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NOTE

From: Presidency

To: Working Party of Chief Veterinary Officers

Subject: Prevention of antimicrobial resistance (AMR) within the EU and globally –
What more can we do?
- Outcome of the Presidency questionnaire

Delegations will find in the [Annex](#) a presentation on the outcome of the Presidency questionnaire on antimicrobial resistance¹.

¹ This presentation was already distributed to delegations in WK 10106/2019 REV 1.

**PREVENTION OF ANTIMICROBIAL RESISTANCE (AMR) WITHIN THE EU AND
GLOBALLY**

– WHAT MORE CAN WE DO?

Outcome of the Presidency questionnaire

SUMMARY

Combating antimicrobial resistance (AMR) is one of the key topics of the Finnish Presidency, which presented in the July CVO meeting its intention to follow up on the progress made in the Member States (MSs). In order to review the progress made in the MSs and identify new ideas for common measures to combat AMR, the Presidency submitted a questionnaire following the July Chief Veterinary Officers (CVO) meeting. The Presidency is pleased to report that 25 of the 28 MSs (89%) provided responses to the questionnaire. The excellent response rate provided a good basis for the discussions during the Finnish Presidency.

Key findings about the progress made:

- MSs have made good progress with AMR National action plans (NAPs): 23 MSs have an AMR-NAP in place and 2 MSs are in the process of drafting one. All but two of the NAPs have been or are being made in the context of One Health collaboration.
- 24 MSs shared their best practices.
- The vast majority (20/23 MSs) supported the need of a common forum at EU level for topics relating to combating AMR. However, the respondents generally considered that careful consideration needed to be given to whether existing structures, like the One-Health network or the VET-AMR working group, can be utilised in this work.
- Guidelines on prudent antimicrobial use exist in 22/25 MSs.
- MSs estimated or had data indicating that the largest volumes of antimicrobials used (AMU) are for pigs followed by poultry.

- AMR and AMU monitoring results are actively published by MSs. The monitoring of antimicrobial use in food-production animals is based in the majority (19/25) of MSs only on sales data. Nine MS (9/25) collect use data by species and two other MS collect use data by species and indication (2/25). (A few MS reported collecting data partly from sales data and partly from use data, so the summary of the replies exceeds the nb of responding countries). Of those countries that replied AMU having been monitored also in companion animals, nearly all base such monitoring on sales data.

Future measures indicated by the respondents as the most important were:

- To improve cattle health, the measures which enjoy the most support were:
 - 1) improved internal biosecurity,
 - 2) better training and controls so that existing prudent use guidelines are followed, and
 - 3) improved disease prevention by means of vaccination.
- To improve porcine health, the methods which enjoy the most support were:
 - 1) improved internal biosecurity,
 - 2) improved disease prevention by means of vaccination, and
 - 3) taking steps to reduce animal density and improve living conditions.
- To improve poultry health, the measures which enjoy the most support were:
 - 1) improved internal biosecurity,
 - 2) better training and controls so that existing prudent use guidelines are followed,
 - 3) improved disease prevention by means of vaccination, and
 - 4) new more efficacious vaccines.

Measures 3 – 4 gained equal support from the responders as the most important action.

- A majority of MSs (20/24) supported the possibility of being able to voluntarily report to EFSA the results of their national monitoring programmes on resistance in clinical non-zoonotic animal disease (food-production animals, companion animals).
- 24/25 MS considered that the EU should develop harmonised monitoring of animal pathogens isolated from food-production animals; 17/24 had the same views with regard to monitoring for companion animals.

Regarding the measures which ought to be considered for further use at EU level, the top three were:

- 1) Utilising the CAP (Common Agricultural Policy) to encourage farmers to improve or change their management systems (to reduce AMU),
- 2) Common European targets for the use of antimicrobials in different animal species, and
- 3) Common European targets in use of (Highly) Critically Important Antimicrobials, (H)CIAs, in different animal species.

