"The EU Ban on Use of Antibiotics for Growth Promotion in Agriculture: Review of Scientific Evidence and Implications for Public Health"

APUA Roundtable Meeting
May 28-29, 2010, Paris France

The following suggestions are an appendix to the feature article, “Restricting Non-Therapeutic Use of Antimicrobials in Food Animals: Lessons from the European Union” That appeared in Microbe, June 2011.

Suggestions for action: Interventions, Education, Policy, Research
The following suggestions were extracted from the transcript of the meeting proceedings and represent comments, ideas and opinions of individual delegates. A vote to establish consensus was not taken.

INTERVENTIONS

i. Program Coordination: integrate all components
   • Monitoring and Evaluation: antimicrobial resistance and antimicrobial use
     o rapid methods to look on farms for particular clones of bacteria known to colonize humans
   • Targeted surveillance: human, animal, food chain
     o strengthen surveillance activities: antimicrobial resistance and antimicrobial usage
   • Development of alternative strategies for infection control in animals
   • Antibiotic Stewardship Program
     o all disease indications
     o animal health and welfare (animal hygiene)
     o reserve “last resort” antibiotics to treat conditions, which respond poorly to other antimicrobials
   • Landscape ecology
     o more accurate detection of antibiotic resistance in sewage, water environments and sludge
     o minimize contact of animal bacteria with humans and human bacteria in all settings

ii. Development of Healthier Farming Systems
   • Farm hygiene & organization
     o bacterial dissemination in and out

EDUCATION
i. Accurate diagnosis and treatment
• Correct drug, dose, and time

ii. Proper use of antibiotics

POLICY
i. Problem solving at the country level under general guidelines

ii. Maintenance and extension of public health considerations and action to include animals, humans, and the environment

iii. Removal of profits from antibiotic sales

iv. Registration of both antibiotics used on farms and antibiotics prescribed by veterinarians

RESEARCH
i. More studies to address antibiotics specifically concerning:
   • Size of the reservoir of resistance
   • Specific effects of low dose of antibiotics on antimicrobial resistance
   • Matured complex risk assessment
   • Mechanisms of resistance
   • Co-resistance

ii. Physiological and molecular bases of the epidemicity of *E. faecium* CC17

iii. Role of antibiotic selective pressure in relation to changes of the intestinal flora which favour *E. faecium* CC17 (particularly problematic in Europe)

iv. Development of new antimicrobials/strategies to combat spread of resistance

   • New vaccines against human-animal clones

v. Proper use of antibiotics in animals: treat for shorter times, at higher intensity—which are the optimal time/doses

**Suggestions: EU/US**
Dr. Herman Goossens recommended that the EU collaborate with the United States (US) on the
joint Trans Atlantic Task Force on Antimicrobial Resistance (TATFAR) to develop a common
database and common language to understand resistance. Furthermore, if the US is going to
withdraw nontherapeutic use of antibiotics, a system ought to be in place to monitor and evaluate
the effect of the interventions.

**EU Monitoring Systems**
Currently, in the EU, monitoring systems for antimicrobial resistance in human medicine (EARS-
Net), in food producing animals (collected by EFSA - European Food Safety Agency) and for
antimicrobial consumption (ESAC) are being integrated under the umbrella of the European
Center for Disease Control (ECDC), with the simultaneous development by the European
Medicines Agency of a monitoring system for use of antimicrobials in animals- European
Surveillance of Veterinary Antimicrobial Consumption (ESVAC). ESVAC, will have data on total
sales and use per species for both food and companion animals and is being developed with input
from ECDC and other key agencies to guarantee an integrated approach inclusive of human
medicine. A high priority for use of the data is for input to risk profiling and risk assessment
regarding antimicrobial resistance.