

# Summary of the results of the WVA/OIE Survey on Actions to reduce the emergence and spread of antimicrobial resistance (AMR) in animals

## **INTRODUCTION**

The growing emergence of resistance to antimicrobials is a threat to humans, animals and the environment. This is an increasing global concern and many countries around the world have already taken measures to tackle the development of Antimicrobial Resistance (AMR).

In the context of promoting prudent use of antimicrobials under veterinary supervision, the World Veterinary Association (WVA) and the World Organisation for Animal Health (OIE) conducted a survey among WVA member organizations aiming to create a global repository of available guidelines for the responsible use of antimicrobials in animal health (i.e. use for treatment, control and prevention of microbial diseases). Access to such data, helps the WVA and OIE to identify best practices in different world regions, assists in identifying gaps, encourages and facilitates veterinary organizations to fill those gaps.

In total, the OIE and WVA received replies from 34 veterinary associations working on a national, regional and international levels, representing 57 countries around the world.

The WVA and OIE would like to thank to all veterinary associations that participated and provided input helping with the creation of global repository of available guidelines for the responsible use of antimicrobials in animal health.

The summary below regroups the replies in accordance to the WVA world regions to highlight key findings.

## **A. LEGAL FRAMEWORK**

**The WVA and OIE asked the WVA members the following questions:**

- Is the use of antimicrobials regulated in your country/region?
- Are antimicrobials for use in animal health freely available on the market?
- Is a veterinary prescription mandatory for the use of antimicrobials in animal health?
- If a prescription is required, who can make the prescription (veterinarian, para-veterinarian or other professional)?

**Members replies:**

1. **EUROPE** (replies received from 12 national associations plus a regional association representing 39 associations).

In Europe, the use of antimicrobials (AM) for animal health is regulated in the vast majority of countries. In most European countries, AM for animal health are not freely available on the market. There are a few exceptions where AM are freely available on the market and where there is no control on the sale of AM over the counter. In most European countries, veterinary prescription is mandatory for the use of antimicrobials in animal health with the exception of one country that authorizes fish health biologists to prescribe some AM.

## **2. ASIA and Oceania** (replies received from 5 National Veterinary Associations).

The majority of the responders informed that the use of AM is regulated in their countries. One association informed that there is a regulation only for the import of AM and not for their use. In some countries, AM are not available on the market and a veterinary prescription is mandatory. While in other countries, AM are freely available on the market and the veterinary prescription is not mandatory or strictly enforced.

## **3. AFRICA** (replies received from 8 National Veterinary Associations).

In Africa, the use of AM is regulated only in half of the countries that completed the questionnaire. In most cases, these regulations are not respected and not enforced. All countries reported that AM are freely available on the market and in half of them, AM shall be used under the veterinarians' and/or para veterinarians' prescription, but it is poorly enforced.

## **4. NORTH and LATIN AMERICA** (replies received by 5 National Veterinary Associations).

North America and Latin America have a similar situation. In all the reporting countries, the use of AM is regulated and in the majority of them, some AM are freely available on the market. In most of these countries, a veterinary prescription is mandatory. In one country, some AM are available over the counter, but the competent authorities plan to move these AMs to have a prescription status.

## **B. PRIVATE INITIATIVES**

The WVA and OIE asked the WVA members the following questions:

- Does the veterinary statutory body (order or chamber) or the veterinary association in your country provide guidelines for the responsible use of antimicrobials in animal health?
- Do veterinary schools in your country provide guidelines for responsible use of antimicrobials in animal health?
- Do other organizations, institutions or the food industry provide guidelines for responsible use of antimicrobials in animal health?
- Are there private industry guidelines on the environmental aspect of the use of antimicrobials, for example on the disposal of unused antimicrobials?

**Members replies:**

### **1. EUROPE**

In Europe, several associations working at the **European level** have a number of initiatives to tackle the development of AMR. For example, the Federation of Veterinarians of Europe (FVE, representing 38 national veterinary associations), provides its members with recommendations on reliable quality assurance for veterinary prescription, factsheets highlighting the importance of veterinary prescription and the prevention of infectious diseases to reduce the use of AM, promoting the need of controlling critically important AM, and improving research in this field. Also, the European Platform for the Responsible Use of Medicines in Animals (EPRUMA) provides policies and factsheets on good use of AM in companion and food production animals. At the **National level**, many Veterinary Statutory Bodies (VSB) and National Veterinary Associations (NVA) provide veterinarians in their countries with species-specific guidelines for prudent use of antimicrobials. **At the University level**, some veterinary faculties prepared guidelines mainly in cooperation with the authorities and other stakeholders. Few countries reported on guidelines provided by **stakeholders and industry**. At the **international level**, the Global GAP (The Worldwide Standard for Good Agricultural Practices) established guidelines for food production species for all its member countries emphasizing the importance of prevention of infectious diseases to reduce the use of antimicrobials and avoid the use of fluoroquinolones and 3<sup>o</sup>/4<sup>o</sup> generation cephalosporins.