AIM OF THE QUESTIONNAIRE

The key areas covered by the questionnaire were as follows:

- ensuring the design and implementation of the NAPs under the One Health approach;
- promoting good animal husbandry practices, high animal welfare standards and efficient biosecurity;
- monitoring AMR by means of harmonised methods to obtain reliable and comparable results;
- monitoring antimicrobial use (by species and indications);
- ensuring the availability on the market of old, but still effective antimicrobials;

More details concerning the background and objectives are outlined in document WK 8638/2019.

OUTCOME OF THE QUESTIONNAIRE

The questionnaire was divided into three main areas (A-C). Please note that not all the MSs provided answers to all of the questions, and therefore the total numbers of MSs may vary in the summary or in the tables for various questions. Some of the responders chose more options than was instructed in some of the questions and thus the actual numbers should be considered with some caution.

A. National action plans, best practices and the need for a forum to discuss combating AMR

A1. National action plans for AMR (AMR NAPs)

In the first set of questions (questions 3-12), the Presidency asked whether the NAP had already been made and published and whether it had been implemented within the framework of One Health collaboration. MSs were also asked to assess whether they had faced any challenges when drawing up AMR-NAPs. In cases where an AMR-NAP had not yet been drawn up, MSs were asked whether they were in the process of drafting an AMR-NAP, when the NAP would be published and whether the NAP is being drafted within the framework of One Health collaboration.

Table 1. Number of MSs which already have AMR-NAPs and those still in the process of drafting NAPs, together with information about whether the NAPs had been drafted within the framework of One Health collaboration.

	Yes	No	Drafting the first AMR-NAP
Has your country made an AMR NAP?	23	0	2*)
<u>Both for existing AMR-NAPs and those being under preparation:</u> - Was the AMR NAP made, or is it currently being drafted, within the framework of One Health collaboration?	23	2	

*) The AMR-NAPs which are currently under preparation will be finalised in 2019/2020.

The first AMR-NAPs were published in 2000-2010. Those MSs have also revised them since then. However, most AMR-NAPs were published in 2016-17, and most recently in 2019.

About 40 % MSs (9/23) considered that they had faced some challenges in terms of preparing the AMR-NAPs, while the rest of those MSs which had already made an AMR-NAP agreed that there had been no major challenges. Having enough resources was the only individual issue which received an average score of under 3 (2.7; scale 1 = strongly disagree ...5= strongly agree), indicating that a lack of human or budgetary resources had been a challenge in some MSs when setting the targets. In general, defining the targets or setting the measurable targets for the AMR-NAP was considered easy. Few MSs reported that there had been some challenges in terms of the One Health cooperation, partly due to the awareness and understanding of the AMR, keeping all the parties involved in the long term or having comparable data or data collection systems. In general, MSs considered that outside assessment had been beneficial for planning or updating the NAP and setting its objectives, e.g. giving it a visible and high-level profile.

A2. Making progress and sharing best practices in terms of combating AMR

Questions 13-14 were about making progress and sharing best practices in terms of combating AMR.

Of the most important measures implemented in the MSs within the field of veterinary medicine or food safety, the top three were the following (Figure 1):

1. Improved surveillance (AMR, antimicrobial sales or usage) (71 % when chosen as the most important, second and third important measure),
2. Optimising the use of antimicrobials (implementation of prudent use guidelines, taking samples and testing susceptibility, etc.) (68 %),
3. Strengthened national legislation concerning the use of antimicrobials (62 %).

