

Rising Antimicrobial Resistance in Pakistan: A call for an urgent action

Faisal Rasheed¹, Sameer Almas²

Madam, Antibiotic resistance is a growing global concern. Pakistan is a developing nation in South Asia with a high rate of antibiotic resistance, posing a serious concern on a global and regional scale.¹

In Pakistan in recent years, both extensively drug-resistant (XDR) and multi-drug-resistant.

(MDR) microorganisms have been found.² From January 2017 to June 2021, a total of 14,360.

XDR-TF cases were reported in Karachi, according to the National Institute of Health (NIH) Islamabad's Weekly Field Epidemiological Report.² Only three antimicrobials: azithromycin, carbapenems, and tigecycline (parenteral) are effective against the XDR strains.³ However, after COVID-19, the misuse of Azithromycin has increased manifold, which is worrisome. Pakistani public's lack of awareness about the harms of antibiotic self-prescription and the widespread presence of quacks in the society has posed a great threat to rational use of antimicrobials.⁴ According to a cross-sectional survey of pharmacy staff's opinion, approximately 81.5% of participants declared that dispensing non-prescribed antibiotics is a common practice in community pharmacies, and 51.1% considered themselves to be authorized to dispense these drugs.⁵

The chicken industry of Pakistan is excessively using important antimicrobials in their bird feed.⁶ According to a surveillance survey done in 2019 in Pakistan; among the antimicrobials used for therapeutic or prophylactic purposes in animals; colistin, tylosin, enrofloxacin, and doxycycline were the most frequently used drugs.⁶ This calls for an urgent action in Pakistan to prevent a public health crisis. It is a dire need of the hour to implement the National Drug Policy (NDP) of Pakistan. There should be a national action plan on how to curb this menace of the misuse of therapeutically important antimicrobials in Pakistan. Special units should be devised by Drug

¹Department of Community Medicine, Allama Iqbal Medical College, Affiliated with University of Health Sciences, Lahore, Pakistan; ²2nd Year MBBS Student, Allama Iqbal Medical College, Affiliated with University of Health Sciences, Lahore, Pakistan.

Correspondence: Faisal Rasheed. e-mail: drfaisalrasheed2@gmail.com
ORCID ID. 0000-0002-7757-4470

regulatory Authority of Pakistan (DRAP) and The Ministry of Health (MoH) to rein back those chemist stores involved in selling of prescription only antimicrobials without the advice of a medical doctor. These teams should catch quacks working in all provinces of Pakistan. Quackery should be made illegal. The sale of large flocks of antimicrobials to animal keepers and broiler industry people should be immediately stopped and the involved people should be fined and their licenses cancelled. Talks and sessions should be held in schools, colleges and public places about the correct use of antibiotics. A medical doctor's stamp with a registration number should be mentioned on each prescription of an antimicrobial.

Furthermore, all doctors should be issued stamps only by a central authority in order to prevent the illegal dispersion of fake stamps.

Disclaimer: None.

Conflict of interest: None.

Funding disclosure: None.

DOI: <https://doi.org/10.47391/JPMA.10013>

Submission completion date: 12-06-2023

Acceptance date: 20-07-2023

References

1. Bilal H, Khan MN, Rehman T, Hameed MF, Yang X. Antibiotic resistance in Pakistan: a systematic review of past decade. *BMC Infect Dis* 2021; 21: 244.
2. National Institute of Health. Weekly Field Epidemiology Report 2021. [Online] [Cited 2023 Jan 23]. Available from: URL: <https://www.nih.org.pk/wpcontent/uploads/2021/06/25-FELTP-Pakistan-Weekly-Epidemiological-Report-June-13-19-2021-.pdf>
3. Akram J, Khan AS, Khan HA, Gilani SA, Akram SJ, Ahmad FJ, et al. Extensively Drug-Resistant (XDR) Typhoid: Evolution, Prevention, and Its Management. *Biomed Res Int* 2020; 2020: 6432580.
4. Aslam A, Zin CS, Jamshed S, Rahman NSA, Ahmed SI, Pallós P, et al. Self-Medication with Antibiotics: Prevalence, Practices and Related Factors among the Pakistani Public. *Antibiotics (Basel)* 2022; 11: 795.
5. Majid Aziz M, Haider F, Rasool MF, Hashmi FK, Bahsir S, Li P, et al. Dispensing of Non-Prescribed Antibiotics from Community Pharmacies of Pakistan: A Cross-Sectional Survey of Pharmacy Staff's Opinion. *Antibiotics (Basel)* 2021; 10: 482.
6. Mohsin M, Van Boeckel TP, Saleemi MK, Umair M, Naseem MN, He C, et al. Excessive use of medically important antimicrobials in food animals in Pakistan: a five-year surveillance survey. *Glob Health Action* 2019;