responsible for cleaning, and ICU. In mixed-effects multivariate analysis, including a random intercept for bed type (standard or under special precautions) and collection unit, beds with cleaning effectiveness below 80% were independently and statistically significantly associated with a 29% increase in the odds of developing HAIs.

Conclusion: Adequate environmental hygiene is a determining factor in preventing HAIs, especially in ICUs. Even small inconsistencies in the protocol can have clinical repercussions for patients.

Keywords: Environmental Hygiene, Environmental Contamination, Intensive Care Units.

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EVALUATION OF KNOWLEDGE AND PERCEPTIONS ABOUT HAND HYGIENE AMONG PATIENTS AND COMPANIONS IN A MEDIUM-SIZED HOSPITAL

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Introduction/Objectives: Hand hygiene is essential in preventing healthcare-associated infections (HAIs). Patient and family involvement is an important strategy to improve hand hygiene adherence within the hospital environment and ensure patient safety. This study aimed to evaluate the level of knowledge and perceptions regarding hand hygiene among patients and companions in a medium-sized hospital.

Methods: This is a cross-sectional study conducted through questionnaires with yes/no and multiple-choice questions. Patients and companions from a medium-sized hospital were included between March and April 2025. Statistical analysis of yes/no responses was performed using binary multiple logistic regression, and multiple-choice responses were analyzed using multinomial multiple logistic regression, G-test for contingency tables, and residual analysis.

Results: A total of 90 participants were included, of whom 30 (34%) were patients and 58 (65.9%) companions. The median age was 46 years (IQR 33–58), with a predominance of females (n = 56, 62.9%). Seventy-six (84.4%) individuals had previously been hospitalized, and 28 (31.1%) had a history of HAIs. All participants reported considering hand hygiene important in healthcare, and 88 (97.7%) considered hygiene before glove placement important. Approximately 87% reported observing whether healthcare professionals perform hand hygiene, but only 28 (31.4%) felt confident asking the professional to perform hand hygiene if it had not been done. Most participants (n = 50, 56.1%) reported not feeling comfortable asking the healthcare professional to perform hand hygiene. In multivariate analysis, age was the main variable associated with not feeling comfortable asking professionals to perform hand hygiene (OR 1.05, 95% CI 1.01–1.08, p = 0.0014).

Conclusion: Although most patients and companions recognize the importance of hand hygiene in preventing HAIs, many still feel uncomfortable requesting healthcare professionals to perform the procedure when necessary. These findings reinforce the need for educational and institutional strategies that encourage patient empowerment and promote a more participatory safety culture in the hospital environment.

Keywords: Hand Hygiene, Patients, Companions.

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EVALUATION OF THE SUSCEPTIBILITY PROFILE AND PREVALENCE OF CARBAPENEMASES IN GRAM-NEGATIVE BACILLI RECOVERED FROM BLOOD CULTURES OF PATIENTS TREATED AT A TERTIARY HOSPITAL IN SOUTHERN BRAZIL

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Introduction/Objectives: Gram-negative bacilli resistant to carbapenems (GNB-CR) are of critical priority, according to the WHO, for research and development of new antibiotics. Most of the new β-lactams with β-lactamase inhibitors are not effective for the treatment of infections caused by NDM-producing GNB-CR, which have emerged in different countries, including Brazil. Polymyxin B (POLB), despite its undeniable toxicity, still remains a therapeutic option, but some bacteria are intrinsically resistant, imposing additional/insurmountable therapeutic difficulties. Our objective was to evaluate the distribution of carbapenemases and susceptibility to ceftazidime-avibactam (CZA) and POLB among GNB resistant (R) or intermediate (I – susceptible, increased exposure) to meropenem (MEM).

Methods: A retrospective study was conducted with bacteria recovered from blood cultures of patients from a tertiary hospital in southern Brazil (11/2024-05/2025). They were identified by MALDI-TOF; susceptibility to MEM and CZA was

assessed by disk diffusion (BrCAST). The MIC of POLB was determined by broth microdilution (BrCAST). The presence of carbapenemase was evaluated by NG-Test® CARBA-5 (NDM, IMP, VIM, OXA-48, KPC) and/or by HRM-qPCR (blaKPC, blaGES, blaNDM-1, blaIMP, blaVIM and blaOXA-48-like).

