

ANTI MICROBIAL RESISTANCE: RISKS FOR UPCOMING GENERATION

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Antimicrobial resistance (AMR) is one of the top global public health and development threats. It is estimated that bacterial AMR was directly responsible for 1.27 million global deaths in 2019 and contributed to 4.95 million deaths.¹

AMR is a natural process that happens over time through genetic changes in pathogens. Its emergence and spread is accelerated by human activity, mainly the misuse and overuse of antimicrobials to treat, prevent or control infections in humans, animals and plants. External and intraocular infections can lead to visual impairment which is a major public health issue. Bacteria are the most frequent pathogens affecting ocular structures and lead to blepharitis, conjunctivitis, keratitis, endophthalmitis, periorbital cellulitis and dacryocystitis.

Further carriage of antimicrobial-resistant bacteria immediately after birth is high in the newborn of the lower middle-class population of Karachi. Enough scientific evidence supports that antimicrobial resistance is one of the growing public health problems in developing countries like Pakistan. Species like Staphylococcus, Pseudomonas, streptococcus, E. coli, Acinetobacter and Enterobacter species are frequently becoming resistant to Oxacillin, Moxifloxacin and Ceftriaxone. Augmentin, Cotrimoxazole, Penicillin, Erythromycin, Cloxacillin, Tetracycline, Cotrimoxazole, Fusidic acid, and Gentamycin as a consequence of genetic mutations.^{2,3}

Contributing factors include lack of access to clean water, sanitation and hygiene (WASH) for both humans and animals; poor infection and disease prevention and control in homes, healthcare facilities and farms; poor access to quality and affordable vaccines, diagnostics and medicines; lack of awareness and knowledge; and lack of enforcement of relevant legislation. People living in low-resource settings and vulnerable populations are especially impacted by both the drivers and consequences of AMR.

CALL TO ACTION

People-centered approach to addressing antimicrobial resistance in human health. Infrastructure for proper diagnosis of the causative agent for rational prescribing.

Antimicrobial stewardship is a systematic approach to educate and support health care professionals to follow evidence-based guidelines for prescribing and administering antimicrobials. WHO developed the Aware (Access, Watch, and Reserve) classification of antibiotics. Doctors must consult the WHO Aware antibiotic book to reduce inappropriate use of antibiotics.

Global Antimicrobial Resistance and Use of Surveillance System developed by WHO and DRAP to fill knowledge gaps and inform strategies at all levels. Raising awareness regarding the intake of antibiotics on prescription and after culture sensitivity tests can also reduce the risk to the newborn baby and the mother.

References:

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