Diego Cassola Pronunciato, Felipe Alberto Lei,
Diogo Boldim Ferreira,
Eduardo Alexandrino Medeiros

Serviço de Prevenção e Controle de Infecção Hospitalar, Hospital São Paulo, Hospital Universitário, Universidade Federal de São Paulo (UNIFESP), São Paulo, SP, Brazil

Introduction: Reducing healthcare-associated infections (HAIs) is a challenge in Intensive Care Units (ICUs), where multidrug-resistant bacteria (MDR) are more prevalent. These microorganisms, by forming biofilms, can survive on surfaces for weeks to months. Proper and frequent environmental cleaning of surfaces and equipment near the patient is recommended to control microbial load; however, adherence to cleaning protocols is low. Possible causes include workload overload, lack of appreciation and knowledge regarding the protocol, as well as inadequate supplies and materials for proper execution.

Objective: To evaluate the impact of a multimodal intervention on nursing staff adherence to the concurrent cleaning protocol in an ICU.

Methods: A quasi-experimental study conducted in an Adult ICU of a Tertiary University Hospital in the metropolitan region of São Paulo. The study was carried out in three periods: pre-intervention (08/01/23–10/31/23), multimodal intervention (11/01/23–04/31/24), and post-intervention (05/01/24–10/31/24). During the first period, professionals maintained their usual cleaning routine. During the intervention, training sessions were conducted, supplies were provided for cleaning practices (one disinfectant solution per bed [quaternary ammonium/biguanide] and disposable multi-use wipes), and feedback on cleaning assessments was shared with staff participation. In the post-intervention period, the implemented measures were maintained. Cleaning assessment used a fluorescent marker applied to 10 pre-established high-touch points and evaluated with an ultraviolet light flashlight. The practice was considered "compliant" when all marked points showed no fluorescence under UV light or demonstrated substantial reduction of the fluorescent marker.

Results: A total of 250 concurrent cleaning assessments were performed. The average adherence by study period was, respectively: 3.1%, 11%, and 25%. Average adherence by work shift across study periods was: morning (0%; 6.5%; 24%), afternoon (7.15%; 11.5%; 34.5%), and night (0%; 15.4%; 16%).

Conclusion: Monitoring cleaning using fluorescent markers, combined with a multimodal educational program, contributed to increased adherence to the environmental cleaning protocol of high-touch surfaces by the nursing staff.

Keywords: Intensive Care Unit, Cleaning and Disinfection, HAIs, Nursing.

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758

IMPLEMENTATION OF A BUNDLE OF MEASURES TO PREVENT THE DISSEMINATION OF RESISTANT MICROORGANISMS IN TWO BRAZILIAN PUBLIC HOSPITALS

Viviane Maria de Carvalho Hessel Dias [a,*],
Ana Cristina Gales [b], Eduardo A. Medeiros [b],
Karina Machado Peron [c],
Magda Machado de Miranda Costa [d],
Mara Rúbia Santos Gonçalves [d],
Luciana Silva da Cruz de Oliveira [d],
Cinthya Ramires Ferraz [e],
Vivian de Pinho Utsch Lima Berlini [f],
Linda Stéphany Bezerra dos Santos [g],
Julival Fagundes Ribeiro [g],
Maria Leticia Barbosa Braga [h],
Aline Baldo Ferreira Bergamini [h]

[a] *Hospital Nossa Senhora das Graças, Brazil*
[b] *Universidade Federal de São Paulo (UNIFESP), São Paulo, SP, Brazil*
[c] *Hospital das Clínicas da Faculdade de Medicina da Universidade de São Paulo (HC-FMUSP), São Paulo, SP, Brazil*
[d] *Agência Nacional de Vigilância Sanitária (ANVISA), Brazil*
[e] *Coordenação Estadual de Prevenção e Controle de IRAS (CECIRAS) - Distrito Federal, Brazil*
[f] *Coordenação Estadual de Prevenção e Controle de IRAS (CECIRAS) - Minas Gerais, Brazil*
[g] *Hospital de Base do Distrito Federal (HBDF), Brasília, DF, Brazil*
[h] *Hospital das Clínicas da Universidade Federal de Minas Gerais (HC-UFMG), Belo Horizonte, MG, Brazil*

Introduction: Antimicrobial resistance is a public health problem with global impact.

Objective: To implement a bundle of measures for monitoring and preventing the dissemination of multidrug-resistant bacteria in two Brazilian public hospitals and to monitor outcomes during the pre-intervention (Jun/23–Feb/24) and post-intervention (Mar/24–Nov/24) periods.

Methods: Hospital A included an Intensive Care Unit (ICU) with 20 beds and a hematology unit (20 beds). Hospital B included an Emergency ICU (10 beds) and a clinical ward (39 beds). The bundle included surveillance of carbapenem-resistant *Klebsiella pneumoniae* (CR-KP) and carbapenem-resistant *Acinetobacter baumannii* (CR-AB) through admission and weekly rectal swabs; monitoring of hand hygiene adherence; contact precautions; environmental cleaning and disinfection; technical visits by specialists; an educational program via a web platform; and biweekly monitoring of indicators. All data were recorded in specific RedCap forms.

