

A multi-stakeholder approach towards operationalizing antibiotic stewardship in India's mixed health system community settings

(OASIS study)

Stakeholder consultation with veterinary sector

3 June, 2021

4:30pm - 6:00pm

Introduction

The OASIS study takes a One Health approach towards understanding antibiotic use and its drivers in human and animal health, with the ultimate goal of using the study findings to co-design an antibiotic stewardship intervention through multi-stakeholder engagement. The study consortium includes a multidisciplinary research team of five partner organizations in India and the United Kingdom.

The overall vision of this project is to a) generate a holistic understanding of the social, economic, structural and policy related drivers of antibiotic misuse and overuse in community settings, and b) develop an inclusive approach to address the key drivers; this will include achieving shifts in people's thinking and addressing policy barriers. The OASIS consortium is conducting a series of consultations with various stakeholders within the health and veterinary systems, including medical and veterinary practitioners (private and public), policymakers, pharmaceutical industry leaders, health and regulatory departments, academics and researchers, NGOs, health-workers and communities.

The high-level consultation on June 3rd, 2021 with veterinary health providers and academics was the first of our consultations.

Key questions posed to stakeholders during this consultation were:

1. How does your experience relate with our one health study findings?
2. What practical solutions are needed to optimize the usage of antibiotics amongst veterinary providers? How should these solutions be prioritized?

Participants: There were twelve participants representing the veterinary sector including practitioners and academics. Ten OASIS study team members were also present.

Agenda: The session began with a welcome address by Dr. Priya Balasubramanian, introductions and a presentation on the study findings by Dr. Meenakshi Gautham. This was followed by breakout group discussions on the key questions and recommended interventions were documented on Miro, a virtual whiteboard. The interventions proposed in the breakouts were summarized and detailed further in the final session.

Summary of the discussion

Building on and corroborating the OASIS study findings, participants further identified the following **key challenges** to improving antibiotic practices in community settings and by different levels of health providers:

- Inadequate regulations and guidelines for veterinary drug use, particularly for livestock owning households and animal feed.
- Lack of tier wise prescription guidelines and policies, including at the level of over the counter sales.
- Lack of diagnostic facilities in rural areas for sensitivity testing.
- Lack of AMR awareness across communities, informal health providers, paravets and rural health practitioners.
- Lack of availability of national level AMR surveillance and antibiotic sensitivity data

Recommendations for interventions

The following broad range of interventions were presented during the discussions

○ **Guidelines**

Formulate national level guidelines on antibiotic usage including withdrawal periods. Follow a multisectoral approach towards rational use of antibiotics and set clear cut targets.

○ **Awareness**

Engage community leaders in AMR awareness campaigns targeted at paravets and informal providers to stop the crossover usage of antibiotics.

Engaging the community through the community leaders for creating awareness about the use of antibiotics.

○ **Regulation**

Restricting antibiotic prescription to only authorized and trained individuals.

Regular prescription audits of prescriptions provided by the health providers for animal as well as human health to keep a check on antibiotics usage as well as crossover usage of human antibiotics.

Auditing of vaccine production, application and implication of biosecurity measures to control diseases.

Limit access of paravets to certain antibiotics.

Strengthening drug policy with a particular focus on over-the-counter antibiotics

○ **Prevention and alternatives to antibiotics**

Recommend changing the approach to treat animals through increasing a) usage of diagnostic tools and b) the rate of antibiotic sensitivity detection.

Promote antibiotic susceptibility testing in animals before starting treatment for any kind of disease.

Documentation and promotion of ethnoveterinary practices/alternative treatments, specifically those developed through traditional knowledge, to reduce antibiotic use.

- **Education and training**

Joint efforts by government and veterinarians to develop plans to impart knowledge to veterinary sector actors regarding existing rules and regulations.

Judicious training for vets and paravets and primary training for farmers.

Ensuring a system in place for systematic flow of information from trained personnel to farmers and livestock keepers, at both the farm level and the block level. Similarly, maintain a liaison or a database of paravets so livestock keepers and farmers can reach out for guidance on treatment.

Train farmers on performing simple diagnostic tests.

- **Funding**

Need for dedicated, committed funding to a) strengthen infrastructure for delivery of services, b) provide training on antimicrobial susceptibility testing, c) provide necessary reagents and consumables for workers, d) create awareness regarding the hazards of AMR and judicious use of antimicrobials among the farming community, e) development of new antimicrobials, and f) continued research and development to get a holistic picture of antimicrobial usage pertaining to its surveillance, epidemiology and effects on human health.

Strengthen human resources - Increase the number of a) qualified, formally trained veterinarians, and b) judiciously trained paravets, particularly among the farming community.

- **Surveillance:**

Surveillance efforts to determine the source of resistance, i.e., if it was direct or indirect transmission, and types of pathogens and factors involved.

Collaboration among the pharmaceutical industry and other partners to develop and maintain a database to assess antibiotic usage. Preemptive surveillance programs to check for road-spectrum antibiotics aggravating AMR.

Introducing QR-coded prescriptions to track and trace the amount of antibiotics being used.