



Summary brief

25th June 2021

Veterinary clinics in Ghana need guidelines and improved surveillance data on antimicrobial use.

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Reference:
**Antibiotic use in a
Municipal Veterinary
Clinic in Ghana: a
Case Study for
Improvement**

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Key Messages

- This study reviewed antimicrobial use in a municipal veterinary clinic in the Kintampo North Municipality in Ghana and found Tetracycline was predominantly used for unspecified diagnosis.
- Incomplete documentation of diagnosis and treatment meant it was difficult to monitor the appropriateness.
- There is a need for the national Antimicrobial Resistance Committee to establish national standard treatment guidelines for antimicrobial use in the veterinary service.
- National surveillance data on antimicrobial use in the veterinary service is required to monitor their use.

What is the problem and why is it important?

The use of antimicrobials in humans, animals and agriculture drives antimicrobial resistance. Global consumption estimates suggest that antimicrobial use in animals is twice that of humans but monitoring their use in veterinary services has received comparatively little attention. WHO recommend that the use of these antimicrobials in animals should be monitored to reduce the risks of antimicrobial resistance.

International guidelines of the World Organization for Animal Health recommend implementing a national surveillance system for antimicrobial consumption within veterinary services, including information on the antimicrobial class used, the total dose, and the route of administration. In this study we assessed the availability of this data in one clinic.

How did we measure it?

We analysed routinely collected data of 513 treatment records of clinic attendances over five years. The number and proportion of the types of animals treated across 2013 to 2015 and 2018 to 2019 were noted. We also examined existence of documentation on diagnosis, antimicrobial type, dose, route of administration and proportion of animals treated with antimicrobials. Records for 2016 and 2017 were missing.

Incomplete documentation of diagnosis and treatments makes it difficult to monitor antimicrobial use in veterinary care.

What did we find?

- Tetracycline was predominantly used, accounting for 99% of the antimicrobials prescribed.
- In 54% of the cases antimicrobials were administered without specifying the diagnosis hence it was not possible to assess if this use was appropriate.
- There was zero record of culture and antimicrobial sensitivity testing being performed.
- The route of antimicrobial administration and dosage were missing in 69% and 38% of records respectively.

Implications

- The lack of national standard treatment guideline for antimicrobial use in veterinary services in Ghana is a challenge to standard evaluation of antibiotic use and prescribing practices in veterinary. Urgently, the national AMR committee and the Veterinary Services Division can assist in bridging this gap.
- Tetracycline has been classified by the WHO as a critically important antimicrobial for human health. The general use of tetracycline to treat poorly defined conditions is likely to contribute to the development of antimicrobial resistance in humans and animals and this will have further implications on the fight against AMR.
- The poor documentation of diagnosis and treatments makes it difficult to adequately monitor the use of antimicrobials in the veterinary service.
- A broader baseline assessment of antimicrobial use in veterinary services in Ghana would be helpful for future monitoring.
- There is a need for the AMR Committee to introduce:
 1. Guidelines for antimicrobial use in veterinary practice
 2. A list of essential antimicrobials to be available at veterinary clinics
 3. A well-structured monitoring and surveillance system for the use of antimicrobials, including in veterinary practice.