use, and curriculum review in nursing courses to improve clinical practice and patient safety.

Keywords: Drug Resistance, Nurse, Infectology.

https://doi.org/10.1016/j.bjid.2026.105433

804

ANTIMICROBIAL RESISTANCE AND FREQUENCY OF PANDEMIC LINEAGES OF ESCHERICHIA COLI ISOLATED FROM BLOODSTREAM INFECTION

Fernanda Baptista de Oliveira Luiz [a,*],
Alessandra Fiuza Hoelz Álvares [a],
Adriana Lucia Pires Ferreira [b],
Luís Guilherme de Araújo Longo [a],
Beatriz Meurer Moreira [a],
Karis Maria De Pinho Rodrigues [c,d],
Karla Rodrigues Miranda [a]

[a] *Instituto de Microbiologia Paulo de Goes, Universidade Federal do Rio de Janeiro (UFRJ), Rio de Janeiro, RJ, Brazil*
[b] *Hospital Universitário Clementino Fraga Filho (HUCFF), Universidade Federal do Rio de Janeiro (UFRJ), Rio de Janeiro, RJ, Brazil*
[c] *Faculdade de Medicina, Universidade Federal do Rio de Janeiro (UFRJ), Rio de Janeiro, RJ, Brazil*
[d] *Instituto de Educação Médica (IDOMED), Universidade Estácio de Sá, Brazil*

Introduction/Objectives: Escherichia coli is the main Gram-negative pathogen associated with bloodstream infection (BSI). Pandemic lineages present different antimicrobial resistance profiles, extended-spectrum beta-lactamase (ESBL) production, virulence factors, and association with community-acquired or healthcare-associated infections (HAIs). Among these, ST131, ST1193, ST69, ST73, and ST95 stand out, responsible for approximately 50% of human infections. The objectives of this study were to determine the frequency of pandemic lineages, evaluate antimicrobial susceptibility, ESBL production, and the origin of infections—community or hospital.

Methods: A total of 376 E. coli samples isolated from patients with BSI treated at a university hospital in Rio de Janeiro between 2014 and 2023 were obtained. ST detection was performed by multiplex PCR. Susceptibility testing to 18 antimicrobials was performed by disk diffusion and double-disk approximation for ESBL identification. Infections diagnosed after 48 hours of hospitalization were classified as HAIs.

Results: Of the 376 isolates, 180 (48%) belonged to pandemic lineages distributed throughout the study period: ST69 (29%), ST131 (27%), ST73 (19%), ST95 (16%), and ST1193 (9%). ST131 and ST1193 were mostly associated with HAIs (52% and 62.5%, respectively). ST69, ST73, and ST95 predominated in community infections (57%, 56%, and 62%). ST131 showed the highest resistance rates, including ampicillin (88%), trimethoprim-sulfamethoxazole (67%), ciprofloxacin (63%), cefazolin (50%), and cefotaxime (38%). ST1193 was 100% resistant to ciprofloxacin, followed by ampicillin (75%), trimethoprim-sulfamethoxazole (38%), and cefotaxime (13%). Among ST69 isolates, resistance rates were observed to ampicillin (57%), trimethoprim-sulfamethoxazole (51%), cefazolin (26%), and cefotaxime (17%). ST73 and ST95 had the lowest resistance rates compared to the others. ESBL production was more frequent in ST131 isolates (38%), followed by ST69 (17%) and ST1193 (6%).

Conclusion: The five lineages were continuously isolated throughout the analyzed period, indicating their persistence among strains circulating in the population, with high antimicrobial resistance rates, including ESBL production. These findings reinforce the importance of continuous surveillance of these lineages in hospital settings.

Keywords: Escherichia coli, Bloodstream Infection, Antimicrobial Resistance, Pandemic Lineages.

https://doi.org/10.1016/j.bjid.2026.105434

805

RESULTS OF MONITORING TERMINAL CLEANING AND DISINFECTION THROUGH THREE DISTINCT METHODOLOGIES IN A PRIVATE INSTITUTION IN CURITIBA

Viviane Maria Carvalho Hessel Dias [*],
Haline Pasinotto dos Santos,
Brenda Salgueiro Guimarães,
Laura Quadrado Betes Monteiro,
Ester Damaris de Espindola,
Gabriele Castro Schleuner, Andre Hoffmann,
Lucineia Mattos

Hospital São Marcelino Champagnat, Curitiba, PR, Brazil

Introduction: Periodic validation of terminal cleaning and disinfection methods contributes to reducing microbial load on surfaces and preventing cross-transmission of microorganisms.

Objective: To analyze results of terminal disinfection monitoring in a 186-bed private hospital in Curitiba-PR between May/2024 and May/2025.

Methods: Terminal disinfection monitoring is adopted in the institution as part of the hospital infection control program and includes the most frequently touched surfaces, mainly in ICUs. Three methodologies are used: (a) surface culture collection using a swab soaked in saline, rubbed on a demarcated surface equivalent to an A4 sheet of paper; acceptable reference value includes negative or positive with skin contaminant microorganism; (b) surface ATP (adenosine triphosphate) measurement by bioluminescence, with an internally standardized reference value of <30 relative light units (RLU); (c) application of invisible fluorescent spray under natural light, followed by inspection with ultraviolet light, with acceptable result being absence of marking after