**Note on Accessing the behavior and awareness of veterinary professionals towards antimicrobials use and antimicrobial resistance in Indian district**

**Abstract**

**Introduction:** Is a significant public health threat, and its mitigation is crucial for practices of healthcare professionals and understanding the awareness.

**Methods**: Evaluation of awareness and behavior of veterinarians and para-veterinarians working in the Jhunjhunu district, Rajasthan. **Closed ended question** was conducted with statistical analysis.

**Results:** 53.8% of veterinarians as compared to 25.8% para-veterinarians do not surely inform farmers about the importance of adhering to antibiotic withdrawal periods, thereby failing to raise awareness about proper antibiotic use. Moreover, para-veterinarians (46.6%) tend to engage less in evidence-based antibiotic prescription than veterinarians (81%). Furthermore, both groups exhibit a lower frequency of advice on Antimicrobial Susceptibility Testing (ABST), essential for informed prescribing decisions. Most significantly, both groups show a tendency to prefer critically important antibiotics for prescription, raising concerns about the escalating threat of AMR.

**Introduction**

1. **What is antimicrobial resistance (AMR)?**
2. **What causes microorganisms to humans and how they evolve.**
3. **Problems regarding area and other factors.**
4. **How these problems and areas have connected with each other and what will cause there.**
5. **Problems in the area. Some findings from other paper.**

**Methods**

1. **Study area and population**
2. **Survey design and sampling**
3. **Statistical analysis**

**Results**

1. **Demographic information**
2. **Awareness**
3. **Prescribing behavior**

**Discussion**

This study would help policymakers and healthcare practitioners develop and act on strategies that mitigate antimicrobial usage (AMU) and antimicrobial resistance (AMR). Our study findings found that para-veterinarians showed limited awareness of the consequences of antibiotic overuse and improper leading to AMR, whereas veterinarians demonstrated greater awareness. These results indicate that all para-veterinarians are not aware of the factors responsible for AMR.

Limited training programs for para-veterinarians contribute to this gap. Survey responses show para-veterinarians rely on colleagues and veterinarians for information, while veterinarians turn to textbooks and colleagues, consistent with previous studies. Another factor contributing to the participants’ limited awareness is the duration of teaching related to AMU.

If first-line therapy appears ineffective, antibiotic change should be made after careful assessment.

In our study, the majority of participants expressed their preference for a specific antibiotic they were comfortable with (Table 3). Notably, Cephalosporins, Tetracyclines, and Penicillins emerged as the most preferred antibiotic classes (Figures 10, 11). Among these classes, Ceftriaxone (a 3rd generation cephalosporin) and Oxytetracycline (a Tetracycline) fall within the “Watch” category group identified by WHO. In contrast, the VCIA category includes Amoxicillin, Enrofloxacin, Gentamicin, ceftriaxone, and oxytetracycline. Strikingly, these antibiotics are among the top preferences of the respondents. Findings from previous studies have also suggested that veterinarians are prescribing critically important antibiotics as their prime preferences (44, 45). Such frequent use of these critically important antibiotics may contribute to the exacerbation of AMR.

The reason behind preferring broad-spectrum antibiotics could be multifaceted but given these preferences, the situation appears alarming because, instead of prescribing these critical antibiotics in low frequency, the respondents have made them their top choices. Embracing a One Health approach is crucial to address this issue, fostering collaboration among veterinarians, environmental experts, and healthcare professionals.

This approach promotes responsible antibiotic practices, mitigates resistance development, and safeguards public health.

**Limitations**

May pose a constraint on the generalizability of the results. Nevertheless, the narrow 95% confidence interval for the responses enhances confidence in our findings.