

Antimicrobial Use and Resistance: Roadmap for 2018-2019

Dr. Michael Costin

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AVMA Committee on Antimicrobials

Charge/Objective:

- Maintain oversight of AVMA antimicrobial policies including but not limited to use, resistance, use data collection, and stewardship.
- Serve as the primary resource to the AVMA on antimicrobial issues.
- Promote AVMA as the leader and trusted source of information on antimicrobial use in animals and primary collaborator with human medical entities in a One Health approach to the issue of antimicrobial resistance.
- Promote antimicrobial stewardship through the development, integration, and implementation of clear, data-driven and scientifically defensible policies and recommendations.
- Provide AVMA members with information and tools to implement and promote antimicrobial stewardship.

Antimicrobial Stewardship for Veterinarians Defined

Antimicrobial stewardship refers to the actions veterinarians take individually and as a profession to preserve the effectiveness and availability of antimicrobial drugs through conscientious oversight and responsible medical decision-making while safeguarding animal, public, and environmental health

Core Principles of Antimicrobial Stewardship in Veterinary Medicine

- Commit to stewardship
- Advocate for a system of care to prevent common diseases
- Select and use antimicrobial drugs judiciously
- Evaluate antimicrobial drug use practices
- Educate and build expertise
- TAKE ACTION!

ANTIMICROBIAL STEWARDSHIP definition and core principles



ANTIMICROBIAL STEWARDSHIP FOR VETERINARIANS DEFINED

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CORE PRINCIPLES OF ANTIMICROBIAL STEWARDSHIP IN VETERINARY MEDICINE

Antimicrobial stewardship involves maintaining animal health and welfare by implementing a variety of preventive and management strategies to prevent common diseases; using an evidence-based approach in making decisions to use antimicrobial drugs; and then using antimicrobials judiciously, sparingly, and with continual evaluation of the outcomes of therapy, respecting the client's available resources.

The following principles can be used to develop antimicrobial stewardship plans in any veterinary practice setting.

- 1. Commit to stewardship**
 - o Engage all practice members and relevant stakeholders in the stewardship effort.
 - o Develop stewardship plans that incorporate dedication to and accountability for disease prevention and that also optimize the prescribing, administration, and oversight of antimicrobial drugs.
 - o Identify high-priority conditions that are commonly treated with antimicrobial drugs on which to focus stewardship efforts.
 - o Demonstrate commitment to systematically assessing the outcomes of antimicrobial drug therapy.
 - o Identify one or more individuals to lead the stewardship plan and provide accountability.
- 2. Advocate for a system of care to prevent common diseases**
 - o Identify barriers to improving disease prevention.
 - o Work with clients to adopt preventive and management strategies to minimize the need for antimicrobial drugs. These strategies include animal husbandry and hygiene, biosecurity and infection control, nutrition, and vaccination programs.
 - o Consider alternatives to antimicrobial drugs.
- 3. Select and use antimicrobial drugs judiciously**
 - o Identify barriers to appropriate antimicrobial prescribing and usage.
 - o Use an evidence-based approach for making a diagnosis and determining whether an antimicrobial drug is indicated.
- 4. Evaluate antimicrobial drug use practices**
 - o Make an informed selection of an appropriate antimicrobial drug and regimen.
 - o Refer to relevant veterinary medical guidelines for judicious therapeutic use.
 - o Assess outcomes of antimicrobial use.
- 5. Educate and build expertise**
 - o Encourage development of a program for the evaluation of antimicrobial drug prescribing at the veterinary-practice or aggregated levels.
 - o Ensure that feedback is provided to veterinarians.
 - o Support analyzing and sharing of antimicrobial drug use data while preserving veterinarian-client confidentiality.
 - o Engage clients to identify barriers to implementation of stewardship programs and to evaluate antimicrobial storage, administration, and other use practices.
 - o Make resources available and encourage the development of expertise in antimicrobial stewardship.
 - o Keep up-to-date on strategies for disease prevention, use of antimicrobial alternatives, and selecting and using antimicrobial drugs.
 - o Critically appraise and then implement appropriate existing clinical guidelines for antimicrobial use.
 - o Provide client education on antimicrobial stewardship, including conditions when antimicrobial drugs are not needed.
 - o Support research on antimicrobial drug use and resistance.

USING THESE PRINCIPLES, VETERINARIANS ARE URGED TO TAKE ACTION

Implement one or more principles of antimicrobial stewardship to improve disease prevention strategies and antimicrobial drug prescribing, assess the outcomes, and modify plans as needed.