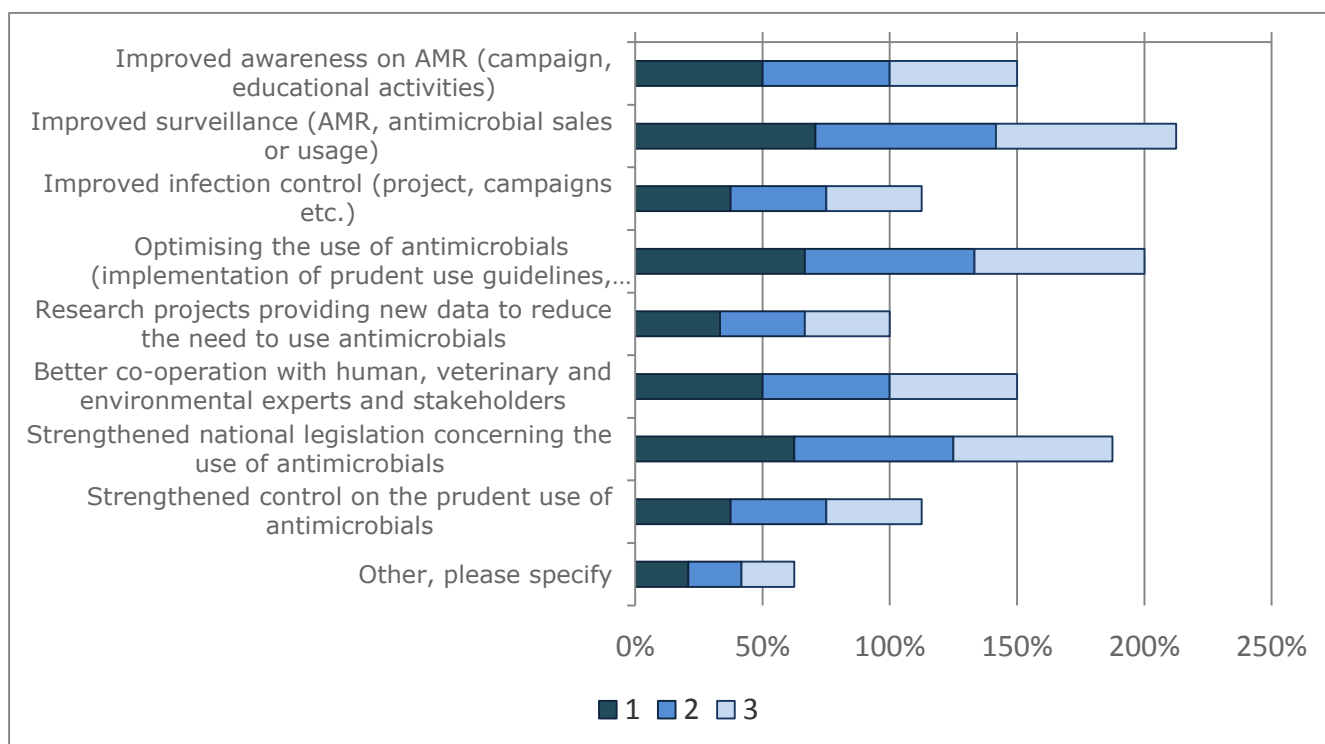


Figure 1. Three most important measures carried out in 24 MSs to combat AMR in the field of veterinary medicine or food safety. (1 = most important, 2 = the next and 3 = last of the measures chosen)

In addition to ranking the measures done, 24 MSs provided information about their most important measures with a view to combating AMR, including:

- National animal health or welfare programmes and disease-specific control programmes such as IBR, BVD, PRRS
- Prudent use guidelines developed for both veterinarians and farmers
- Monitoring of AMR and AMU improved by legislation, specific programmes and e.g. pilot projects in order to collect further information concerning use, categorised by species and diagnoses
- Central electronic systems for veterinary prescriptions established for real-time information, benchmarking veterinarians and farmers and focusing corrective actions
- Risk-ranking of veterinarians having obtained critically important antibiotics used for risk-based controls

- Testing of drinking water for antibiotic residues at farm level for control purposes
- Bringing all sectors together to solve problems
- A firm commitment by industry and the creation of sector-specific targets to better monitor and achieve a reduction in antibiotic consumption.
- Enhancement of cooperation with veterinarians, farmers and officials by means of national working groups, conferences, campaigns and other meetings and events
- Raising awareness among veterinarians, animal owners, and consumers

A3. Need for an AMR forum

In question 15, MSs were asked about the need for a common forum at EU level, similar to the EU Platform on animal welfare, for exchanging information and best practices and finding solutions to common problems, in cooperation with officials and stakeholders.

