

EDITORIAL

ANTIBIOTIC RESISTANCE IN BANGLADESH: A PUBLIC HEALTH CRISIS

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With antibiotic resistance creating serious hazards due to its multifaceted issues with both individual health and the general population, Bangladesh faces particular difficulties in tackling this crisis as a developing nation. With several essential medications already exhibiting 79% to 97% resistance to common illnesses, antibiotic resistance (ABR) is a serious public health concern in Bangladesh.¹ According to WHO research, the efficacy of a number of commonly used antibiotics in Bangladesh is quickly decreasing. For example, third-generation cephalosporins show over 88% resistance, and cefotaxime shows almost 80% resistance in bloodstream infections caused by *E. coli*. Bangladesh has the 77th highest age-standardized mortality rate linked to AMR in 2021, and ABR was directly responsible for almost 1.27 million deaths worldwide in 2019.² Longer hospital stays, more treatment failures, and higher healthcare expenses are all consequences of the crisis. According to a 2025 study, 41% of patients in large hospital critical care units (ICUs) were resistant to every antibiotic tested, indicating a collapse of treatment options for severe cases.³ This worrying trend, which is caused by the overuse and abuse of antibiotics in both agricultural and human healthcare, puts the nation in danger of returning to a “pre-antibiotic era” where common diseases could be lethal.⁴ Inadequate public awareness, incomplete antibiotic dosages, and the inappropriate use and prescription of antibiotics in both healthcare and agricultural settings are major causes of the development in antibiotic resistance. Considering laws like the “Animal Feed Act” and guidelines for “red-labeling” antibiotics, enforcement is inadequate because regulatory agencies like the Directorate General of Drug Administration (DGDA)

lack resources, logistics, and qualified staff. Hospital-acquired illnesses (HAIs) brought on by resistant organisms are a result of overcrowding, inadequate hospital hygiene, and a lack of skilled medical personnel.⁵ It is essential to implement systematic programs in hospitals to direct medical personnel in the administration of evidence-based antibiotics.⁶ These programs have been initiated by certain hospitals, with encouraging outcomes in terms of decreasing irrational use. Standardized national surveillance systems are required to keep an eye on resistance trends.⁷ It is imperative that rules governing the sale of antibiotics be strictly regulated and enforced, including prohibiting over-the-counter sales. To increase public and healthcare providers’ knowledge and behaviors, mass media campaigns, community efforts, and the incorporation of AMR awareness into medical and general education curriculum are all being pursued. Collaboration among the human health, animal health (veterinary), and environmental sectors is required to address the issue completely, as indicated in the country’s National Action Plan (NAP).⁸ Therefore, in order to stop further worsening of public health and protect future generations, antibiotic resistance in Bangladesh needs immediate attention and concerted efforts from all sectors of society.

Keywords: Antibiotic Resistance. Public Health Crisis

References:

1. World Health Organization. Establishing Red Label of Antibiotics for Curbing Antimicrobial Resistance in Bangladesh. WHO Bangladesh; 7 Mar 2023. Available from: <https://www.who.int/bangladesh/news/detail/07-03-2023-establishing-red-label-of-antibiotics-for-curbingantimicrobial-resistance-in-bangladesh>.

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2. Iftekhar Ahmed, Md. Boduzzaman Rabbi, Sakina Sultana, Antibiotic resistance in Bangladesh: A systematic review, International Journal of Infectious Diseases, Volume 80, 2019, Pages 54-61, ISSN 1201-9712, <https://doi.org/10.1016/j.ijid.2018.12.017>.
3. The Daily Star. Some critical antibiotics now show 79-97% resistance — WHO warns. 15 Oct 2025 (news summary of WHO findings).
4. Mutheeb G, Rehman MT, Shahwan M, Aatif M. Origin of Antibiotics and Antibiotic Resistance, and Their Impacts on Drug Development: A Narrative Review. *Pharmaceuticals (Basel)*. 2023 Nov 15;16(11):1615. doi: 10.3390/ph16111615. PMID: 38004480; PMCID: PMC10675245.
5. A. Akinyele A, Aminu K and N. Okeke I. Knowledge, Attitudes, and Perceptions Surrounding Antibiotic Use: Exploring Social Determinants of Antibiotic Misuse in Peri-Urban Nigeria [version 1]. *VeriXiv* 2025, **2**:424 (<https://doi.org/10.12688/verixiv.2548.1>)
6. Khadse SN, Ugemuge S, Singh C. Impact of Antimicrobial Stewardship on Reducing Antimicrobial Resistance. *Cureus*. 2023 Dec 4;15(12):e49935. doi: 10.7759/cureus.49935. PMID: 38179391; PMCID: PMC10765068.
7. Patra M, Gupta AK, Kumar D, Kumar B. Antimicrobial Resistance: A Rising Global Threat to Public Health. *Infect Drug Resist*. 2025 Oct 23;18:5419-5437. doi: 10.2147/IDR.S530557. PMID: 41158783; PMCID: PMC12558087.
8. Llor C, Benkō R, Bjerrum L. Global restriction of the over-the-counter sale of antimicrobials: does it make sense? *Front Public Health*. 2024 Jul 3;12:1412644. doi: 10.3389/fpubh.2024.1412644. PMID: 39022420; PMCID: PMC11251895.