have high clinical relevance due to their extensive antimicrobial resistance capacity, ease of spread in the hospital environment, biofilm formation, and limited therapeutic options, representing a global public health threat. This study analyzed the influence of the COVID-19 pandemic on the profile of ACINSPE infections in adult ICU patients at a tertiary hospital in Recife, PE, between 2018 and 2022.

Methods: A retrospective, descriptive study analyzing medical records and cultures collected from adult ICU patients (2018–2022) with ACINSPE infections.

Results: A total of 732 patients were included. Of the 378 hospitalized in the pre-pandemic period, 39.1% died. During the COVID-19 pandemic period, 354 patients were evaluated, of whom 54.2% died and 32.3% had COVID-19 infection during hospitalization. Regarding antibiotics, the most susceptible were colistin and polymyxin B, while the most resistant were meropenem and imipenem.

Conclusion: Current studies show a higher risk of ACINSPE infections in patients with COVID-19. The increase in infections during the pandemic was associated with prolonged hospitalization, invasive and noninvasive mechanical ventilation, and immunosuppression. Treatment is a public health challenge given the difficulty of managing infection with a fully effective antimicrobial. The COVID-19 pandemic strongly influenced the outcomes of patients affected by ACINSPE. Infection prevention and surveillance measures carried out by infection control committees remain the best tools to improve the clinical course of ICU patients.

Keywords: Hospital Infection, Acinetobacter spp, Adult ICU, Sepsis, Multidrug-Resistant Microorganisms.

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CLINICAL-EPIDEMIOLOGICAL PROFILE OF INVASIVE STAPHYLOCOCCUS AUREUS INFECTIONS IN HOSPITALIZED PEDIATRIC PATIENTS

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Introduction: Invasive Staphylococcus aureus (SA) infections are an important cause of morbidity and mortality in hospitalized children. Prompt, appropriate diagnosis and

treatment are essential. Therefore, the hospital established a set of measures (a bundle) to improve disease management and reduce mortality and complications. The study aimed to describe the clinical-epidemiological profile of invasive SA infections in pediatric patients hospitalized at a public university hospital and to assess adherence to the institutional bundle.

Methods: A retrospective study based on chart review of patients aged 0 to 17 years and 11 months with invasive SA infection diagnosed between January 2020 and December 2023. Community and nosocomial cases were included, with isolation in blood cultures or sterile materials and defined infectious focus such as bacteremia, sepsis, deep abscesses, or musculoskeletal infections. The institutional bundle included: follow-up blood cultures after 48 hours of antibiotics, source control, endocarditis evaluation, de-escalation to oxacillin, vancomycin dose adjustment based on serum levels, and treatment duration according to protocol.

Results: Fifty-five patients were included, with a median age of 5 years and length of stay of 30 days. Oxacillin-resistant SA infections occurred in 43.6% of cases. Overall mortality was 5.5%, occurring exclusively among patients with MSSA, suggesting association with severe comorbidities ($p < 0.01$). Adherence to the institutional management bundle was 82%. Mean antimicrobial use was 17 days, with vancomycin as the most frequently used agent. In 68.3% of cases, empiric antibiotics were appropriate, and vancomycin dose adjustments occurred in 73.3% of patients. Forty percent of total hospitalization time occurred in intensive care units. Switching to oral antibiotics enabling discharge occurred in six patients (10.9%).

Conclusion: The institutional experience reinforces the need to optimize diagnosis and therapy of S. aureus infections through standardized protocols and a structured care pathway, even for oxacillin-susceptible microorganisms. The data highlight the importance of antimicrobial stewardship, early risk stratification, and continuous monitoring of clinical outcomes related to infections.

Keywords: Invasive Infections, Staphylococcus Aureus, Pediatrics, Epidemiological Profile, Clinical Profile.

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PROFILE ANALYSIS OF PATIENTS HOSPITALIZED WITH POLIOMYELITIS SEQUELAE AND DEATHS: BRAZIL, 2015–2024

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Introduction/Objectives: Poliomyelitis is a contagious viral infectious disease caused by poliovirus; it can be asymptomatic, and in more severe cases may cause muscle paralysis. It has been eradicated in Brazil since 1994 thanks to vaccination coverage. However, many people still live with infection sequelae, which negatively impact quality of life. This study aims to analyze and compare the demographic profile of patients hospitalized due to poliomyelitis sequelae and the number of deaths across Brazilian regions between 2015 and 2024.

Methodology: This was an ecological, descriptive, observational study using secondary data from the SUS Hospital Information System (SIH/SUS) linked to DATASUS/Tabnet. The analysis included hospitalizations for poliomyelitis sequelae and deaths from 2015 to 2024. Demographic variables were also evaluated.

Results: Over the period, there were 3,200 hospitalizations due to poliomyelitis sequelae in Brazil, with the Southeast region having the highest number of cases (55%), followed by Northeast (24.8%), South (10.9%), Central-West (8.8%), and North (0.40%). In all regions, males had more hospitalizations, accounting for 58.9% of cases. Nationally, the most affected age group was 50–59 years (21.2%), followed by 40–49 years (19%). However, in the Northeast and North regions, the pattern was reversed, with the latter contributing 19.26% and 38.46% of cases, respectively. The South region had a distinct pattern, with the highest number of cases in the 60–69 age group (26%). The 50–59 age group predominated in the Southeast (24.4%) and Central-West (22%). Regarding deaths, 95 were recorded across the years, and the most affected was the White population with 42 deaths (44.2%), with more cases in the Southeast (57%) and South (40.4%). The mixed-race (parda) population had the second highest number of deaths (38), with higher prevalence in the Central-West (42%) and Northeast (31.5%).

Conclusion: Although the disease has been eradicated in the country, it still impacts the lives of people living with its sequelae who require greater care. The most affected regions are the Southeast and Northeast, and the mixed-race male population aged 50–59 years is the most impacted. However, there is variation in the distribution of hospitalizations by age depending on the region.

Keywords: Poliomyelitis, Mortality, Epidemiology, Hospital Information System.

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EPIDEMIOLOGICAL ANALYSIS OF CENTRAL LINE–ASSOCIATED BLOODSTREAM INFECTIONS IN A PRIVATE HOSPITAL IN RECIFE

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