The majority (20/23; Figure 2) of MSs agreed that there is a need for a common forum at EU level for exchanging information and best practices and finding solutions to common problems, in cooperation with officials and stakeholders. However, the strengthening of the existing platforms was supported rather than the creation of new bodies. This could mean examining the possibility of enhancing discussions at technical level and also inviting stakeholders to meetings. MSs recognised the value of the existing bodies, such as One Health Network, other One Health meetings (EPRUMA, JAMRAI) and the former ECK Working group on AMR. Joint meetings with the CVOs, CMOs, the EU Commission, EFSA and ECDC were proposed as well as further cooperation with EMA. The recently established International Centre for Antimicrobial Resistance Solutions – ICARS – is also a new actor in the global agenda against AMR.

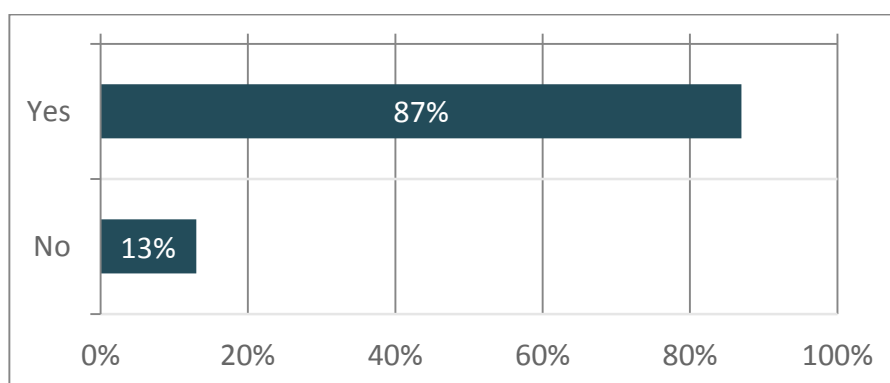


Figure 2. MSs’ opinions about the need for a common AMR forum at EU level (n = 23).

B. Promotion of good animal husbandry practices and animal welfare to prevent AMR

The questions 17-26 were about having prudent use guidelines, identifying which animal species the largest volumes of antimicrobials were being used for and identifying what major action is necessary in the MSs to improve cattle, porcine and poultry health. Finally, opinions were sought regarding which common measures could be used to reduce the need for antimicrobials in the EU (question 27).

Prudent use guidelines

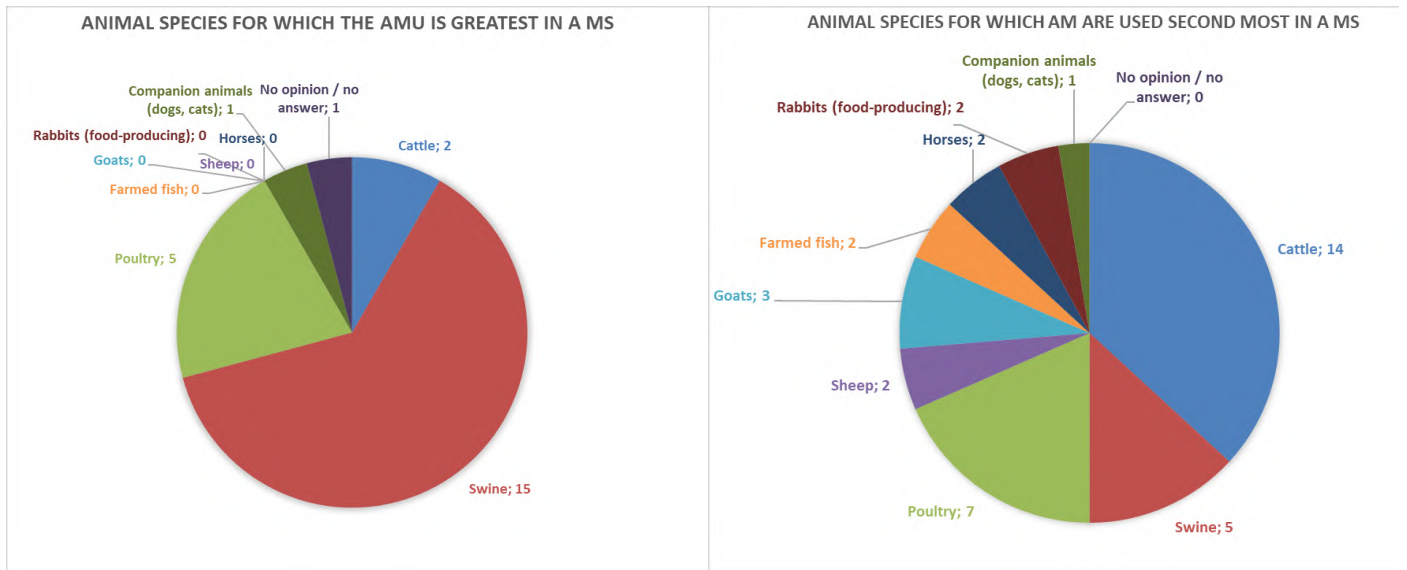
Prudent use guidelines exist in 22/25 MSs and one MS is planning to develop such guidelines. In some MSs, they cover only certain prioritised indications in some food-producing animal species, while in other MSs prudent use guidelines cover all animal species. In addition, European Commission guidelines on the prudent use of antimicrobials in food-producing animals are reported to be in use.

