AMR in Montenegro

The National Interdisciplinary Commission for the Control of Antibiotic Resistance (**NIKRA**) was established by the Ministry of Health in October 2011

- NIKRA was revised in 2025 and now includes, beside representatives from human and veterinary sector, also environmental experts.
- NIKRA is an advisory body which prepares guidelines, issues recommendations, implements activities and raises concerns.
- The national programme for bacterial resistance to antibiotics for 2022–2024 was the latest national strategic document on AMR. It covers human health as well as the veterinary and environment sectors. The programme has the following objectives:
  - Improved monitoring of antimicrobial consumption and resistance of bacteria to antibiotics;
  - Optimised application of antimicrobials in human medicine;
  -Optimised application of antimicrobials in veterinary medicine;
  -Reduced pollution of the environment with antibiotics.
- The new three years programme is in the final stage of preparation. It focuses on enhancing and strengthening intersectoral collaboration, such as data collection, sharing and analysis, joint educational and awareness raising activities.

AMR prevention and control

Operational objectives in the national programme in veterinary sector are focused on:

- 1. **Alignment and harmonization of legislative framework** with the EU framework for veterinary medicines (Regulation 2019/6 and delegated and implementing acts) – expected date for adoption by the end of 2025;
- 2. **Improvement of official controls for supply and use of antimicrobials -** increase the number of controls (wholesalers, veterinarians, farmers) and provide trainings to inspectors for official controls.
- 3. **Implementation of the dedicated campaign on awareness raising on AMU (use) and AMR** – funding is problematic.
- 4. **Improvement of animal disease and zoonosis treatment** – only generic treatment guides exists,e.g. EMA guidelines adapted and translated into MNE.
- **5. Improvement of hygiene practices, animal welfare, and biosecurity measures in livestock farming, and hygiene practices in food production and distribution.**
- **6. Enhancement of AMR monitoring, including monitoring of zoonoses and zoonotic agents –** AMR monitoring has been implemented from 2023 in line with Decision (EU) 2020/1729. In 2025 Montenegro also introduced monitoring of methicillin resistant staphylococcus aureus in pigs. The cumulative data from 2023 and 2024 reveals a similar pattern of resistance across all tested species (pigs, broilers, turkeys, and bovine). A notable finding is the high level of resistance to ciprofloxacin (a fluoroquinolone), alongside some observed resistance to cefotaxime and ceftazidime (3rd-generation cephalosporins). These are critical concerns, as both ciprofloxacin and 3rd-generation cephalosporins are classified by the European Medicines Agency (EMA) as antimicrobials whose use in animals should be restricted due to their importance in human medicine.
- 7. **Improvement of collection of antimicrobials use and sales** - Montenegro has been collecting and analyzing data on antibiotic sales from veterinary wholesalers since 2018, through ANIMUSE platform (WOAH). The total amount of antibiotics sold for use in animals in 2023 was 501.1 kg, and in 2024 it was 377 kg. In 2024, there was a decrease in antibiotic sales compared to the previous year. As in previous years, the antimicrobial drugs most commonly used in animals are tetracyclines.

Actions implemented by the Administration for AMR in last 3 years:

- The Administration has taken a number of steps to reduce the use of antibiotics in the veterinary sector, which include:
  - activities in educating veterinarians and farmers through lectures at professional gatherings, preparation and distribution of educational materials, conducting FAO survey among farmers and veterinarians on the use of antibiotics and antimicrobial resistance;
  - introduction of an additional program for controlling residues of pharmacologically active substances in imported shipments;
  - introduction of a mandatory program for monitoring zoonotic bacteria for antibiotic resistance;
  - improvement of the system for monitoring of antibiotic consumption in accordance with international standards (standards of the World Organisation for Animal Health);
  - Harmonization of national legislation with EU legislation in the field of veterinary medicines, where the main goal of the new law is to contribute to the reduction of use of antibiotics and antimicrobial resistance;
  - prohibition of the use of certain antibiotics reserved for human medicine;
  - Active participation in the activities of the NIKRA.

Thank you for attention!