AVMA Definitions of Antimicrobial Use for Treatment, Control and Prevention

AVMA believes antimicrobial stewardship can be achieved whether the intent is prevention, control, or treatment, and attempts to prioritize antimicrobial stewardship by therapeutic purpose are misguided. Stewardship is better demonstrated by the clinical rationale for antimicrobial therapy. We provide the following definitions for treatment, prevention, and control in the context of antimicrobial use in individual animals or populations of animals.

<https://www.avma.org/KB/Policies/Pages/AVMA-Definitions-of-Antimicrobial-Use-for-Treatment-Control-and-Prevention.aspx>

AVMA Definitions of Antimicrobial Use for Treatment, Control and Prevention

Antimicrobial prevention of disease (synonym: prophylaxis):

- 1) Prevention is the administration of an antimicrobial to an individual animal to mitigate the risk for acquiring disease or infection that is anticipated based on history, clinical judgement, or epidemiological knowledge.
- 2) On a population basis, prevention is the administration of an antimicrobial to a group of animals, none of which have evidence of disease or infection, when transmission of existing undiagnosed infections, or the introduction of pathogens, is anticipated based on history, clinical judgement or epidemiological knowledge.

Antimicrobial control of disease (synonym: metaphylaxis):

- 1) Control is the administration of an antimicrobial to an individual animal with a subclinical infection to reduce the risk of the infection becoming clinically apparent, spreading to other tissues or organs, or being transmitted to other individuals.
- 2) On a population basis, control is the use of antimicrobials to reduce the incidence of infectious disease in a group of animals that already has some individuals with evidence of infectious disease or evidence of infection.

Antimicrobial treatment of disease:

- 1) Treatment is the administration of an antimicrobial as a remedy for an individual animal with evidence of infectious disease.
- 2) On a population basis, treatment is the administration of an antimicrobial to those animals within the group with evidence of infectious disease.

Legislative and Regulatory Activity

LEGISLATIVE

- Federal
 - [H.R. 1587](#), Preservation of Antibiotics for Medical Treatment Act (PAMTA)
 - [S. 629](#), Preventing Antibiotic Resistance Act (PARA)
- State
 - Illinois—[S.B. 3429](#), Administration of antibiotics to food-producing animals; requires veterinary prescription for medically important (visit within past 6 months), duration not to exceed 21 days, producer record-keeping and reporting

REGULATORY

- Federal—[FDA 5-year plan](#)
 - Remaining OTC to prescription
 - Address products without defined durations of use
 - Enhanced monitoring
 - Attention to companion animals
 - Incorporates AVMA definition and principles
- State
 - Maryland—Regulations ([0.1-0.5](#)) under new chapter 15.01.15, Use of Antimicrobial Drugs; prohibit use of medically important abx for feed efficiency and administered in a “regular pattern” to cattle, poultry, swine

Outreach and Partnerships

Itn'l VMAs

- **NEW** AVMA/CVMA/FVE Joint Statement on Continuous Monitoring of Antimicrobial Use and Antimicrobial Resistance

PACCARB

- Infection prevention and stewardship WG
- Workforce, education, and competencies SG
- Strategies for successful implementation of stewardship plans

OIE

- Presentation— [2nd Global Conference on AMR](#)
- Survey response— Actions to reduce emergence and spread of AMR in animals in country

SAVMA

- Shared work and policies around AMR
- Assistance with survey inquiry

CDC

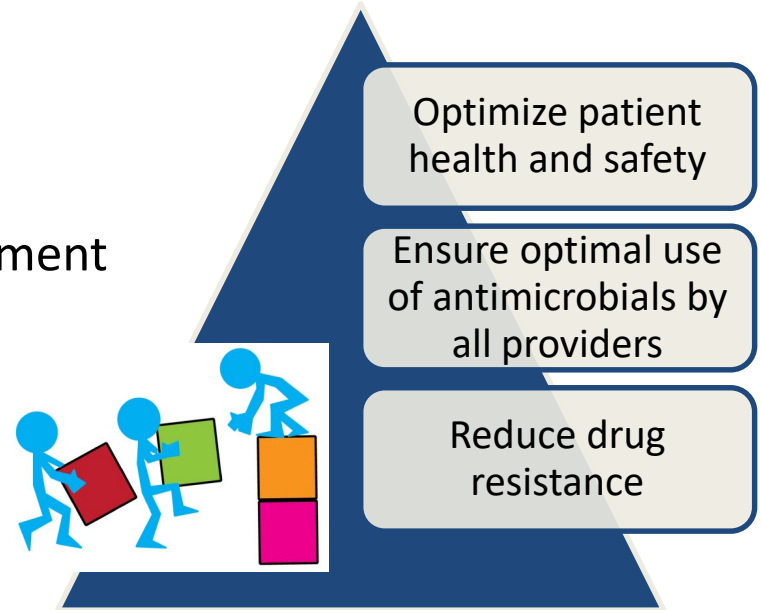
- [Antimicrobial Resistance Challenge](#)--Commitments building on 2015 White House commitments
- One Health Office Zoonoses and One Health Updates—Presentation

