

# Improving Antibiotic Use in the Veterinary Setting

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Presidential Advisory Council on Combating Antibiotic-Resistant Bacteria

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Resistant Bacteria

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# Veterinary Settings

Some factors impacting the judicious use/stewardship of antimicrobials in veterinary settings include:

- A wide variety of animal species
- A wide variety of husbandry practices
- A wide variety of stakeholders

# Veterinary Settings

Some factors impacting the judicious use/stewardship of antimicrobials in veterinary settings include:

## Wide variety of animal species

- Food-producing animals
  - Major - cattle (dairy/beef), swine, chickens (broilers, layers), turkeys
  - Minor - including (but not limited to) sheep, fish, goats, quail, honey bees
- Companion animals such as cats, dogs, horses
- Exotic/zoo species

# Veterinary Settings

## Wide variety of animal husbandry practices

- Food animal husbandry inherently involves the rearing of populations of animals in a wide variety of settings
  - Managing disease in large groups - pens, houses/buildings, pasture, etc.
    - Treating sick animals
    - Preventing or controlling disease outbreaks
- The size of operations vary greatly
  - Small operations may have lower density, but disease control/biosecurity measures may be less rigorous
  - Large operations may have higher density, but disease control/biosecurity measures may be more rigorous

# Veterinary settings

## Wide variety of stakeholders:

- Fostering judicious use/stewardship requires collaboration across a broad set of stakeholders including:
  - Veterinarians
  - Animal producers
  - Animal feed industry
  - Animal pharmaceutical industry
  - Distributors and retailers
  - Academia
  - Local, State, and Federal agencies

# Fostering stewardship in veterinary medicine

Important areas of focus include:

- **Align products** - Align approved use conditions of medically important antimicrobial products with judicious use principles
- **Use practices** – Implement/reinforce antimicrobial stewardship in all veterinary settings
- **Monitor progress** - Enhance monitoring of antimicrobial resistance and antimicrobial drug use in animals

# Align medically important antimicrobials with judicious use principles

A focus for FDA - making sure the labeled use conditions of medically important antimicrobials are consistent with judicious use/stewardship principles

## Steps underway now:

- Guidance 209, Guidance 213, Veterinary Feed Directive rule
- **Significance** – Effective Jan. 1, 2017, medically important antimicrobials used in animal feed and drinking water will no longer be approved for production (e.g. growth promotion) purposes in food-producing animals and all therapeutic uses of these antimicrobials will require authorization of a licensed veterinarian



# Align medically important antimicrobials with judicious use principles

Changes being implemented through Guidance #213 process are critically important steps forward, but we believe additional measures are needed.

## Additional measures include:

- Examine those uses of medically important antibiotics for feed/water that do not currently have an explicitly defined duration of dosing
- Develop strategy and timeline for bringing all dosage forms of medically important antimicrobials under veterinary oversight
- Identify and implement a strategy for promoting antimicrobial stewardship in companion animals

# Implement/reinforce antimicrobial stewardship in all veterinary settings

Many organizations and affected stakeholders have role to play in supporting progress in this area

- ❑ Involvement of multiple Federal agencies including FDA, USDA, and CDC
- ❑ Veterinary and animal producer organizations play key role
- ❑ State agencies that oversee licensing/practice standards

## Challenges

- ❑ Diversity of settings
- ❑ Coordinating activities across affected stakeholders

# Implement/reinforce antimicrobial stewardship in all veterinary settings

## Progress to date includes:

- A broad array of organizations have actively supported outreach efforts to prepare for Guidance #213 changes
  - Webinars, public meetings, brochures, guidance documents, other web-based materials
- Academic organizations are incorporating judicious use principles into curricula at veterinary and land grant colleges
- Veterinary organizations, including State veterinary boards, are re-examining and updating policies
- Industry “quality assurance programs” include elements regarding the judicious use of antimicrobials

# Implement/reinforce antimicrobial stewardship in all veterinary settings

Some possible areas for further progress include:

- Seek clearer vision of what “judicious use” or “stewardship” means
  - Clarify core principles of “stewardship” in various veterinary settings
  - Identify practical strategies for implementing stewardship plans
- Develop tools to help “optimize” use of antimicrobials
  - Diagnostics and other tools
- Develop alternatives to the use of medically important antimicrobials
  - Research is needed on alternative products and management strategies for managing important animal diseases

# Enhance monitoring of antimicrobial resistance and antimicrobial drug use

- As we implement judicious use strategies, it is important that we collect sufficient data to assess the impact of such strategies
  - “Success” should not focus solely on reductions in overall sales or use
  - It is important that we identify appropriate indicators that help us assess the extent to which judicious use/stewardship plans are being implemented
- Our ultimate goal is that improved use practices will curb resistance development

# Enhance monitoring of antimicrobial resistance and antimicrobial drug use

## Challenges include:

- Wide diversity of settings where antimicrobials are used
- Substantial differences in “health care” infrastructure compared to human health care
- Lack of new funding has delayed progress on enhanced data collection

## Progress being made:

- USDA preparing antimicrobial use surveys; funding pending
- Utilizing existing funds, FDA recently awarded two grants
- FDA anticipates having more details on data collection and assessment plan available this fall

# In closing...

- Significant progress has been made; an important milestone is January 1, 2017
- Judicious use/stewardship of antimicrobials is an ongoing process impacting many stakeholders and sectors; incremental steps are needed to phase in changes
- Continued engagement of veterinary community, animal producers, and others is critical
- While optimizing use is important; development of alternative products and disease management strategies to reduce the need for antimicrobials is also an important priority