KEY POINTS

1. Strengthening animal health systems and improving professional oversight of antimicrobial use at the national level can greatly reduce the use of antimicrobials in animals.

Guidance on appropriate and responsible antimicrobial use and better access to veterinary professionals and paraprofessionals - including those in aquatic animal health and agronomists - is needed to reduce the use of antimicrobials in animals.

Strengthening animal health systems and improving access to evidence-based treatment (e.g., clinical oversight, withdrawal periods) can assist in making informed decisions on treatments and underpin responsible antimicrobial use, ultimately leading to the reduced need for antimicrobials in animals. Strengthening animal health systems includes improving diagnostics, strengthening surveillance, quality control and access to rapid and affordable diagnostic tests for use in the field.

Ending the use of medically important antimicrobials for growth promotion is also needed to reduce the use of antimicrobials in animals.

2. Effective and robust vaccination, nutrition, infection prevention and control and biosecurity measures are key building blocks to reduce the overall need for antimicrobials in farmed terrestrial and aquatic animals.

Measures to reduce the overall use of antimicrobials include promoting and supporting disease prevention, such as vaccination programmes against major transboundary animal diseases. Vaccines have been used to control and prevent animal diseases for many years and have helped to eradicate rinderpest and limit the spread of other animal diseases such as foot and mouth disease, as well as peste des petits ruminants (PPR).
Nutrition plays a key role in good animal health, and there is scope for dramatic improvements in some settings. Improved animal nutrition, such as access to in-feed nutritional products, improved access to immunostimulants, and increased funding for animal nutrition research, can lessen the overall need for antimicrobials.

Improving biosecurity on farms and production sites and access to adequate animal health care should prioritize in safeguarding animal health and welfare. In livestock production, biosecurity measures include, but are not limited to, isolation of new animals, wildlife control, air filtration systems, cleaning and disinfection prior to access, sanitizing equipment, and managing vehicle traffic. Such improvements in biosecurity practices mean that pathogens, including bacteria, have less opportunity to spread.

Other measures to reduce antimicrobial use in animals include education, raising awareness of antimicrobial resistance, behaviour change and increased investments.

3. Existing issues and inequalities regarding national access to veterinary and laboratory services, quality, affordable and standardized antimicrobials, and alternatives to antimicrobials for animal health must be addressed.

Maintaining and improving access to quality antimicrobials and antimicrobial alternatives is challenging in many low- and middle-income countries and in countries with a small market for veterinary products. It is also challenging in countries where economic feasibility or motivation for obtaining marketing authorization is limited.

Robust national legislation is fundamental for controlled access to quality antimicrobials. Such legislation should cover all aspects of the supply chain, including manufacturing, authorization, distribution, responsible use of veterinary medicinal products, and appropriate disposal of unused and expired drugs.

Lack of legitimate access to quality antimicrobials can increase the use of illegal, substandard and falsified medicines, or the use of less effective options, leading to an increased burden of antimicrobial resistance. Lack of access to quality vaccines against animal diseases and alternatives to antimicrobials also increases the need for antimicrobials.

Inadequate, inequitable or unaffordable access to veterinary care and diagnostic testing services can lead to excessive, inappropriate and/or ineffective antimicrobial use.

4. Responsible use of antimicrobials is an integral part of veterinary medicine.

Antimicrobials are vital for treating specific infectious diseases in both terrestrial and aquatic animals, contributing to animal health and welfare, food safety and security, and the human-animal bond. As the COVID-19 pandemic has highlighted, the health of humans, animals and the environment are interlinked. A One Health approach that recognizes this link is key to reducing drug-resistant infections and ensuring that antimicrobial medicines remain effective for both humans and animals.

If antimicrobials stop working, there could be serious repercussions on the health and welfare of humans and animals, an impact on food security, loss of livelihoods and damage to national economies and international trade. It is crucial that all stakeholders work together across sectors to curb antimicrobial resistance and preserve the effectiveness of antimicrobials. By keeping animals healthy and reducing the need for antimicrobials, the risk of antimicrobial resistance emerging and spreading from animal sources can be reduced.

5. Global and national governance of the use of antimicrobial agents in animals needs to be urgently strengthened.

Effective governance of antimicrobials requires sufficient resources, proper implementation, and efficient controls on antimicrobial distribution and use. Harmonized regulation across regions and around the world strengthens the controls on use of antimicrobials.