Results: A total of 3,130 patients were included, with 4,021 care records. Admission rectal swabs were collected in 70% (2,805) of all records, with positivity rates of 2.6% for CR-AB, 9.6% for CR-KP, and 2.2% for simultaneous CR-KP and CR-AB. The incidence density of CR-KP and CR-AB was 8.7 and 3.7 per 1,000 patient-days in the pre-intervention period, and 12.98 and 3.65 per 1,000 patient-days in the post-intervention period, respectively. Between periods, hand hygiene adherence improved from 50% (3,324/6,661) to 58% (4,900/8,485), as did compliance with surface cleaning and disinfection from 52.5% (1,889/3,483) to 64.7% (2,420/3,742). Regarding contact precautions, improvements were observed in stethoscope disinfection between patients (37.6% [71/189] to 81.2% [211/260]), appropriate use of personal protective equipment (45.8% [447/977] to 65.1% [545/837]), and glove change between contaminated and clean sites (35% [82/234] to 65.1% [545/837]).

Discussion: There was improvement in antimicrobial resistance surveillance and gradual adherence to the prevention bundle throughout the study. However, a reduction in the incidence of new cases was not observed, likely due to unmeasured limitations such as patient-to-staff ratio, colonization pressure, irregular supply of preventive materials, and gaps in professional training.

Keywords: Antimicrobial Resistance, Carbapenems, HAIs, *Klebsiella pneumoniae*, *Acinetobacter baumannii*.

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759

IMPORTANCE OF MICROBIOLOGICAL SURVEILLANCE IN IDENTIFYING COLONIZATION BY MULTIDRUG-RESISTANT BACTERIA IN HOSPITALIZED ONCO-HEMATOLOGICAL PATIENTS AND HEMATOPOIETIC STEM CELL TRANSPLANT RECIPIENTS

Leonardo Barbosa Rodrigues *,
Jara Libia Costa Louredo,
Gabriela Euzebio dos Santos,
Maria Eduarda Dantas Querino,
Priscila Costa Pimentel Germano,
Barbara Caterine Pegoraro,
Juliana de Lima Teodoro, Cristiane Schmitt,
Odeli Nicole Encinas Sejas, Icaro Boszczowski

Hospital Nove de Julho, Rede Américas, São Paulo, SP, Brazil

Introduction/Objective: Onco-hematological and transplant patients are at high risk of infection by multidrug-resistant bacteria, with high mortality. Colonization by carbapenem-resistant Enterobacterales is a relevant risk factor, especially during neutropenia. Microbiological surveillance helps guide empiric antimicrobial therapy and enables early implementation of precaution measures. This study aimed to evaluate the importance of admission and point-prevalence surveillance cultures in detecting colonization by multidrug-resistant bacteria in hospitalized onco-hematological patients and hematopoietic stem cell transplant (HSCT) recipients.

Methods: Retrospective study conducted between 01/01/2022 and 12/31/2024 in a tertiary hospital, including all patients admitted to the onco-hematology and HSCT units. Rectal swabs (or perianal swabs in cases of neutropenia) were collected at admission and weekly after 72 hours of hospitalization if the initial swab was negative. Samples were plated on specific media for detection of vancomycin-resistant Enterococcus (VRE), carbapenem-resistant Enterobacterales, and non-fermenting Gram-negative bacilli. Data were extracted from the SCIH electronic database. Colonization prevalence was calculated, the clinical-demographic profile of colonized patients was described, and the incidence of healthcare-associated infection (HAI) and 30-day and in-hospital mortality were assessed.

Results: A total of 4,571 samples from 681 patients were included; median age 51 years (2–92), 53.7% male. There were 2,757 (60.3%) admission collections and 1,814 (39.6%) point-prevalence collections. Admission detection: 45 microorganisms (1.6%), with *Klebsiella pneumoniae* (68.9%), *E. coli* (15.6%), and other enterobacteria (6.7%). Point-prevalence collections: 51 microorganisms (2.8%), with *K. pneumoniae* (66.7%), *P. aeruginosa* (7.8%), and *Enterococcus*spp. (5.9%). Among positives, 51.1% (admission) and 72.5% (point-prevalence) were HSCT. HAI occurred in 14 (14.6%) colonized patients. Six patients died within 30 days of colonization, five (83.3%) from point-prevalence collections.

Conclusion: Point-prevalence collections showed higher positivity and association with HAI than admission collections. Weekly screening enables early identification of colonization and is valuable for preventing transmission and supporting therapeutic decision-making.

Keywords: Microbiological Monitoring, Multidrug-Resistant Bacteria, Onco-Hematological and Transplant Patients.

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760

CUMULATIVE INCIDENCE AND FACTORS ASSOCIATED WITH SURGICAL SITE INFECTIONS IN A HOSPITAL COHORT (2011–2025)

Gabriela Nagem de Aragão *,
Lafaiete Barboza da Cruz,
Nayane Beatriz Machado Silva,
Carlos Magno Castelo Branco Fortaleza,
Gabriel Berg de Almeida

Hospital das Clínicas, Faculdade de Medicina de Botucatu (FMB), Universidade Estadual Paulista (Unesp), Botucatu, SP, Brazil

Introduction/Objective: Surgical site infections (SSIs) are a relevant complication, with potential negative impacts on patient recovery and hospital costs. Their occurrence may be