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OVERVIEW OF BRAZILIAN HOSPITALS ON THE IMPLEMENTATION OF ANTIMICROBIAL STEWARDSHIP PROGRAMS

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Introduction/Objective: Microbial resistance represents a growing threat to public health, intensified by the use of antimicrobials. Adherence to antimicrobial management programs is still limited in many Brazilian hospitals. The objective was to compare hospitals that implemented such programs with those that have not yet adopted this strategy.

Methods: A cross-sectional, retrospective, and multicenter study was conducted in Brazilian hospitals with adult intensive care units, included by non-probabilistic and convenience sampling. Data collection was carried out through a self-administered electronic questionnaire composed of 94 items (2024–2025). Institutional characteristics and compliance with the six essential components of antimicrobial management programs were evaluated. The units were grouped according to hospital profile and categorized into four levels of implementation.

Results: A total of 1,453 hospitals from all federative units participated, of which 766 (52.7%) reported having the antimicrobial management program implemented. The hospital infection control committee was present in 99.8% and 97.8% of hospitals with and without the program, respectively. Regarding laboratory/microbiological capacity, the frequency of outsourced laboratories did not vary, remaining around 30.0%. Most programs were implemented from 2020 onwards, with higher frequency in 2024 (28.5%). Among the difficulties reported for program execution were high staff turnover, disorganization of processes, and low team engagement. In hospitals without the program, the main obstacles mentioned were the absence of qualified professionals, limited institutional support, and insufficient resources. Despite this, 100% of the institutions stated that they develop at least one action aimed at the use of antimicrobials.

Conclusion: Hospitals with an antimicrobial management program implemented showed greater maturity in clinical governance. On the other hand, hospitals without the program showed operational and structural limitations that weaken the overall implementation of measures. The findings reinforce the need for coordinated national strategies and institutional technical support to expand adherence and strengthen the capacity of Brazilian health services in addressing microbial resistance and all related impacts.

Keywords: Antimicrobial Management, Antimicrobials, Resistance, Intensive Care Unit, Brazil.

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URBAN PARKS AS RESISTOMES: A CHALLENGE FOR THE ONE HEALTH PARADIGM

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Introduction: Urban parks can be considered critical environments for investigating antimicrobial resistance, as they can act as resistomes. These conditions can directly contribute to the proliferation and dissemination of resistant bacteria and resistance genes, causing significant impacts on One Health. Therefore, the objective of this study was to investigate the potential of two urban parks in the metropolitan region of Curitiba, Paraná, as possible resistome environments.

Methods: Water samples were collected from lagoons in two locations: 1) Parque das Águas (Pinhais - PR) and 2) Parque de São José dos Pinhais (PR). Sampling was performed at three points in each park, with 2 km between them. Water was collected in sterile tubes. In the laboratory, 200 μL of water was plated on selective ESBL medium to detect bacteria resistant to beta-lactams. Quantification of antimicrobials belonging to the tetracycline and beta-lactam classes was performed using the TwinSensor test. After colony growth on the ESBL medium, the isolated bacteria were plated on Mueller-Hinton medium to evaluate susceptibility to ciprofloxacin (CIP), tetracycline (TET), amoxicillin + clavulanate (AMC), azithromycin (AZI), and penicillin (PEN).

Results: Beta-lactam–resistant strains were identified at all points in both parks. In Parque das Águas, strains of *Pseudomonas* spp. and *Escherichia coli* resistant to PEN and AMC and *Klebsiella pneumoniae* resistant to AMC and PEN were detected. In Parque de São José dos Pinhais, in addition to *Pseudomonas* spp. and *E. coli* resistant to PEN and AMC, strains of *Proteus* spp. resistant to PEN, AMC, and AZI and *K. pneumoniae* resistant to PEN were also found. The concentrations of antimicrobials detected included tetracycline (80 μg/L), oxytetracycline (50 μg/L), amoxicillin (2 μg/L), and penicillin (3 μg/L). These results indicate that both parks act as resistomes, possibly influenced by adjacent water bodies