

MICROBIOLOGICAL PROFILE AND ANTIMICROBIAL RESISTANCE ANALYSIS OF BACTERIOLOGICAL STUDIES AT BATUMI REPUBLICAN CLINICAL HOSPITAL

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Background: Environmental and equipment bacteriological surveillance is a core infection prevention and control (IPC) tool, particularly against the backdrop of rising global antimicrobial resistance (AMR).

Objective: We describe the results of environmental, equipment, and sterile-material bacteriological surveillance conducted for Batumi Republican Clinical Hospital by the Adjara Division Zonal Diagnostic Laboratory (2024–2026) and discuss them in the context of recent Georgia-based AMR literature.

Methods: We retrospectively analyzed 137 unique laboratory records collected over three surveillance phases (February–March 2024; August–December 2025; January–March 2026), compiled from the institution's official laboratory reports. No antimicrobial susceptibility testing (antibiogram) was performed on these records — identification only.

Results: Of 137 samples, 132 (96.4%) showed no bacterial growth; 5 samples (3.6%) yielded *Klebsiella pneumoniae* (n=3), *Pseudomonas aeruginosa* (n=1), and *Klebsiella planticola* (n=1), all in the last quarter of 2025.

Discussion: As our dataset contains no susceptibility data, antimicrobial resistance is discussed with reference to published Georgian studies (Mgeladze et al., 2026; 2025) and the WHO Bacterial Priority Pathogens List (2024), which document high resistance rates for *K. pneumoniae* and *P. aeruginosa* in Georgian hospitals.

Conclusion: Our institution's environmental surveillance data show a generally favorable microbiological picture, but the sporadic detection of priority pathogens, together with the reviewed literature, supports incorporating antimicrobial susceptibility testing into future surveillance protocols.