

Stewardship of Antimicrobial Use in Animals: Defining Goals and Objectives

**National Institute for Animal Agriculture
2016 Antibiotics Symposium**

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November 1, 2016**

Topics

- Stewardship: some factors to consider
- Clarifying goals and objectives
- Progress to date
- Monitoring progress moving forward

Factors to Consider

Some factors impacting efforts to implement stewardship strategies in veterinary settings include:

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

Factors to consider

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

Factors to Consider

Wide variety of animal husbandry practices

- Rearing of populations of animals in a wide variety of settings
- Managing disease in large groups - pens, 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

Factors to Consider

Wide variety of stakeholders:

- 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

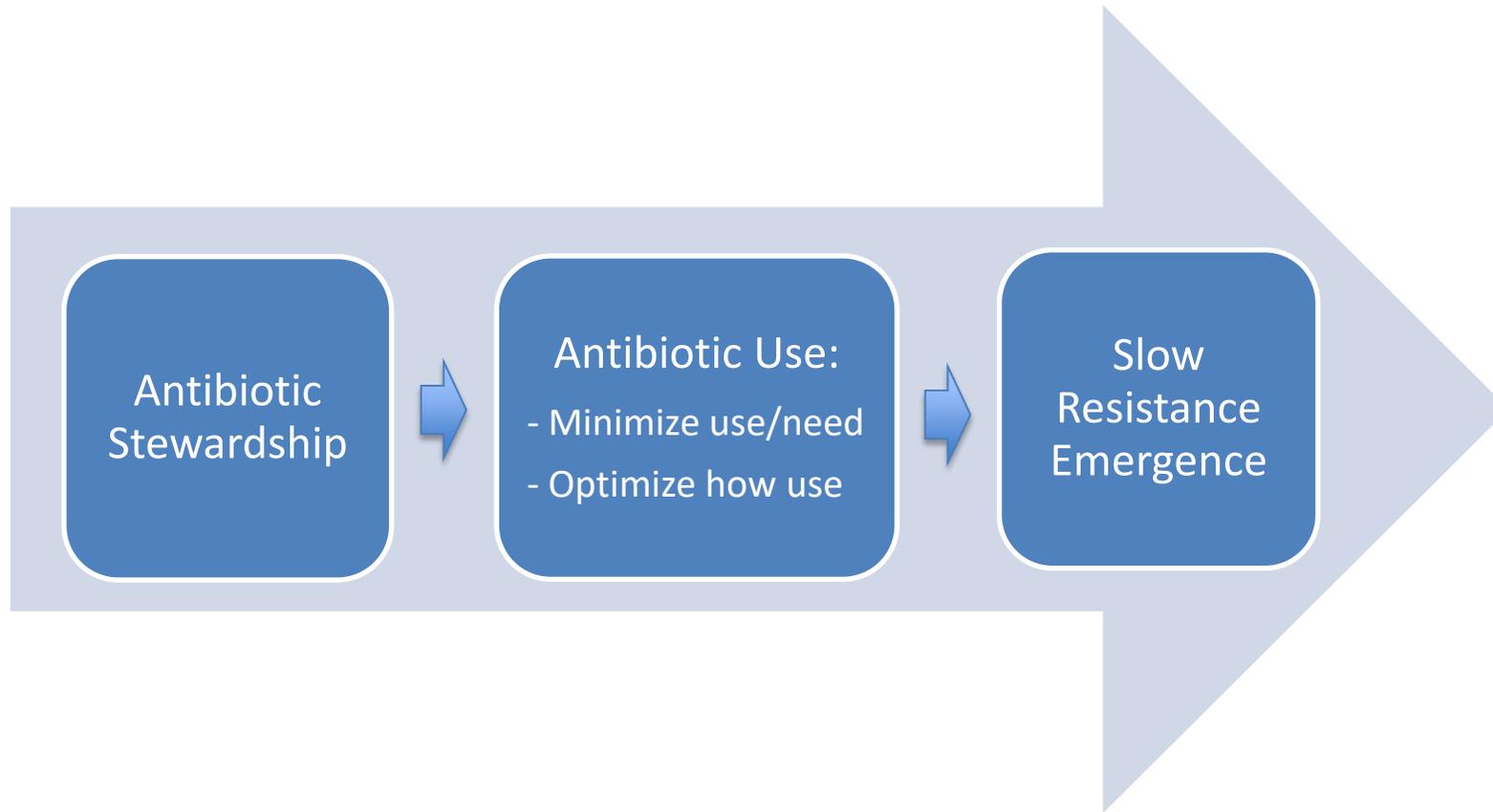
Goals and Objectives

- Is there sufficient clarity regarding the goals and objectives of stewardship efforts?
- What does “judicious use” or “stewardship” mean to you?
- What outcomes are we seeking?
- Is there a clear message?

Goals and Objectives

- We have focused on “what to do” and “how to measure”, but perhaps have not focused enough on the “why”
- Greater clarity (and agreement) regarding the goals and objectives – critical for progress
- Build consensus around core principles of “stewardship” in veterinary settings
- Recognizing strategies for implementing stewardship may need to vary by sector

What is the goal?



