Project: Technical assistance to improve implementation of food safety standards and disease crisis preparedness

Training course: Prudent use of VMP

Lecturer: Blagojcho Tabakovski

Date: ……

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CONTENT

- What is a prudent use of antimicrobials
- Definition
- Principles
- Critical important antimicrobial
- Oral use of antimicrobials

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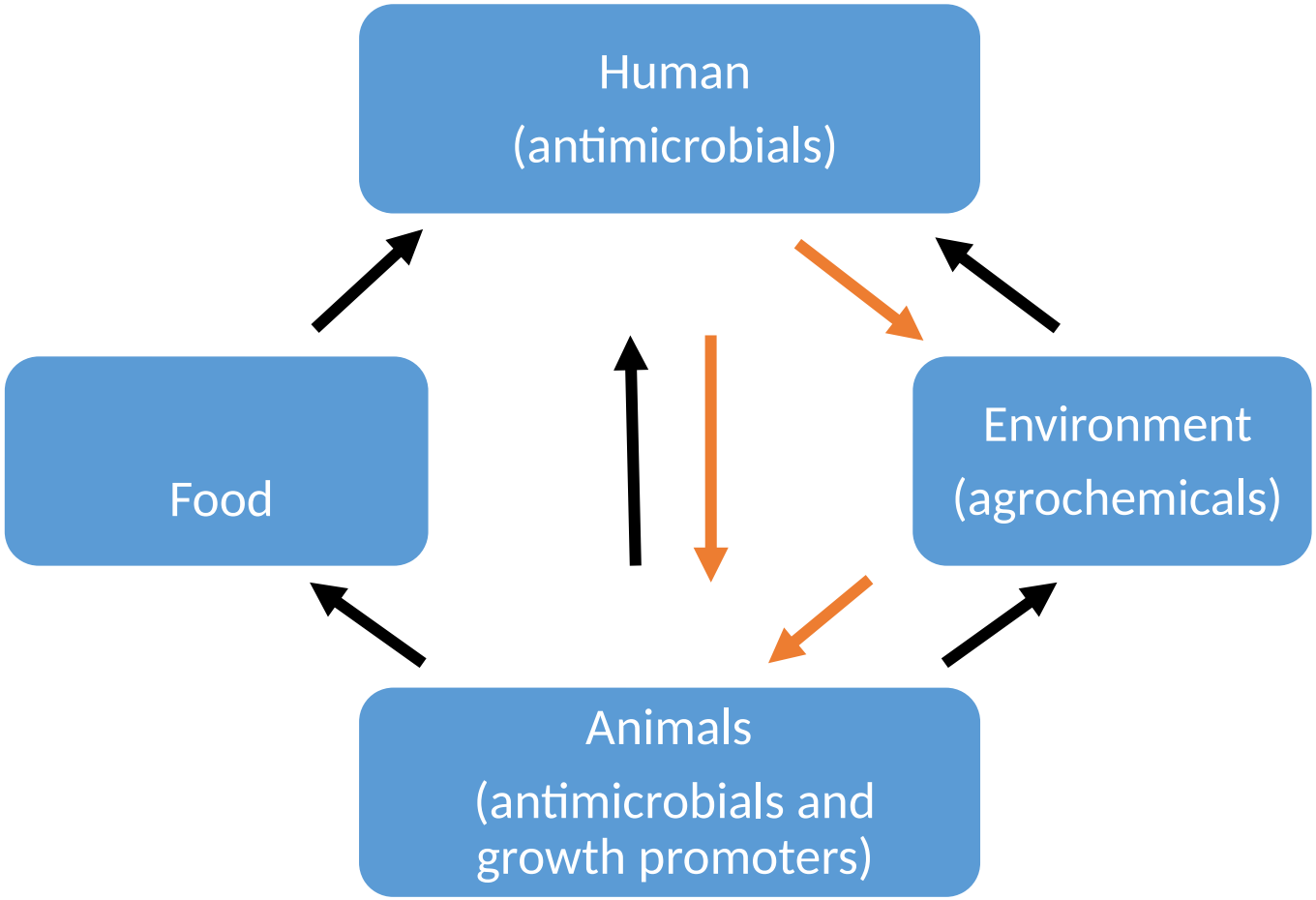
Why is prudent use important?

- Bacteria become resistant to antimicrobial
- Transmission of the antimicrobial resistant bacteria



Exercise

- How many sick animals did you have on your farm in the last 12 months?
- Do you use antimicrobials?
- Where do you get information on which antibiotic to use?
- If the antibiotic is expired, what do you do?
- Do you agree with the following:
  - If the symptoms are improving, you should stop giving antibiotics!
  - Using vaccines can prevent using antibiotics!
  - Antibiotics can be simple discard because do not influence the environment!
  - if the antibiotic does not work you should use a higher dose or a longer time!
  - Using antimicrobials in animals can not affect human health!