Regarding the drafting the guidelines, some MSs commented that it was not easy to draft the guidelines and it could be costly due to all the background data needed on AMR and AMU.

Data concerning or estimation of animal species for which the largest volumes (kg) of antimicrobials are used

The animal species for which the largest volumes (kg) of antimicrobials are used was the subject of question 19. The top three animal species identified by the MSs were as follows (Figures 3 and 4):

1. Swine (15+5/24 MSs)
2. Cattle (2+14/24 MSs)
3. Poultry (5+7/24 MSs)



Figures 3 and 4. Distribution of animal species for which the largest (left) and second largest volumes (in kg) are used. Responses from 24 MSs.

Improving the health of production animals

Questions 20 – 26 focused on actions that MSs considered necessary to improve animal health, thus reducing the need to use antimicrobials. Respondents had an opportunity to indicate which measure they considered the most important and second most important.

The actions that gained most support both on cattle, porcine and poultry farms are depicted in the Figure 5 and were as follows:

1. improving internal biosecurity
2. improving disease prevention by vaccinations
3. better training and controls so that existing prudent use guidelines are followed
4. developing new more efficacious vaccines

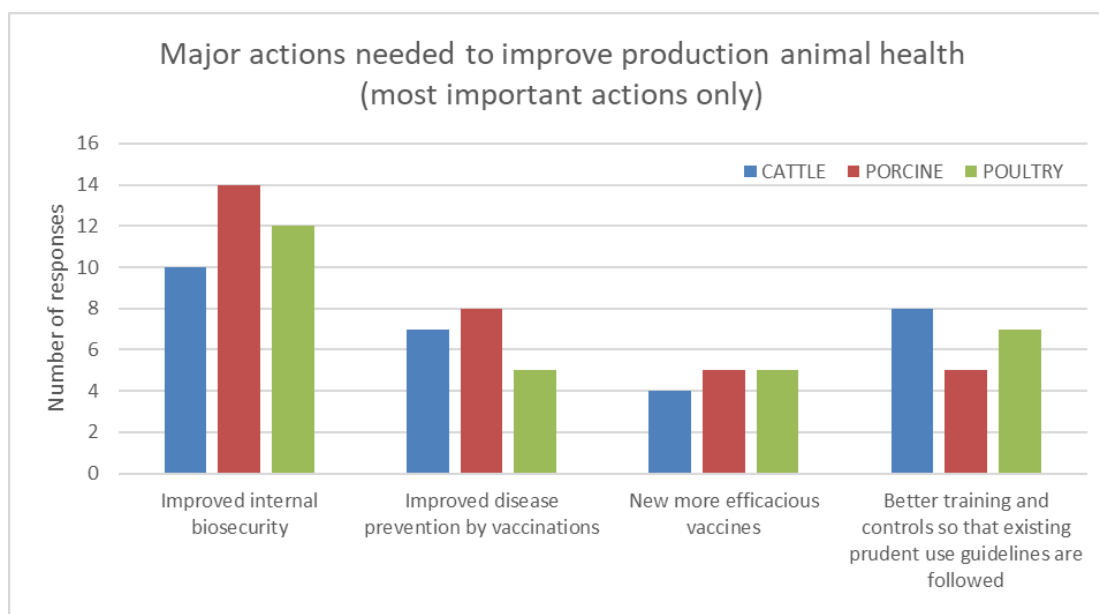


Figure 5. The most important measure needed to improve p the health of cattle, porcine and poultry. Four of the measures which were given most support by the MSs. (Question 20; n = 24).

