

ANTIBIOTIC RESISTANCE: BANGLADESH PERSPECTIVE, DOCTORS' ROLE TO PLAY

Khan A.¹, Ahmed R.²

1. Prof. Dr. Atiquzzaman Khan, Professor & Head, Dept. of Conservative Dentistry & Endodontics, University Dental College & Hospital.

2. Prof. Dr. Rubaba Ahmed, Professor, Dept. of Science of Dental Materials, University Dental College & Hospital.

Antibiotic resistance is a growing global crisis, and Bangladesh is not immune to its consequences. With a rapidly increasing population, crowded urban centers, and limited healthcare resources, the misuse and overuse of antibiotics have become common in the country, leading to a serious threat to public health. In this context, the role of doctors becomes pivotal in combating this issue effectively.

The Alarming Rise of Antibiotic Resistance in Bangladesh

Antibiotic resistance, the phenomenon where bacteria evolve to resist the effects of medication that once killed them, is particularly worrying in Bangladesh. According to a study published in the *International Journal of Infectious Diseases* (2018), over 80% of common infections in urban areas have shown resistance to first-line antibiotics like amoxicillin and ciprofloxacin. This resistance makes treating common illnesses like urinary tract infections, pneumonia, and tuberculosis increasingly challenging. The *World Health Organization (WHO)* has also warned that if this trend continues, the country could face a public health crisis where simple infections become deadly.

Several factors contribute to this alarming rise in antibiotic resistance. In Bangladesh, antibiotics are often sold over-the-counter without prescriptions. People frequently self-medicate, leading to incomplete treatment courses and misuse of antibiotics. Additionally, the livestock and poultry industries heavily rely on antibiotics for growth promotion and disease prevention, adding to the resistance pool in the environment.

Doctors' Role in Combating Antibiotic Resistance

The medical community, especially doctors, has a crucial role in curbing this trend. The first step lies in ensuring proper diagnosis and prescription practices. Studies, including one by *Chowdhury et al.* published in the *Bangladesh Journal of Pharmacology* (2021), have shown that irrational prescription practices are a significant contributor to antibiotic resistance. Many doctors, due to patient pressure or diagnostic uncertainty, prescribe antibiotics for viral infections where they are ineffective. Strengthening diagnostic facilities to distinguish between bacterial and viral infections is essential for informed prescribing.

Doctors should also emphasize completing antibiotic courses, even when symptoms subside. Often, patients discontinue antibiotics prematurely, allowing surviving bacteria to mutate and become resistant. By educating patients on the importance of completing the full course, doctors can help reduce the likelihood of resistance.

Challenges Faced by Healthcare Providers in Bangladesh

While doctors can play a critical role, they face multiple challenges. In rural areas, healthcare access is limited, and doctors may have to rely on empirical treatment due to the lack of diagnostic facilities. A survey conducted by *Rahman et al.* in 2022 highlighted that nearly 60% of rural health centers in Bangladesh lack basic laboratory facilities, leading to a higher dependence on broad-spectrum antibiotics.

Moreover, patient behavior is another hurdle. In a culturally diverse society like Bangladesh, traditional medicine and home remedies often take precedence over medical advice. Educating patients on the dangers of self-medication and the proper use of antibiotics remains a challenge. Doctors must adopt culturally sensitive communication strategies to encourage adherence to medical guidelines.

The Role of Education and Awareness

Public awareness campaigns are essential to combat antibiotic resistance effectively. Doctors can lead these campaigns by participating in community outreach programs, collaborating with local health authorities, and using media platforms to spread awareness. The *Bangladesh Society of Microbiologists* has launched several campaigns to educate both medical professionals and the public on the rational use of antibiotics. However, these efforts need to be scaled up significantly.

Medical education also needs to include a stronger focus on antimicrobial stewardship. Training future doctors to recognize the signs of antibiotic resistance, understand the local resistance patterns, and adopt best practices for prescribing antibiotics can make a long-term difference. Continuous professional development for practicing doctors on updated guidelines for antibiotic use is equally crucial.

Policy Measures and International Collaboration

To address antibiotic resistance, Bangladesh must adopt a multi-faceted approach involving policy changes, international collaboration, and local action. The *Ministry of Health and Family Welfare* in Bangladesh has already launched a National Action Plan to combat antimicrobial resistance, following the *WHO's Global Action Plan*. This includes monitoring antibiotic use in healthcare facilities, promoting research on local resistance patterns, and improving regulatory oversight on the sale of antibiotics.

Doctors can advocate for stricter policies regarding over-the-counter sales of antibiotics and push for better enforcement of existing laws. Additionally, collaboration with international health bodies, such as the *Centers for Disease Control and Prevention (CDC)* and the *World Health Organization (WHO)*, can provide access to global expertise and resources.

Conclusion

The rising threat of antibiotic resistance in Bangladesh requires immediate and sustained action. Doctors, as frontline healthcare providers, have a unique position to influence positive change. By adhering to rational prescription practices, educating patients, and advocating for stronger policies, they can play a key role in mitigating the crisis. However, a comprehensive strategy involving the public, government, and international partners is essential to ensure a healthier future for all. The stakes are high, but with a collective effort, the tide of antibiotic resistance can be turned.

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Address of Correspondence

Prof. Dr. Atiquzzaman Khan

Professor & Head, Dept. of Conservative Dentistry & Endodontics

Editor in Chief, Journal of Dentistry and Allied Science

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E-mail: dratiquzzamankhan@yahoo.com