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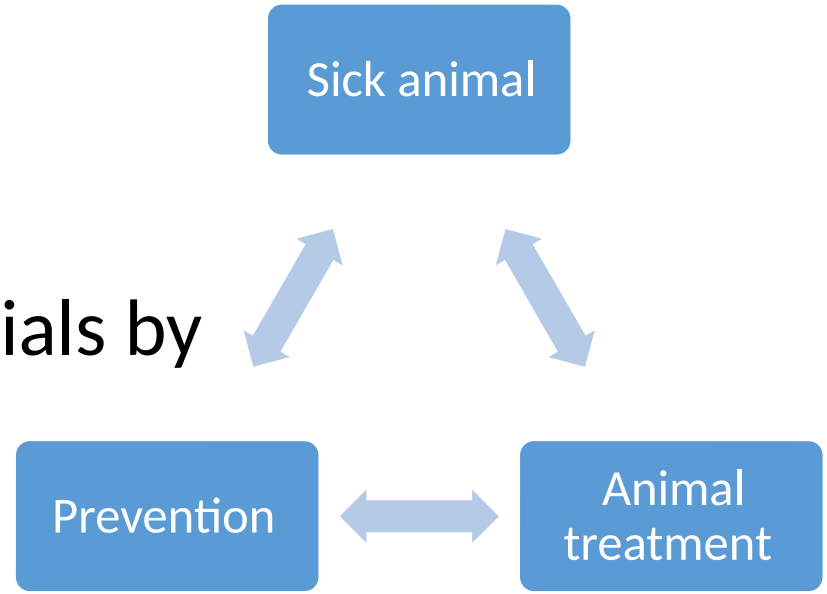
Treating sick animals

- **Problem:**
  - Overuse of antimicrobial
  - Missus of antimicrobial

- **One of the solutions:**
  - Prudent use of antimicrobials by veterinarians and farmers
- **Other solutions**
  - Good husbandry
  - Observed animal welfare
  - Effective biosecurity



Good husbandry practices

- safe, clean and comfortable housing and manure management;
- all-in/all-out system; adequate space allowance with no over-stocking;
- good lighting and air quality through appropriate ventilation;
- appropriate temperature (adapted to animal species and age);
- quarantine possibilities for sick animals (pigs);
- nutritious feed (good hygienic quality, adequate amount and nutrient content);
- free/continuous access to clean drinking water;
- regular veterinary advice on disease prevention, animal health programmes, and treatment regimens;
- observance of stress behaviors in animals and taking measures to reduce those behaviors;

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Prudent use of antimicrobials

- Prudent use of antimicrobials should lead to more **rational and targeted use**, thereby maximizing the therapeutic effect and minimizing the development of AMR. Taking into account cross- and co-resistance, which mean that any exposure to antimicrobials increases the occurrence of AMR, the final outcome of prudent use should be an **overall reduction in the use of antimicrobials**, predominantly by limiting their use only to situations where they are necessary. In these situations, antimicrobials should be used as targeted treatment and according to best practices, i.e. **based on clinical diagnosis** and, whenever possible, on the results of **microbiological susceptibility tests**, and using an antimicrobial agent of as **narrow-spectrum as possible**.
- Prudent use <u>in short:</u>

how to?	at the same time …	synonyms
use of antimicrobials to benefits the patient	**minimizes the probability of adverse effects**	**judicious, rational, adequate, correct and optimal**

Principles for prudent use - 1

- The **prescription** and dispensation of antimicrobials must be **justified by a veterinary diagnosis** in accordance with the current status of scientific knowledge.
- Where it is necessary to **prescribe** an antimicrobial, the prescription should be based on a diagnosis made **following clinical examination** of the animal by the prescribing veterinarian. Where possible, **antimicrobial susceptibility testing** should be carried out to determine the choice of antimicrobial.
- **Antimicrobial metaphylaxis** should be prescribed only when there is a **real need for treatment**. In such cases, the veterinarian should justify and document the treatment on the basis of clinical findings on the development of a disease in a herd or flock. Antimicrobial metaphylaxis should **never be used in place of good management practices.**
- **Routine prophylaxis must be avoided**. Prophylaxis should be reserved for exceptional case-specific indications.