Results: During the study, 514 GNB R or I to MEM were recovered, with 13.2% (68/514) from blood cultures, mostly K. pneumoniae (45.6%, 31/68), P. aeruginosa (17.6%) and A. baumannii (10.3%). E. coli (8.8%), Enterobacter sp. (5.9%), S. marcescens (4.4%), K. oxytoca (2.9%), M. morganii (2.9%) and P. mosselii (1.5%) were also recovered, ensuring diversity. Among Enterobacterales (n = 48), 10 were MEM I and 38 (79.2%) R. All non-fermenters (n = 20) were MEM R. Susceptibility to CZA was assessed for all isolates, except A. baumannii and P. mosselii, with 55% (33/60) R. Of these, 56.5% were K. pneumoniae (n = 13) and P. aeruginosa (n = 10), all NDM producers, except 1 S. marcescens blaKPC. Among CZA R isolates, 24.2% (8/33) were also resistant to POLB, including 1 S. marcescens and 2 M. morganii, intrinsically resistant.

Conclusion: Treating severe infections caused by GNB-CR is challenging, especially considering the spread of NDM-producing isolates. Therefore, microbiological surveillance programs, infection control and rational use of antibiotics should be strengthened, in addition to continued investment in therapeutic and diagnostic strategies.

Keywords: Carbapenemases, Gram-Negative Bacilli, Resistance.

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SEMIQUANTITATIVE EVALUATION OF CONCURRENT CLEANING IN AN INTENSIVE CARE UNIT USING FLUORESCENCE: A DESCRIPTIVE STUDY IN A TERTIARY HOSPITAL

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Introduction: Healthcare-associated infections represent a persistent challenge in hospital settings, especially in intensive care units (ICUs), where patients are more susceptible to pathogens. Concurrent cleaning — performed with the patient present — is an essential infection control measure, but its effectiveness can be compromised by technical failures and low adherence to protocols.

Objective: To evaluate, using a fluorescent marker, the effectiveness of concurrent cleaning performed in ICU beds.

Methods: This is an observational, cross-sectional, descriptive, and semiquantitative study, developed in the ICUs of a tertiary hospital. Sixty occupied beds were evaluated (43 standard, 11 isolation, and 6 under contact precautions). Specific surfaces were marked with a 20% fluorescein-based suspension and inspected with ultraviolet light after cleaning. Points were classified according to the responsibility of the nursing staff or the cleaning team. High-touch points and areas difficult to clean were selected. “Not removed” was considered both visibly present marker and partially removed marker. Cleaning effectiveness rates between different bed types and responsible teams were analyzed statistically using the Clopper-Pearson method, followed by mixed-effects binomial regression.

Results: In standard beds, nursing showed 50.0% effectiveness in removing marked points (100/200; 95% CI: 42.9–57.1) and the cleaning team, 41.1% (97/236; 95% CI: 34.8–47.7), p = 0.067. In isolation beds, nursing had 46.2% (30/65; 95% CI: 33.7–59.0) and cleaning 40.5% (32/79; 95% CI: 29.6–52.1), with no significant difference (p = 0.505). In beds under contact precautions, lower overall effectiveness in marker removal was observed: 21.0% for nursing (8/38; 95% CI: 9.6–37.3) and 39.3% for cleaning (11/28; 95% CI: 21.5–59.4), p = 0.168.

Conclusion: Concurrent cleaning showed unsatisfactory effectiveness, especially in beds under contact precautions. Although statistical significance was not reached, a trend toward better nursing performance in standard beds was observed. The data reinforce the need for continuous training of teams, strengthening oversight, and adopting objective methods, such as fluorescence and statistical analysis with exact intervals, to qualify surveillance of hospital cleaning.

Keywords: Intensive Care Units, Quality of Healthcare Assistance, Infection Control.

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BACTEREMIA DUE TO MYCOLICIBACTERIUM MUCOGENICUM

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Male patient, 43 years old, with hypertensive nephrosclerosis, on hemodialysis since October 2021, via a central venous catheter (CVC). Five months before the current episode, the patient was hospitalized for candidemia, and the tunneled catheter was replaced with a temporary Quinton-type catheter. Fifteen days before the current hospitalization, he presented fever during a hemodialysis session, receiving antimicrobials for five days during sessions. On the day of hospital admission, he had a new febrile episode, malaise, and hypotension during hemodialysis. Given the suspicion of catheter-related infection, the CVC was removed and meropenem and daptomycin were started, with partial clinical improvement, but with persistently elevated laboratory