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Editorial Letter

Antimicrobial Resistance in Iraq: Causes and Trends

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Dear Editor,

The Rising Tide of Superbugs

A comprehensive nationwide analysis of 238,973 clinical specimens reveals that Iraq has reached critical thresholds of antimicrobial resistance (AMR) [1]. Key pathogens are rapidly outstripping the efficacy of standard treatments; for instance, carbapenem resistance in Acinetobacter baumannii surged from 66% in 2020 to 80% by 2023, while resistance to third-generation cephalosporins reached an alarming 88.5% to 92% for A. baumannii and 88% for Escherichia coli [1]. Methicillin-resistant Staphylococcus aureus (MRSA) resistance stood at 74% in 2023 [1]. Even more alarming is the rapid decline of last-line reserve antibiotics, with resistance to colistin leaping from 23.8% to 44% and tigecycline more than doubling from 10.4% to 23.5% in 2023 [1]. These staggering figures indicate that commonly used empirical therapies are losing their clinical utility, leaving healthcare providers with dangerously narrow therapeutic options [1].

Prescribing in the Dark

The primary catalyst behind this accelerating crisis is the pervasive misuse of antibiotics across Iraq's healthcare landscape [1,2]. Studies indicate that only 1.2% to 9% of prescriptions are based on important bacterial culture and sensitivity tests [2]. This means that doctors in public hospitals often prescribe antibiotics without any real reason. Meanwhile, in the private sector, community pharmacies routinely dispense potent antibiotics over the counter without prescriptions [1, 2]. This unchecked availability fuels rampant self-medication, with surveys indicating that up to 90% of the general public in major cities have used antibiotics without professional medical oversight [2].

The Contaminated Ecosystem

This biological threat is not confined within hospital walls; it has contaminated the broader Iraqi environment, animal populations, and food supply, exemplifying a classic "One Health" crisis [2]. Antibiotic residues and multidrug-resistant bacteria have been detected in local soil, major rivers, and drinking water treatment plants [2]. Furthermore, agricultural and veterinary practices heavily contribute to the resistance pool, with drug residues frequently identified in raw retail meat and similar resistance patterns mapped between humans and domesticated animals [2]. This environmental recycling of active drugs and resistant genes ensures that superbugs continuously circulate through water, food, and communities [1,2].

Securing the Last Line of Defense

While Iraq has successfully expanded its national AMR surveillance network to 106 active sites, capturing data is only the first step [1]. To halt the progression of extensively drug-resistant (XDR) pathogens—such as XDR Acinetobacter spp., which surged to 66% by 2023—the Ministry of Health must aggressively enforce existing prescribing regulations and implement robust antimicrobial stewardship programs across both public and private sectors [1,2]. This requires introducing electronic tracking systems in pharmacies, incorporating dedicated AMR training into university medical curricula, and promoting public awareness campaigns [2]. Ultimately, safeguarding Iraq's remaining reserve antibiotics requires a collaborative, multisectoral effort that bridges human medicine, veterinary science, and environmental protection [2].

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REFERENCES

1. Alhilfi R, Al-Jumaili AA, Abdul Razzaq AlJoori B, Abdul Mahdi R, Shakir DA, Al-Khafaji F. Four-year analysis of antimicrobial resistance patterns in Iraq. *East Mediterr Health J.* 2026;32(5):261-269. doi: 10.26719/2026.32.5.261.
2. Al-Jumaili AA, Ahmed KK. A review of antibiotic misuse and bacterial resistance in Iraq. *East Mediterr Health J.* 2024;30(10):663-670. doi: 10.26719/2024.30.10.663.