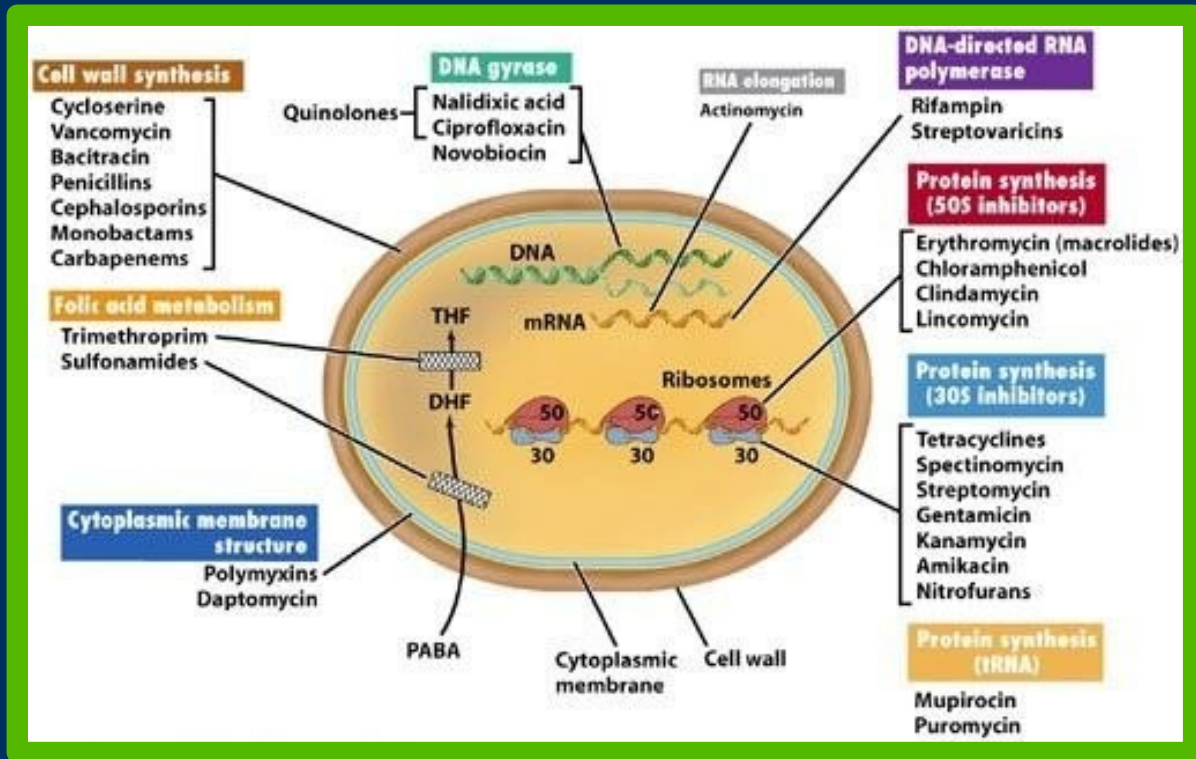
AND MORE

- New Hampshire Antimicrobial Stewardship Symposium—Presentation and exhibit materials
- [NIAA 8th Antibiotic Symposium](#)—Presentation

Support Members and Teams on Stewardship

- Policy
 - Definition of stewardship
 - Core principles
 - Definitions of prevention, control, treatment (accompanying CoA report for JAVMA)
- Stewardship for practices (toolkits)
 - Checklist to align with core principles
 - Species-specific resources
 - Staff and client educational material
- One-pagers and educational presentations for delivery by volunteers and staff; help spread the word!
- Under discussion—CoA report on antimicrobial-resistant bacteria of concern in animal health (similar [CDC report for human health](#))
- Webpages update





thank you