## 2. ASIA and OCEANIA

**At the National level**, only one association provides species-specific guidelines on prudent use of AM to the profession. In the rest of the countries, VSB/NVA are planning to develop such guidelines in the future. At the **stakeholder level**, 2 associations informed about species-specific antimicrobial use guidelines produced by the industry. At the **University level**, veterinary faculties do not provide specific guidelines, but in one country, the concept of AMR and antimicrobial use (AMU) is part of the student curriculum.

## 3. AFRICA

At the **National level**, only one association has developed general technical guidelines for responsible use of AM in veterinary medicine in the country. In addition, specific veterinary groups developed more species-specific guidelines for pigs and poultry focusing also on the aspect of environmental contamination and residues. Some other African countries are planning to develop such guidelines in the future. **At the Industry level**, some associations have developed guidelines for the prudent AMU. In addition, only the Pharmacy Council of one country has published a set of rules related to good pharmacy practice that deals with the disposal of medicines. At **University level**, veterinary faculties do not provide specific guidelines, but in some countries, the veterinary curriculum includes aspects of antimicrobial stewardship.

## NORTH and LATIN AMERICA

At **National level**, North American NVA/VSBs developed detailed guidelines for each food producing animals (beef cattle, dairy cattle, poultry and swine) highlighting the importance of disease prevention by good practices management and reduction of AM using alternative therapeutic options (including detailed treatment options with the dosage information for each infection). In one country, new guideline for companion animals, will be available in December 2018, coinciding with the new national regulations. The

Latin America countries are planning to develop such guidelines in the future. At the **Industry level**, some countries informed that many stakeholders and companies have developed factsheets and guidelines on prudent use of AM in their fields. Regarding the **environmental aspect**, two countries provided examples of environmental policies related to AM use and disposal. At **University level**, veterinary faculties do not provide specific guidelines, but responsible use of AM is a part of the veterinary curriculum in most cases.

### **C. GOVERNMENTAL INITIATIVES**

**The WVA and OIE asked the WVA members the following questions:**

- Does the national government provide guidelines for responsible use of antimicrobials in animal health? If yes, for which species (Bovine, Swine, Poultry, Small Ruminants, Other)?
- Do regional or local authorities provide guidelines for responsible use of antimicrobials in animal health?

**Members replies:**

#### **1. EUROPE**

At the **National Level**, EU countries adopted and use the European Commission “Guidelines for the prudent use of antimicrobials in veterinary medicine” (2015/C 299/04) as part of their National Action Plans. Most European governments give general information on AMR in their websites and some countries provide detailed recommendations and species-specific guidelines that includes all food producing animals and also pets, horses and fish. **At regional and local authorities’ level**, there are no initiatives to develop guidelines.

#### **2. ASIA and OCEANIA**

At the **National level**, only one government provides guidelines on AMU in bovine and swine. Two other governments are preparing guidelines for the use of AM in production animals. All responders informed that **regional and local authorities** did not provide/prepare any guidelines.

#### **3. AFRICA**

Only governments of two countries have developed guidelines on AMU. In most cases, guidelines are not provided by regional and local authorities.

#### **4. NORTH and LATIN AMERICA**

At **National level**, apart from one country, the governments of the responding countries developed guidelines and factsheets on prudent AMU. At Regional and Local Authorities level, only one country informed about guidelines that were developed by the local competent authorities.

### **D. AVAILABILITY OF NATIONAL ACTION PLAN (NAP)**

**The WVA and OIE asked the WVA members the following questions:**

- Does your country already have a fully developed and approved national action plan on AMR, or is it under development? Who/which institution (s) is coordinating it?
- Is the national action plan a combined action plan for human health and animal health?
- Was / is your organization involved in the development of the national action plan on AMR?
- Was / is your organization involved in the implementation of the national action plan on AMR?
- Are the OIE standards on the responsible use of antimicrobials referenced in the national action plan? (Chapter 6.10 of the Terrestrial Animal Health Code (Responsible and prudent use of antimicrobial agents in veterinary medicine') and Chapter 6.2 of the Aquatic Animal Health Code ('Principles for responsible and prudent use of antimicrobial agents in aquatic animals)).

**Members replies:**

**1. EUROPE**

Most European countries have a NAP that follows the OIE standards and the One Health concept and approach. The objectives of the different national plans are quite similar as most of them are stressing the importance of surveillance, monitoring, improvement of research, communication, awareness and education, and the need for intersectoral and international cooperation. The few European countries that do not have a NAP, already started to develop it. Most of the European associations were involved in the development and implementation process of the NAP.

**2. ASIA and OCEANIA**

Two countries have NAPs in place. Two other countries are currently developing their NAPs. All the NAPs follow the OIE standards and the One Health concept and approach. VSB and NVA were involved in the development and implementation of the NAP.

