Editorial

Antimicrobial Resistance: Are We Ready to Combat?

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We are currently in the golden age of antibiotics, as many communicable diseases can still be treated with common antibiotics. However, this window of effectiveness is gradually narrowing. The rise and spread of drug-resistant pathogens now pose a significant threat to our ability to treat even common infections, as well as to perform life-saving procedures such as cancer chemotherapy, cesarean sections, hip replacements, organ transplants, and other surgeries. Antimicrobial resistance (AMR) is a global issue that affects countries across all income levels, as its spread transcends national borders. Key factors contributing to AMR include limited access to clean water, sanitation, and hygiene (WASH) for both people and animals, inadequate infection prevention and control measures in homes, healthcare settings, and farms, poor availability of affordable and quality vaccines, diagnostics, and medicines, lack of awareness, and insufficient enforcement of relevant laws. Low-resource settings and vulnerable populations are particularly at risk, facing both the drivers and consequences of AMR.[1]

Antimicrobial Resistance (AMR) occurs when bacteria, viruses, fungi, and parasites become resistant to antimicrobial agents. As a result, antibiotics and other treatments lose their effectiveness, making infections harder or even impossible to treat. This increases the risk of disease spread, severe illness, and death. The World AMR Awareness Week (WAAW) is an annual global campaign aimed at raising awareness about AMR and promoting best practices among One Health stakeholders to curb the rise and spread of drug-resistant infections. WAAW is observed from November 18-24 each year. The theme for World AMR Awareness Week 2024 is "Educate. Advocate. Act now." This theme was selected based on an online survey that gathered nearly 200 responses from stakeholders across the human, animal, plant, and environmental health sectors worldwide. AMR represents an urgent global health and socioeconomic challenge, with significant consequences for human and animal health, food production, and the environment. Drug-resistant pathogens pose a threat to all people, everywhere. However, much remains to be done to raise awareness among the public and relevant stakeholders. This year's theme encourages the global community to educate others about AMR, advocate for strong commitments, and take concrete actions to combat AMR. Events like the 2024 United Nations General Assembly High-Level Meeting on AMR and the Fourth Global High-Level Ministerial Conference on AMR present crucial opportunities for political and financial commitments, as well as greater accountability in tackling AMR. Stronger political leadership, advocacy, and accountability at all levels are essential, and the time to act is now.[2]

Antibiotic resistance is a critical concern in Bangladesh, driven by several factors. Those are: (i) Misuse and overuse of antibiotics: Over-the-counter availability of antibiotics often leads to self-medication without proper prescriptions. (ii) Substandard healthcare practices: The inadequacy of healthcare infrastructure exacerbates the issue. (iii) Insufficient surveillance: Surveillance systems are underdeveloped, with resistance data being reported from only six out of the 64 districts.

The consequences of antibiotic resistance in Bangladesh are alarming: (a) High mortality rates: Antimicrobial resistance (AMR) was linked to 26,200 deaths in 2019. (b) Reduced antibiotic efficacy: The effectiveness of commonly used antibiotics has declined by up to 82% over the past five years. (c) Severe multi-drug resistance: According to the National Antimicrobial Susceptibility Report, multi-drug resistance peaked at 82% in June 2023.

To address AMR, Bangladesh has developed a National Strategic Plan and National Action Plan for 2021–2026. Key components of this plan include: (1) Comprehensive surveillance across human and animal health sectors. (2) Advocacy, communication, and social mobilization to raise awareness. (3) Implementation of Infection Prevention and Control (IPC) measures alongside Antimicrobial Stewardship (AMS) programs an (4) Strengthening microbiology laboratories to enhance diagnostic capabilities.[3]

Physicians play a key role in combating antimicrobial resistance (AMR) by: Prescribing appropriately (Only prescribe antibiotics when needed, and for the correct duration and dose), Educating patients (Advise patients on the risks of antimicrobial therapy and how to safely dispose of unused drugs), Improving infection prevention (Practice good hand hygiene, disinfect equipment, and implement infection prevention and control measures), Using rapid diagnostics (Use point-of-care diagnostics to support clinical decisions), Using vaccines (Use vaccines to protect patients from infections), Improving sanitation (Improve sanitation in hospitals to prevent healthcare-associated infections), Improving waste management (Improve waste management to remove pharmaceuticals and microbes), Staying up to date (Stay current on disease prevention tools, prescribing guidelines, and professional standards).[4] Antimicrobial stewardship is a coordinated program that encourages the appropriate use of antimicrobials. The World Health Organization (WHO) guides countries to develop and implement antimicrobial stewardship programs.

Addressing antimicrobial resistance (AMR) in Bangladesh demands a coordinated effort from policymakers, healthcare providers, and the general public. Key strategies include effectively enforcing the National Action Plan on AMR, fostering responsible antibiotic use, and raising awareness among the population. Furthermore, strengthening infection prevention practices, upgrading diagnostic capabilities, and supporting research into alternative treatments are vital. Ongoing collaboration and persistent actions among all stakeholders are neces

sary to combat AMR and secure a healthier future for the country.

References

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