Equitable access to quality antimicrobials globally is urgently needed. Inequalities in access mean that some countries currently have no quality antimicrobials while others need to restrict their use. To ensure a high level of animal health and welfare, availability of, and access to, regulated or quality medicines is essential.

6. Countries should collect, use and publish standardized, accurate and comparable data, and increase their participation in reporting on antimicrobial resistance and use at national, regional, and global levels.

Robust, accurate and comparable data are essential for informed decisions to curb antimicrobial resistance. Establishing data baselines is essential for measuring the effect of interventions and surveillance. An agreed set of metrics that everyone uses allows for consistency.

The animal biomass segregated by animal species must be included in comparability calculations, reporting and monitoring to better inform decisions and activities on antimicrobial resistance and use.

Reporting to global databases administered by the Quadripartite, such as ANIMUSE and InFARM, helps to inform global initiatives and harmonization of actions to fight antimicrobial resistance.

7. More investment is urgently needed to address antimicrobial use and resistance in animal health.

Investment in animal health and welfare is inadequate. Increased investments are needed from governments; global, regional, national, bilateral and multilateral financing and development institutions and banks; and private investors, to address antimicrobial resistance in animal health. Investments in innovation and research into alternatives to antimicrobials in animal management should be prioritized to reduce the overall need for antimicrobials.

These investments should also support vaccination programmes, development of new vaccines and innovative biosecurity measures.

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3 The Global Leaders Group on AMR (2022) Call to action; Reducing antimicrobial discharge from food systems, manufacturing facilities and human health systems into the environment. Available here.
8. Use of antimicrobials in animals has implications for animal health, food safety, food security, the environment, plant and human health, livelihoods, and wellbeing. A One-Health approach is critical because antimicrobial use in one sector can have consequences across sectors.

To address antimicrobial resistance in animals, countries should prioritize animal health and build, resource and sustain robust animal health systems to reduce the need for antimicrobials. Countries should promote and strengthen animal welfare legislation, its implementation and application, and respect and apply the "five freedoms" of domestic animals to reduce the impact of antimicrobial resistance on animal welfare. Countries should also establish national guidelines on biosecurity measures for different rearing and production systems for the various animal species, drawing upon the available global and regional standards. While improving legal frameworks, countries should also improve enforcement capacities to ensure appropriate regulatory control of antimicrobials in all stages of their life cycle, as well as improving disease prevention to minimize the need for antimicrobials in animal health.

It is imperative countries collect information on antimicrobial use in animals and report to the global database ANIMUSE, administered by the World Organisation for Animal Health (WOAH) on behalf of the Quadripartite. Countries should collect information on antimicrobial resistance in animals and food and report it to the InFARM database, administered by the Food and Agriculture Organization of the United Nations (FAO). This contributes to Quadripartite efforts on global integrated surveillance. Establishing baselines on antimicrobial use in animals considering the animal biomass for reliable data will allow countries to better inform decisions and measure progress.

Countries should also phase out non-veterinary medical antimicrobial use, such as growth promotion, starting with medically important antimicrobials for human and animal health.

While it is critical that countries act on a national level, a global effort is needed to prevent and mitigate the impact of antimicrobial resistance. Intergovernmental organizations should harmonize and coordinate evidence-based global guidance on antimicrobial resistance and antimicrobial use and support countries in implementing their national action plans on antimicrobial resistance, ensuring that antimicrobial resistance is addressed across One Health sectors. Intergovernmental organizations should support and prioritize research and development on innovative approaches to curb antimicrobial use across sectors to stop the spread of antimicrobial resistance. They should also strengthen the evidence base for costs and losses related to antimicrobial resistance in animals and work to better determine the burden of infectious diseases in animals that are due to antibiotic resistant bacteria.

4 The guiding principles on animal welfare, developed in 1965 and widely recognized, include the "five freedoms": Freedom from hunger, malnutrition, and thirst; freedom from fear and distress; freedom from heat stress or physical discomfort; freedom from pain, injury and disease; and freedom to express normal patterns of behaviour. Available here.

5 Non veterinary medical use of antimicrobial agents means the administration of antimicrobial agents to animals for any purpose other than to treat, control or prevent infectious disease. It includes growth promotion. Growth promotion means the administration of antimicrobial agents to animals only to increase the rate of weight gain or the efficiency of feed utilization.