When both the most important and second most important measures summed together - without giving more weight to the responses that were most important - in cattle, porcine and poultry were considered the actions that gained most support were

1. improving the internal biosecurity
2. improving disease prevention by vaccinations
3. better training and controls so that existing prudent use guidelines are followed
4. making measures to reduce animal density and improving living conditions
5. -6. more controlled movement of animals in order to improve external biosecurity and more advisory herd health services by specialised veterinarians should be available (these two measures gained equal support)

Measures needed to improve cattle health – focus on calf health

Additional comments were received from 13 MSs on measures necessary to improve cattle health and combat AMR. One MS considered that for them all suggested measures are equally important. Several comments highlighted the importance of keeping animals healthy by preventive measures.

Especially, improving the care of young calves is considered important in order to reduce the need to use antimicrobials. The challenge is the low economic value of calves. Several MSs considered that the most important measures are more controlled movement of animals and improvement of external biosecurity. Other suggested measures included reducing stress by improving management practices, ensuring adequate colostrum intake, not using mastitis milk/antibiotic milk for calves and adhering better to vaccination programs. Need for more efficacious vaccines was also mentioned.

Several MSs commented that the role of herd health veterinarians and herd health planning is also crucially important. Some MS considered that it is important that the food-production industry is taking responsibility by developing prudent use guidelines and doing voluntary actions such as reducing/terminating the use of 3rd and 4th generation cephalosporins or other HCAs. They also have a role in voluntary disease control programmes such as BDV control programme and improving biosecurity.

Improving awareness and providing training to farmers regarding treatment guidelines and promoting responsible antimicrobial use was mentioned by some MSs. It is also important to carry out controls to ensure the compliance to these principles and legislation.

Finally, national legislation regulating antimicrobials usage was mentioned, for instance, the prescription/use of fluoroquinolones only based on susceptibility testing. One MS highlighted the need to have secure availability of old antimicrobials on the market.

Measures needed to improve porcine health – focus on biosecurity and phasing-out zinc oxide

Additional comments were received from 13 MSs on measures necessary to improve porcine health and combat AMR. As for cattle, one MS considered that for them all suggested measures are equally important.

More than a half of respondents highlighted the importance of biosecurity, management or good animal care. Improving biosecurity is not important only in combat against AMR but due to other threats like ASF. Some MSs commented the importance of improving buildings, infrastructure or feed delivery systems. Some MSs raised concerns regarding effects of phasing-out the use of zinc oxide on piglet health without losing the effects of long-term actions done so far. Couple of MSs commented the importance of the role of herd health veterinarians and herd health planning. A need for more efficacious vaccines and adherence to vaccination programmes as well as availability of vaccines and antimicrobials were also mentioned by some MSs.

Besides raising awareness and training, legal or pig sector's voluntary restrictions to use HCIAAs (fluoroquinolones, 3rd and 4th generation cephalosporins, colistin) were considered important by some MSs.

Measures needed to improve poultry health - focus on biosecurity

Eleven respondents provided additional comments on measures necessary to improve poultry health and combat AMR. Again, improving biosecurity and improving animal care, management and conditions were seen important measures by over a half of respondents. Individual critical issues were such as the supply of grandparent and parent stock, testing freedom of diseases from imported birds and reducing animal density. One MS considered all measures equally important. Another highlighted the importance to promote and apply best practice at all steps of production; these are supported by the legislation that requires bird welfare parameters, including cumulative daily mortality, rejects at slaughter and pododermatitis, to be monitored. The role of specialised poultry veterinarian was also considered important. It is important to apply measures to those poultry species for which most of antimicrobials are being used.