Principles for prudent use - 2

- Administering medication to an **entire herd or flock should be avoided** whenever possible. **Sick animals should be isolated** and treated individually (e.g. by administrating injectables).
- **All information** relating to the animals, the cause and the nature of the infection and the range of available antimicrobial products must be taken into account when making a decision regarding antimicrobial treatment.
- A **narrow-spectrum antimicrobial** should always be the first choice unless prior susceptibility testing - where appropriate supported by relevant epidemiological data - shows that this would be ineffective. The **use of broad-spectrum antimicrobials** and antimicrobial combinations should be avoided (with the **exception** of fixed combinations contained in **authorized veterinary** medicinal products).

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Principles for prudent use - 3

- If an animal or group of animals suffer from recurrent infection(s) requiring antimicrobial treatment, efforts should be made to eradicate the strains of the microorganisms by **determining why the disease is recurring**, and altering the production conditions, animal husbandry and/or management.
- Use of antimicrobial agents prone to propagate transmissible resistance should be minimized.
- A number of compounds on the World Health Organization's **list** of **critically important** antimicrobials are only authorized in medicinal products for human use. As laid down in EU legislation, those that do **not have marketing authorizations** as veterinary medicinal products for use in **food-producing** animals may only be used **off-label** (following the cascade) in these animals if the substance in question is listed in Table 1 of the Annex to Commission Regulation (EU) No 37/2010.

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Principles for prudent use - 4

- The **off-label use** (cascade) of the compounds referred to above for **non-food-producing animals** (e.g. pets and animals used for sports) should be avoided and strictly limited to very exceptional cases, e.g. where there are ethical reasons for doing so, and only when laboratory antimicrobial susceptibility tests have confirmed that no other antimicrobial would be effective.
- Antimicrobial treatment must be administered to animals **according to the instructions** given in the veterinarian's prescription.
- The need for antimicrobial therapy should be **reassessed** on a regular basis to avoid unnecessary medication.
- The **perioperative use** of antimicrobials should be minimized by using aseptic techniques.

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Principles for prudent use - 5

- When possible, **alternative strategies** for controlling disease that have been proven to be equally efficient and safe (e.g. vaccines) should be preferred over antimicrobial treatment.
- The **pharmacovigilance system** should be used to obtain information and feedback on therapeutic failures, so as to identify potential resistance issues in the case of use of existing, new or alternative treatment options.
- A **network of laboratories** with the capacity for performing antimicrobial susceptibility tests in zoonotic and commensal microorganisms and target pathogens should be established in each Member State to ensure the availability of susceptibility testing.

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Critically important antimicrobials

- These antimicrobials should only be used in situations where a veterinarian has assessed, on the basis of antimicrobial susceptibility testing and relevant epidemiological data, that there is no non-critically important effective antimicrobial available.
- In exceptional cases where the use of these antimicrobials under off-label use (cascade) is unavoidable and legally permissible, prescription and final use should be sufficiently justified and recorded. Such use should be based on clinical grounds, i.e. the prescribing veterinarian considers the use of a particular critically important antimicrobial necessary in order to avoid the suffering of diseased animals, and should also take into consideration ethical and public health concerns.

Oral administration via feed and drinking water - 1

- Whenever possible, individual treatment of the affected animal(s) (e.g. injectable treatments) should be preferred to group or mass treatment
- When using group treatment, the following points should be taken into account:
  - Medicated feed contains a premix of veterinary medicines and requires, according **to EU legislation**, veterinary prescription.
  - Oral antimicrobial treatment given via medicated feed or drinking water must only be administered where **prescribed by a veterinarian**.
  - Antimicrobials should only be administered to groups of animals via feed or drinking water where there is evidence of microbial disease or infection; such treatment should **not be given as a prophylactic** treatment. The administration of antimicrobials via feed or water should be **limited to the animals requiring treatment**, and the drug delivery systems should be appropriate for the intended treatment.

Oral administration via feed and drinking water - 2

- The quantities of antimicrobials administered in feed or water should be monitored and **documented** on a continuous basis, especially in intensive food production systems.
- The **instruction** given in the product information (SPC, leaflet, labelling) and by the veterinarian must be complied with, both in terms of **dosage and duration** of treatment.
- Where an antimicrobial is administered through **feed**, it is important to ensure the **homogeneity** of distribution of the drug, in order that each animal obtains the required therapeutic dose for treating the disease in accordance with the veterinary prescription.
- **Off-label** (cascade) use should be limited to the necessary minimum and to **exceptional occasions** where no other authorised treatment options are available.
- Adequate, **clean storage facilities** should be available on the farm to ensure proper storage of the medicated feed. Access to these facilities should be restricted.

CONTACT

Project e-mail: foodsafetyprojectTCc@gmail.com

THANK YOU FOR YOUR ATTENTION

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