Antibiotic Stewardship				
	Minimize When Antibiotics are Needed/Used	Optimize How Antibiotics are Used		
Possible Actions	<ul style="list-style-type: none"> ➤ Veterinary oversight ➤ Eliminate production uses ➤ Adjust husbandry practices ➤ Enhance disease prevention strategies (e.g., vaccination) ➤ Utilize non-antibiotic alternative therapies 	<ul style="list-style-type: none"> ➤ Veterinary oversight ➤ Update use conditions on product labels, as needed ➤ Training/education ➤ Implement stewardship plans in animal production settings 		
				
Desired Outcomes	<ul style="list-style-type: none"> ➤ Reduced disease incidence ➤ Increased vet oversight; more selective use of antibiotics ➤ Therapeutic use only ➤ Increased use of non-antibiotic alternatives ➤ Reduced antibiotic use 	<ul style="list-style-type: none"> ➤ Appropriately labeled antibiotic products ➤ Use in consultation with veterinarians ➤ Stewardship plans implemented ➤ More targeted/judicious use 		Slow Emergence of Resistance

Progress to Date

Important areas of focus have included:

- **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

Aligning antimicrobial products

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

Aligning antimicrobial products

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

Implementing antimicrobial stewardship

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

Implementing antimicrobial stewardship

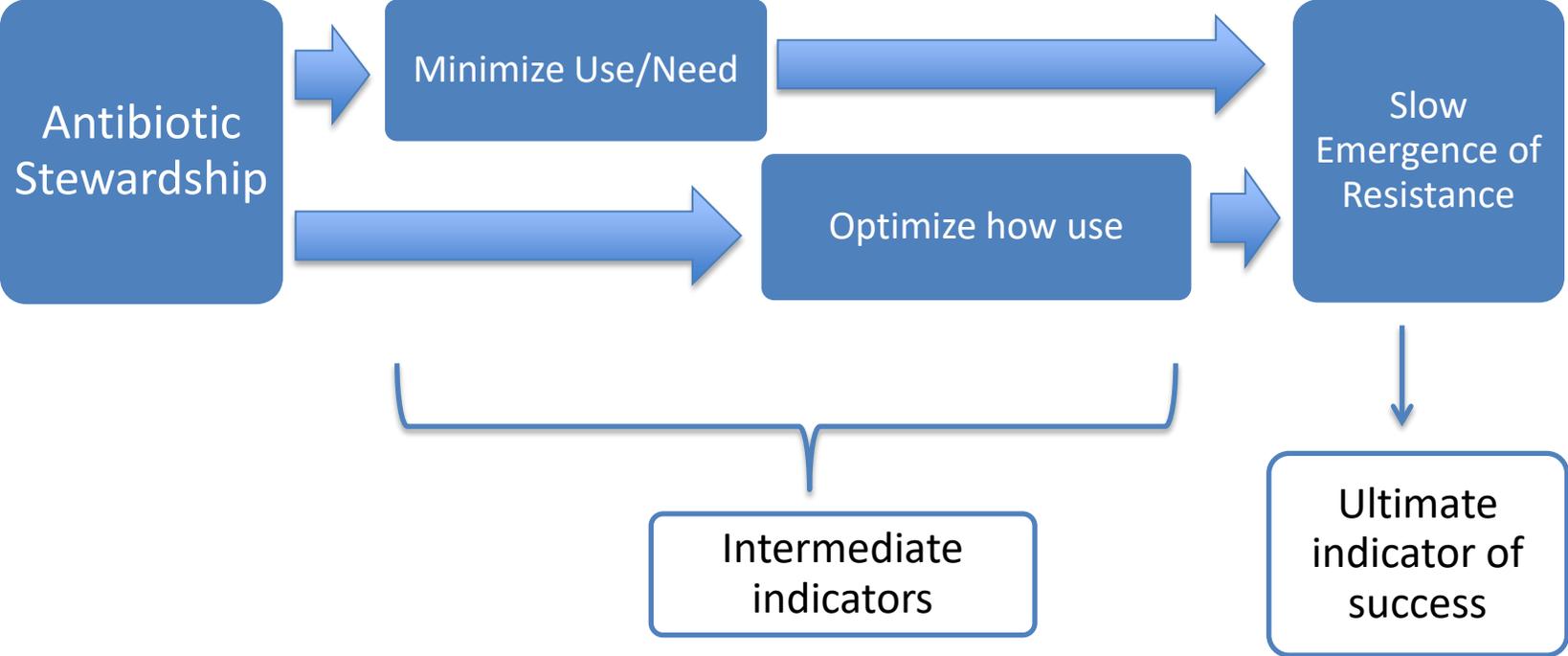
Progress includes:

- 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

Monitoring impact of stewardship activities

- As we implement stewardship 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 other appropriate indicators that help assess stewardship
- Our ultimate goal is that improved use practices will curb resistance development

Monitoring Impact



Monitoring impact of stewardship activities

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

In closing...

- Significant progress has been made; an important milestone is January 1, 2017
- Antimicrobial stewardship is an ongoing process impacting many stakeholders and sectors; incremental steps to phase in changes – as needed
- Continued engagement of veterinary community, animal producers, and others is critical
- Important that we seek common understanding as to the goals/objectives of “antimicrobial stewardship”