One MS considered that availability of old antimicrobials and authorised vaccines on the market is important, while another noted that shortages of avian vaccines take place almost every year. One MS had noted that enhancing the gut microbiome have led to large reductions in antimicrobial use and better animal health together with improved biosecurity.

As for cattle and pigs, a comment was made that training and controls so that existing prudent use guidelines are followed are also important. Legal or poultry sector's voluntary restrictions to use HCIAAs (fluoroquinolones, 3rd and 4th generation cephalosporins, colistin) were considered important by some MSs. In case of poultry, the challenge is that resistant bacteria, such as ESBL, spread without selective pressure on farms.

Means that could be used to reduce the need for antimicrobials in animals in the EU

(Question 27).

Three of the common means that could be used to reduce the need for antimicrobials in animals in the EU gained most support as the first choice:

1. Utilising the CAP (Common Agricultural Policy) to encourage farmers to improve and change management systems and reduce the need to use antimicrobials in the rearing of different animal species,
2. Common European targets for the use of antimicrobials in different animal species
3. Common European targets in use of (Highly) Critically Important Antimicrobials, (H)CIAAs, in different animal species

Distribution of most and second most important measures is shown in Figure 6.

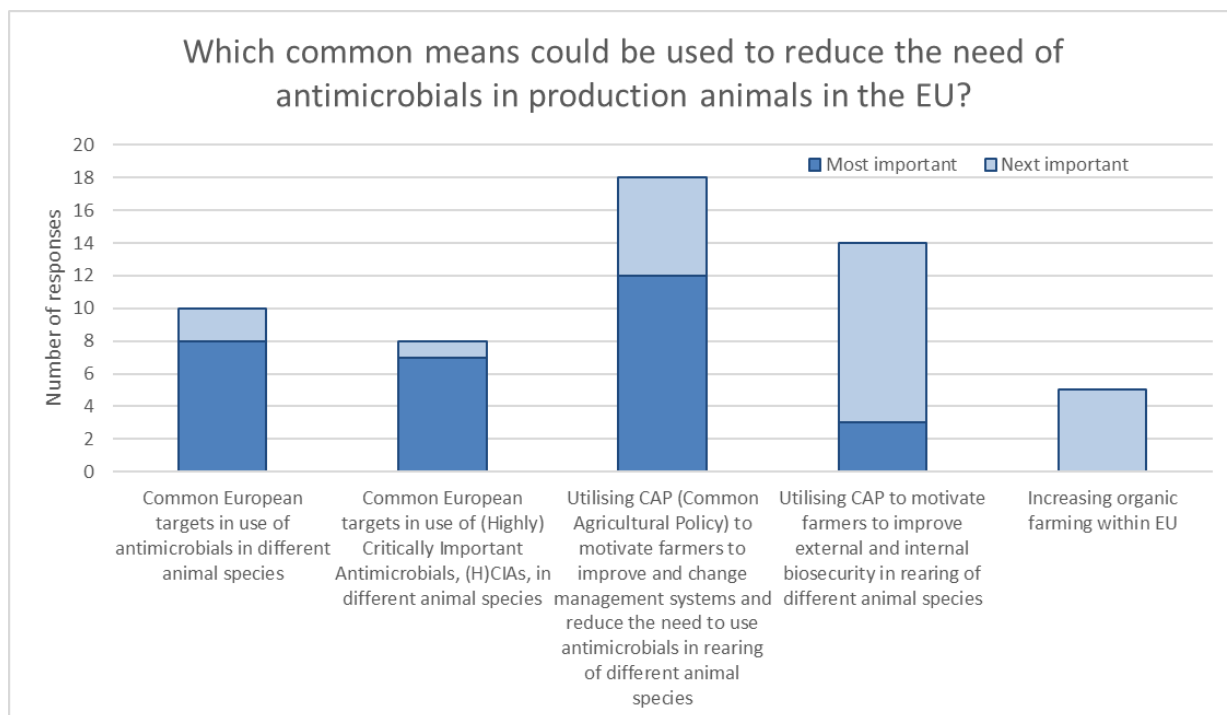


Figure 6. Distribution of responses on the most important or second most important means that could be used to reduce the need for antimicrobials in animals in the EU (24 MSs responded).

