

## Anti-Microbial Resistance (AMR): Updates in Bangladesh Perspectives

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Antimicrobial resistance (AMR) is a burning issue of Bangladesh. Antimicrobial therapy is essential for treating and preventing bacterial infections. AMR is the ability of microorganisms to resist the effects of medication that once could successfully treat the microbe.<sup>1</sup>

There are four main mechanisms by which microorganisms exhibit resistance to antimicrobials are: Drug inactivation or modification, Alteration of target- or binding site, Alteration of metabolic pathway, Reduced drug accumulation: by decreasing drug permeability or increasing active efflux (pumping out) of the drugs across the cell surface.<sup>2</sup> AMR is regarded as one of the most important global health problem because it reduces the effectiveness of antimicrobial treatment. Microbes resistant to multiple antimicrobials are called multidrug resistant (MDR). Those considered extensively drug resistant (XDR) or totally drug resistant (TDR) are sometimes called "superbugs".<sup>3</sup> Antibiotic resistance is accelerated by the misuse and overuse of antibiotics, as well as poor infection prevention and control. This lead to increased morbidity, mortality, disease burden and health care expenditure. Preventive measures include stopping irrational use of antibiotics. Culture and antibiotic sensitivity testing is essential before prescribing a antimicrobials.

Narrow-spectrum antibiotics are preferred over broad-spectrum antibiotics. Strictly maintain the appropriate dose and duration of drugs. Health care providers can minimize spread of resistant infections by use of proper sanitation and hygiene, including handwashing and disinfecting between patients, and should encourage the same of the patient, visitors, and family members.<sup>4</sup> Steps can be taken at all levels of society to reduce the impact and limit the spread of resistance. To prevent and control the spread of antibiotic resistance, individuals can only use antibiotics when prescribed by a certified health professional. To prevent and control the spread of antibiotic resistance, policy makers can improve surveillance of antibiotic-resistant infections. Strengthen policies, programmes, and implementation of infection prevention and control measures.

### References

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