**3. AFRICA**

Only 3 of the responders informed that their countries have a NAP and one country is currently developing a NAP. The NVA/VSB were involved in the development and the implementation of the NAP. One country NAP considers to ban the use of AM as growth promoters. The NAPs include reference to the OIE standards and were developed according the One Health concept and approach.

**4. NORTH and LATIN AMERICA**

All the responding countries inform about NAPs developed in their countries which are quite similar to the NAPs mentioned in the other continents (following OIE standards and One Health Approach). In most countries, VSB/NVA were involved in the NAP development and implantation. One country's NAP includes the elimination of antibiotics as growth promoters by 2020. In another country, the authorities are also developing the "National Framework for Action-Tackling Antimicrobial Resistance and Antimicrobial Use"

which is a common work of federal, provincial and territorial governments, academics, non-governmental organizations and industry. Subject matter experts focused on surveillance, infection prevention and control, stewardship, research and innovation.

## MAIN FINDINGS

Taking in consideration the replies received from 34 veterinary associations around the world, the main findings are:

- There is a **high level of awareness regarding antimicrobial resistance (AMR)** in most of the responding countries and the veterinary profession on both public and private levels is involved in raising awareness regarding the development of AMR.
- Despite, the high level of awareness, there are **different levels of progress and actions taken to fight the development of AMR**, mainly between low-income and high-income countries.
- The use of antimicrobials is **regulated in the majority of the responding countries** (apart from the African countries), but in many cases, the regulations are **not fully respected and enforced**.
- There are still many countries in which antimicrobials are freely available on the market but in most cases, antimicrobials can be obtained only with a veterinarian prescription. Unfortunately, in some regions, the mandatory prescription by veterinarians is poorly enforced.
- In half of the responding countries, the **NVA/VSB developed guidelines** for the prudent use of AM (and if not, they plan to do it).
- Some regional and international associations developed guidelines trying to **unify the measures** and the efforts in fighting the development of AMR in their areas.
- All over the world, **veterinary faculties** introduce aspects related to AMR and AMU to their curriculums but **do not provide specific guidelines**. In some cases, veterinary faculties collaborated with the authorities and other professionals to develop guidelines.
- Only in a few countries, other stakeholders and industries developed species-specific guidelines for the prudent use of AM.
- All over the world, there is **not much awareness or action on the environmental aspects** of the use of AM.
- In the majority of countries, **governments are concerned** about the development of AMR and developed guidelines and/or provided detailed information to the public on their websites.
- In most cases, **local and regional authorities did not develop** any guidelines for the prudent use of AM.

- Most of responding countries informed about **National Action Plan developed** in their countries to fight the development of AMR. Where NAPs are not available, the countries are developing them or plan to do so.
- Most of the available NAPs were **developed taking in consideration the One Health concept and approach** and following (or give references) to the **OIE standards**.
- In most cases, **NVA/VSB were involved in the development of the NAPs** and they are part of the implementation process. Nevertheless, there are some cases where NVA/VSB were not aware about the National Action Plan which was already published in their countries.
- Apart from the prudent use of AM, the available NAPs cover also different related aspects such as the prevention and control of diseases, the need of research and communication and improving education and awareness among the general public.

#### HOW VETERINARY ASSOCIATIONS CAN HELP TO FIGHT AGAINST THE DEVELOPMENT OF AMR

Despite the growing global concern and awareness regarding the development of antimicrobial resistance and the actions taken by many countries to tackle this issue, there is still a lot to be done at local, regional, national and global levels. The veterinary profession has the accountability and the responsibility to play a major role in the fight against the development of AMR:

- When the use of AM for animal health is not regulated in the country, veterinary associations should **advocate** for the development of such regulations.
- Where regulations are available, veterinary associations should **promote and facilitate** the understanding of these regulations to the profession and provide practical guidelines for better implementation of these regulations and **ensure that these regulations are respected and enforced by veterinarians**.
- Veterinary associations should develop **together with other professionals species-specific guidelines** for the different AMR aspects (prudent use of AM in different species, treatment options with the dosage regime information for each infection, disposal of medicines, environmental contamination and residues etc.), based on OIE standards and guidelines.
- Veterinary associations that already have guidelines in place, should assist and **help veterinary associations in neighboring countries** to develop their own guidelines and awareness campaigns. This can be facilitated by regional and international veterinary associations.
- Veterinary association should be **involved in the development and implementation of National Action Plans (NAP)** and improve communications and collaborations with all the relevant entities (governments, academia, industry, NGOs, etc.) to promote and raise awareness on AMR to the public.

- NVA/VSB should encourage local and regional associations to **develop guidelines and/or promote national guidelines to their members.**
- Veterinary associations should **produce position papers, factsheets and recommendations** and should **organize conferences/workshops** for their members promoting awareness and best practices for the prudent use of AM.

#### **NEXT STEP**

WVA and OIE will investigate further the 48 guidelines received from governments, veterinary associations, industry, stakeholders and veterinary schools to collect metadata to build the global repository of available guidelines for the responsible use of antimicrobials in animal health.