C. Monitoring and surveillance of AMR and AMU (antimicrobial use)

In questions 28-41, MSs were asked to provide information about publishing AMR and AMU monitoring results and about monitoring and publishing results about AMR in pathogens from food-producing or companion animals or from the environment. Opinions were also sought as to whether the EU should develop the harmonised monitoring of animal pathogens isolated from food-production or companion animals, and as to whether MSs should be able to voluntarily report to EFSA the results of their national monitoring programmes on resistance in clinical non-zoonotic animal disease pathogens.

Publishing national results on AMR and AMU

A majority of MSs indicated that monitoring results on AMR and AMU are published separately for the veterinary and human sectors. A minority of MSs publish all veterinary and human AMR and AMU results together.

Monitoring of AMR:

The results of responses on monitoring AMR and future needs in terms of developing such monitoring are summarised in the following table:

	Yes	No
Animal pathogens systematically monitored in food-production animals	18	7
If monitored, are results publicly available?	13	5
Should the EU develop harmonised monitoring of animal pathogens isolated from food-production animals?	24	1
Should Member States be able to voluntarily report to EFSA the results of their national monitoring programmes on resistance in clinical non-zoonotic animal disease pathogens (food-production animals, companion animals)? (Question 26)	20	4
Is AMR monitored in the environment (animal dung, fields, waterways etc.)?	regularly: 0 occasionally: 18	2
Is AMR monitored in pathogens isolated in companion animals?	6	19
Should the EU develop the harmonised monitoring of animal pathogens isolated from companion animals?	17	7

Several comments concerning AMR monitoring in non-zoonotic pathogens from food-producing animals (Questions 31-32) called for caution regarding the interpretation of data. Concerns were raised that the data produced voluntarily on diagnostics are inaccurate, and therefore do not allow for a comparison of the situation in the different MSs. Some MSs highlighted the need for a harmonised programme and harmonised interpretive criteria for clinical breakpoints (VETCAST work). The need for more resources was also stressed. Some countries reported that the monitoring of AMR in pathogens formed part of their AMR-NAP activities or national programmes.

With regard to the monitoring of AMR in pathogens causing diseases in companion animals (Questions 37-38), 24 % of the MSs replied that AMR in pathogens is monitored. Where monitoring is carried out, 67 % of the MSs stated that the results are also publicly available. The majority (71 %) of all the respondents supported the harmonised monitoring of pathogens in companion animals at EU level due to the close contact of such animals with their owners. Such monitoring should, however, be voluntary, taking into account the financial and technical constraints relating to the establishment of such a system. It would also be important to discuss together which pathogens should be covered in such monitoring.

Monitoring of the use of data on antimicrobials (AMU)

The results of responses on monitoring antimicrobial sales or use data are summarised in the following table (25 MSs responded):

	Yes
Food-producing animals	
Sales data only	19
Use data by species	8
Use data by species and indication	2
Other: sales data on wholesalers, some data by species	1
Companion animals	14

The monitoring of AMU in food-production animals is based in the majority (76 %) of MSs on sales data compared to use data by species (32 %) or use data by species and indication (8 %). In companion animals, either the sales data or the use data were monitored in 56 % of the MSs. Of those countries that replied that AMU is also monitored in companion animals, nearly all base such monitoring on sales data, but some also on prescription data from pharmacies. Systems are also being further developed and occasional surveys are carried out.

OTHER COMMENTS RECEIVED

In other comments, the need for the implementation of Art. 118 of the Regulation on Veterinary Medicinal Products (Regulation (EU) 2019/6) was mentioned by one country. This article deals with import of animals or products of animal origin into the Union.

Another MS stated that, in the event of further target setting for AMR, the MSs should be compiled in clusters based on similar attributes, such as husbandry conditions, pathogens, climate, animal demographics, etc.

Also, a comment was made that Member States implement their AMR measures without special financial support and this makes more difficult to motivate stakeholders.